

ENERGY CONSERVATION AND CONVERSION ACT OF 1975

HEARINGS BEFORE THE COMMITTEE ON FINANCE UNITED STATES SENATE

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

H.R. 6860

AN ACT TO PROVIDE A COMPREHENSIVE NATIONAL
ENERGY CONSERVATION AND CONVERSION PROGRAM

JULY 10, 11, 14, 15, 16, 17, AND 18, 1975

PART 1 OF 2 PARTS
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ENERGY CONSERVATION AND CONVERSION ACT OF 1975

THURSDAY, JULY 10, 1975

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to notice, at 9:30 a.m. in room 2221 Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senators Long, Talmadge, Ribicoff, Nelson, Gravel, Bentson, Haskel, Curtis, Hansen, Dole, Packwood, Roth, Jr., and Brock.

The CHAIRMAN: This hearing will come to order.

This morning the committee begins hearings on H.R. 6860, the Energy Conservation and Conversion Act. It is my hope that by the time the Committee on Finance completes action on this bill, it will be a significant step toward dealing with one of our most important domestic problems—assuring an adequate supply of energy to meet our economy's needs. We will welcome the suggestions of witnesses, not only on the specific provisions of the House Bill, but also on any other matter within the Finance Committee's jurisdiction relating to energy production, conversion and conservation.

Our first witness this morning will be Mr. Elliott M. Estes, president and chief operating officer of the General Motors Corp.

Mr. Estes, we are very pleased to welcome you here before the committee, and we look forward to your statement. We would hope that you could limit your statement to 10 minutes and on the first round of questions, I will ask each Senator to confine himself to 7 minutes, hoping that that is sufficient time for all the questions they wish to ask, but if they wish to ask more, they can.

Statements of Senators Curtis, Dole, and Brock, the committee's press release announcing these hearings, and a copy of the bill, H.R. 6860 follow. Hearing commences on page 119.

STATEMENT OF SENATOR CARL CURTIS

Mr. Chairman, we are today commencing full committee consideration of the Energy bill passed by the House. I look forward to hearing the witnesses who will come before us to give us the benefit of their views on the energy problem and their suggestions as to how Congress should respond to the problem.

Mr. Chairman, our responsibility is an important one. If we are to reduce our dependence on foreign energy sources, we must greatly expand our production of domestic energy resources. Yet, so far as I can tell, there is no provision in the House bill that will lead to the production of a single barrel of domestic oil. Conservation is important, but it is only a part of the solution.

I look forward to working with you Mr. Chairman, and with my colleagues on the committee, to develop an effective and equitable bill that will start us down the road to energy independence.

STATEMENT OF SENATOR BOB DOLE

Because of the apparent and well-publicized weaknesses in the House-passed version of H.R. 6860, we bear the responsibility of shaping an equitable, responsive energy bill which encourages the conservation of available energy resources and provides incentives for the development of new domestic energy supplies. It seems that the House has attempted to give the American people something that simply cannot be given—energy independence at no cost.

But, more importantly, the House bill does absolutely nothing to encourage the development of new domestic supplies of oil and gas. Nowhere does the House bill address the inevitable shortages of natural gas and oil which we will face in the very near future in the absence of positive legislation which provides the economic incentive to step up efforts to find domestic reserves. Instead, the House has settled for a measure which relies heavily on import quotas as a means of self-imposed conservation without, at the same time, providing realistic methods of increasing domestic energy production to take up the economic slack which will certainly develop if new domestic energy sources are not found to replace the lost imported energy.

NO COST FREE SOLUTION

In fact, the import restrictions in H.R. 6860, which could reduce oil imports by 2 million barrels per day by 1985, could result in a loss to the American economy of as much as \$90 billion per year. The Senate budget committee energy task force has estimated that the mandatory reductions in energy consumption which will result if incentives are not provided for increased domestic energy production will lead to a diminution in the Nation's output of goods and services. Specifically, it is estimated that a self-imposed reduction in imports of 1 million barrels per day would save about \$3.7 billion per year in payments to foreign energy producers. *But*, such a reduction could cost as much as \$30 billion in gross national product, for a net cost of over \$26 billion per year to the American economy. True, it is difficult to identify precisely who bears this cost. And therein lies the political appeal of the import quota concept.

I am hopeful that we in the Senate will be able to vastly improve and expand the bill sent to us by the House. We must strengthen the provisions which provide incentives for fuel conservation. We must closely examine the superficial appeal of import quotas in light of their impact on the economy. And we must review carefully the provisions relating to business use of petroleum products in light of economic reality.

ENCOURAGE DOMESTIC ENERGY PRODUCTION

More importantly, we have the opportunity to demonstrate leadership in the drive for energy independence by enacting positive measures to deregulate the artificially-controlled prices of natural gas and old domestic crude oil. It should be painfully obvious to everyone how artificial price regulation affects petroleum production. And if it is not yet obvious, the curtailments of natural gas this winter—estimated as high as 33 trillion cubic feet—will make it obvious. For such curtailments may lead to factory shut-downs, increased unemployment and economic hardship.

Domestic production of crude oil is also declining due to artificial price restraints. For that reason, I believe that the increased revenue the industry is getting from high oil prices should be channeled back into the exploration and development of additional domestic oil and gas. The Finance Committee could take the lead in this area by adopting a windfall profits tax with a plowback provision in conjunction with the phased decontrol of natural gas and crude oil prices. Obviously, such decontrol should be phased in gradually over a period of years so that prices to consumers rise slowly, thus avoiding an inflationary shock just as the economy begins to recover from the recession. Moreover, a properly constructed excess profits tax provision will assure that oil producers plow back their increased revenues in the search for new domestic reserves.

Only when we balance decreased imports and conservation with increased domestic production or development of alternative energy sources can we begin to solve this Nation's energy problem. I urge that we balance the numerous energy conservation incentives in H.R. 6860 with incentives for development of domestic reserves. For this is a situation where half a loaf is not necessarily better than no loaf at all.

STATEMENT OF SENATOR BILL BROCK

Mr. Chairman and Members of the Committee, some six months before the Arab oil embargo I warned that

"In the long run, few alternatives are less attractive than an America dependent for its vital energy upon the caprice of such areas as the Middle East or the Communist bloc. Our national security impels us to extreme caution as we move toward greater dependence on such sources.

"We must never allow ourselves to be placed at the mercy of some volatile monarch who may, under whatever influence, suddenly decide to turn off the lights."

Now, two years and one embargo later, we are at a turning point. The House of Representatives has failed to act decisively and the burden is on us. We can either adopt a tough but evenhanded energy conservation *and development* program, or we can continue to drift, growing more dependent on foreign sources of energy with all the consequences this implies for our economy and our national security.

But before we begin considering legislation, perhaps it would help to take a look at what we've accomplished in the last two years. For maybe we can learn what we should and should not do.

On the face of it at least, there have been many developments that would appear to have contributed to our long run goal of energy security. A major reorganization of federal energy policymaking was effected. The Federal Energy Administration Act was enacted, the Energy Resources Council and Energy Research and Development Administration were also formed. Last November, the *Project Independence Report* was published.

At the same time, however, there have been many indications that the energy industries are moving away from energy self-sufficiency. There have been many suspensions and cancellations of refinery expansion programs. The total loss of new refinery capacity now exceeds two million barrels per day, and several companies that build and design refineries are now out of work in the United States. Company drilling programs have been curtailed sharply, while the development of oil shale has also been delayed indefinitely, largely because of federal energy policy. Many electric utilities have postponed expansion of their generating capacities, while domestic production of crude oil has fallen since January, partly because of the government's entitlements program.

Perhaps one reason for contrast between what is supposed to be happening in energy policy and what is happening is the confusion created by the repeated reorganization of the federal energy policymaking establishment. One way to appear to solve a problem is to reorganize. Governments, it often seems, measure their success in terms of new organizations created. As one observer has noted: "... we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization." This was said, incidentally, not by Secretary William Simon or Secretary Rogers Morton or Administrator Frank Zarb, but by Gaius Petronius Arbiter, a confidant of Nero Caesar during the First Century A.D.

Of course, we in Congress have gotten to know the different energy czars and their subordinates quite well. For particularly since the embargo, they have had to spend much of their time appearing before Congressional committees. During his tenure time as Administrator of the Federal Energy Office, Secretary Simon reportedly appeared on the Hill at the request of Congress 108 times, an average of more than once per working day. And in the first 135 days of ERDA's existence, witnesses from this agency testified for 109 hours of formal hearings before 6 full committees and 27 subcommittees.

All this wouldn't be so bad if we had been more productive. However, aside from the Alaskan pipeline bill, which was passed about a year and a half ago, not one meaningful piece of energy legislation has emerged since the energy crisis was officially recognized as such. Instead, we have preoccupied ourselves with the search for a scapegoat and with methods of punishing the industry for alleged wrongdoing. We have threatened the oil industry, especially the major oil companies, with price rollbacks, extension of allocation authority, the divestiture of holdings in production, pipelines and marketing facilities, and the extension of FPC jurisdiction to the intrastate market for natural gas. None

of these measures will save energy; neither will they encourage the production of energy. In short, Congress has been worse than useless: it has been counter-productive.

But while we have been busy hunting scapegoats and trying to rollback prices, the Administration's record has been dismal as well. The embargo was an excellent time to obtain Congressional approval of such critically important measures as the deregulation of natural gas. Rather than acting, however, the Administration chose to study the issues. And what a fine study emerged. The result of months of work by hundreds of federal bureaucrats, the *Project Independence Report* is a massive document that I'm sure few if any in this Chamber have read.

And even if someone has read it, it raises more questions than it answers. However, the primary failing of the report is not what it says or does not say, but the diversion it has created. The *Report*, like appearing before Congress, has absorbed enormous amounts of time and talent in the Federal government. Perhaps worse, throughout 1974, it provided the Administration with a means of reassuring the public, and themselves, that the goal of self-sufficiency was being advanced when, in fact, it was being studied. Reorganization is one way to create the illusion of progress: studying a matter is another.

While Congress has been scapegoating and the Administration reorganizing and studying, another and far more dangerous aspect of federal energy policy has emerged: the regulatory one. Now, the Federal Energy Administration employs about 3,700 bodies, most of them concerned with administering price and allocation controls. The bureaucracy is rapidly becoming entrenched, with a vested interest in prolonging the controls. And the regulations these bureaucrats write often make little sense. They have also gone far beyond the original intent of the United States Congress. For example, the San Francisco Office of the Federal Energy Administration ruled early this year that no gasoline station could use allocated products to engage in price wars. In other words, FEA is opposed to lower prices for consumers.

Several months ago FEA issued a regulation, without a comment period, requiring parties seeking to establish new stations in a market area to first solicit comments from existing stations (and potential competitors) to assure that their market position will not be eroded. In other words, in the name of protecting competition, FEA is actually opposing competition and, because of this, the interests of the American consumer.

Mr. Chairman, I would like to have included and printed in the Record a policy directive from the San Francisco office of the Federal Energy Administration regarding price cutting and a notice from the Federal Register containing the procedures a businessman must follow to open a new gas station.

The regulatory approach to energy policy has clearly been a failure. It has discouraged domestic production, encouraged imports and created uncertainty and stagnation in the energy industry. It is ironic to me that at the same time that we are questioning the efficacy of government regulation of economic activity in so many areas, we are saddling the energy industry with more and more regulations.

If our fascination with regulations and controls was responsible only for rising consumer prices and increasing inefficiencies in the energy industry, I would be deeply concerned. But the consequences of our present energy policy are much more grave. We are in essence insuring our dependence on insecure foreign sources of oil. What happens if we have another oil embargo slapped on us tomorrow? And even without an embargo, we face the prospect of future increases in oil prices from the OPEC nations with all the consequences that this will have for an already weak domestic economy.

What am I talking about? For one thing, I am talking about the increasing vulnerability of the United States economy to foreign supply disruptions. I shudder at the thought of what such actions could mean.

And I would like to point out another question which I have come to fear more and more. What happens when our freedom to conduct foreign policy is hampered by our ever growing dependence on foreign oil? For example, will we be forced to abandon, or lessen, our support of Israel because of our need for Arab oil? The United States cannot be a great power unless it is independent. Dependence is not freedom.

A year ago, the United States sent \$2.2 billion in special military assistance to Israel. We thought it necessary to rebuild Israeli forces to balance the Soviet-supplied Arab forces. What did that do to the balance of power in the Middle

East? Did resupplying Israel force us to start digging ourselves a hole because there is no true balance of power in that region as long as the Middle East has oil dependence to hang over our heads?

Let me present a rather grim scenario. Suppose there is another Middle East war and this time, out of fear of a more devastating embargo, the United States refuses to resupply Israel with the military equipment it needs to survive.

Thoughtful observers have believed for many years that Israel possesses nuclear weapons and has the capacity to deliver them. And when faced with a question of national survival, is there any doubt as to what would occur? In fact, we could see the fulfillment of a Biblical prophecy within our lifetime . . . a nuclear Armageddon in the Middle East—stemming, in part, from the failure and misdirection of U.S. energy policy.

This is a terribly grave matter. We face a precarious time. Decisions need to be made which will allow us to make future decisions in an atmosphere of freedom, not of dependence.

For months, we have talked and listened and argued and gotten nowhere. The Senate now has the opportunity to work toward a national energy policy which allows us our freedom and also allows us the oil necessary to continue with a strong economy. However, a strong economy will not appear by itself as long as Congress continues to believe that all wisdom remains in Washington. Our belief in controls and regulations has put us deeper in that hole which we are digging. We must strive toward energy security, but to achieve that we must realize that the laws of supply and demand are still valid ones and should be given as much of an opportunity as possible, as soon as possible.

Energy is still our future. Policy direction is vitally needed if we are to remain a strong and free nation.

[From the Federal Register, Friday May 9, 1975]

FEDERAL ENERGY ADMINISTRATION, MOTOR GASOLINE

GUIDELINES FOR EVALUATION OF APPLICATIONS FOR ASSIGNMENT OF SUPPLIER AND BASE PERIOD USE TO NEW GASOLINE RETAIL SALES OUTLETS

The Federal Energy Administration hereby gives notice of guidelines to be used by FEA in evaluating applications for assignment of suppliers and base period uses to new gasoline retail sales outlets. The guidelines are set forth below and will provide a basis for consistent application of FEA's regulatory provisions with respect to new retail sales outlets of motor gasoline.

May 6, 1975, Washington, D.C.

ERIC J. FYGE,

Acting General Counsel.

APPENDIX

GUIDELINES FOR EVALUATION OF APPLICATIONS FOR ASSIGNMENT OF SUPPLIER AND BASE PERIOD USE TO NEW GASOLINE RETAIL SALES OUTLETS

1. *Scope.* Numerous questions have been raised as to the procedures and substantive criteria which FEA should apply to applications for assignment of suppliers and base period use for new gasoline retail sales outlets. These guidelines are intended to provide guidance as to how such applications should be handled both procedurally and substantively under current FEA regulations. In particular, these guidelines will discuss the identification of and service of notice to possible aggrieved parties as required by 10 CFR § 205.33 and the evaluation of applications to determine whether to assign a supplier and, if so, how to determine the assigned base period use pursuant to 10 CFR §§ 205.34 and 211.12(e).

2. *Notice to Aggrieved Parties.* (a) *General.* The procedural regulations and criteria applicable to all applications for assignment of suppliers and base period use are set-out in Subpart C of Part 205. Section 205.34 requires that the applicant file an application which not only contains various facts regarding the request, but also the "names and addresses of all affected persons (if reasonably ascertainable)," and "[t]he identification of any persons who will be aggrieved by the FEA action sought, including potential suppliers."

Section 205.33(a) provides that FEA *shall* serve notice on any person readily identifiable by the FEA as one who will be aggrieved by the FEA action and

may serve notice on any other person that written comments will be accepted if filed within 10 days of service of the notice. . . . (Emphasis added.)

The word "aggrieved" is defined in § 205.2 as describing or meaning "a person with an interest sought to be protected under the FEAA or EPAA who is adversely affected by an order of interpretation issued by the FEA or a State Office."

Thus it is the responsibility of the applicant under § 205.34(b) to supply FEA with a list of potentially aggrieved persons, but the burden is on FEA under § 205.33(a) to serve notice of the application on such aggrieved parties. Moreover, FEA "may serve notice on any person. . . ." (Emphasis added.)

(b) *Identification of Aggrieved Parties.* The applicant's task of identifying potentially aggrieved persons is not as difficult as it might seem. In most cases this information is known to the applicant because suppliers opening new sites often have made sophisticated studies of the size of the trading area and the competitors located within it before their application is submitted. As a general rule, in the case of a new station located in a typical residential neighborhood, all retail sales outlets, particularly small and independent refiner-operated outlets and all branded and non-branded independent marketer-operated outlets, located within a mile radius of that station should be presumed to be "aggrieved persons" within the meaning of the notice requirements. The geographical trading area affected might be somewhat larger in rural neighborhoods and somewhat smaller in urban neighborhoods. Moreover, because of the peculiarities of traffic flow, an affected trading area might be longer in one direction than another. But, even though it is not possible to prescribe rigid rules for the determination of the parameters of the trading area, in most cases the FEA's discretion in this area should be freely exercised so long as the general rule of erring on the side of over-inclusion is followed.

It is not necessary that notice be served on other persons also identified by the applicant but not located in the trading area of the proposed new station—even though they might otherwise be affected because their supplies might be reduced—since the administrative burdens of doing so greatly outweigh the minimal effect which comments received from such persons would have on the decision.

(c) *Method of Providing Notice.* Notice should be individually served upon any person identified by the applicant as an aggrieved party and located in the trading area of the proposed new station using the form of notice provided in Attachment A. In addition, FEA should arrange, using imprest funds, for the publication of a notice in local newspapers of general circulation in the market area to be served by the proposed retail sales outlet. The notice should also be substantially in the form of Attachment A to these guidelines and should be published on at least two separate occasions at least one week apart. This procedure should serve to provide notice to those persons not readily identified by the applicant as aggrieved persons and satisfies FEA's independent responsibility to identify and notify aggrieved persons.

(d) *Information in Notice.* It is not necessary to disclose in the notice any of the information contained in the application except (i) the applicant's name and address, (ii) the location of the station for which application is made, and (iii) an approximation of the base period use sought by the applicant. Only an approximation of the amount being applied for should be given because in some cases applicants have claimed that the actual amount is proprietary information arrived at after a thorough and highly confidential marketing survey of the area, the disclosure of which would inform the applicant's competitors of the applicant's strategy of market expansion. While such information may not in fact be the type of proprietary information protected from disclosure, there is at least a colorable argument that it is. In any event, the problem can be readily avoided by providing in the notice only an approximation of the actual amount. For example, if the amount applied for is 1,000,000 gallons per year, it could be described as "a high volume station having an aggregate base period use in excess of 800,000 gallons per year." Such a description would give potentially aggrieved parties adequate notice of the relative size of the station and at the same time avoid the unnecessary disclosure of possibly confidential competitive information.

(e) *Comment Period, Hearings and Conferences.* Subpart C of Part 205 requires FEA to give aggrieved parties 10 days from service of the notice in which to file written comments. FEA may also make an independent investigation of facts alleged in the application of comments and may rely on information obtained from any source. (See § 205.35.) A conference and hearing are both discretionary with the agency. (See § 205.35 and Subpart M of Part 205.) A conference with

only the applicant in attendance is the recommended means of obtaining additional information if the application and the written comments still leave some unresolved issues. A hearing should be used only rarely and in exceptional circumstances, since most of the information relevant to the application can best be conveyed only in writing.

(f) *Timeliness of FEA Action and Interim Supplies.* FEA is required to act upon an application for assignment of a specified supplier within 90 days after its receipt. Failure to act during such period may be considered by the applicant as a denial from which an appeal may be taken. (See § 205.37.)

It is sometimes difficult, however, to evaluate an application properly within the 90-day period. Moreover, the applicant may need prompt action because the station is idle, perhaps at great expense to the applicant. In such cases it is possible for FEA office to issue an order granting a temporary assignment until such time as a full evaluation of the application for a permanent assignment can be completed. (See also discussion below concerning retail sales outlets which operate using surplus products.) The procedures for issuing such temporary orders are found in § 205.39.

As indicated in that section, a temporary assignment can be made "upon application." This does not mean that the applicant must expressly apply for a temporary as well as a permanent assignment. Since an application for a temporary assignment need contain no more information than that required for a permanent assignment, the filing of two applications is unnecessary. Thus, when an application for a permanent assignment has been made and it is apparent from the circumstances that a temporary assignment is warranted pending a final decision and is not objected to by the applicant, the application on file for a permanent assignment may be treated as an application for temporary assignment as well as for a permanent assignment.

An order granting a temporary assignment can be effective for only 60 days and cannot be renewed. The temporary order must contain an express finding that circumstances do not permit issuance of an assignment or phase with the usual processing of permanent assignment orders. See § 205.39(b).

3. *Substantive Criteria Applicable to Assignment of Supplier and Base Period Use.* (a) *General.* The procedural regulations set forth in § 205.35(b) the criteria applicable to the evaluation of applications for assignment of a supplier and new base period use. These criteria restate the criteria set forth in section 4(b) (1) of the Emergency Petroleum Allocation Act of 1973 applicable to FEA's overall duties in promulgating and applying the Mandatory Petroleum Allocation and Price Regulations.

Like the criteria of section 4(b) (1) of the EPAA, the various criteria of § 205.35(b) are to be applied only "to the maximum extent possible." As applied to a particular set of circumstances, these criteria may not only be difficult to apply but also conflicting. As the courts have said in applying the various goals of section 4(b) (1), "[t]he goals are inherently inconsistent, and no regulation could promote all of them at the same time. Congress recognized this in saying that the regulations shall provide for them 'to the maximum extent practicable.' A balancing of goals is required, and Congress has left the details of this balancing to the Federal Energy Administration. *Union Oil Co. v. FEA*, _____ F. Supp. _____, Fed. Energy Guidelines ¶ 26,007, at p. 26,098 (C.D. Cal. 1974); see also *Air Trans. Ass'n of America v. FEA*, 382 F. Supp. 437 (D.C. 1974). Thus, FEA should be guided by the criteria of § 205.35(b) but has considerable discretion in balancing one against the other.

While it is inappropriate to prescribe precise rules for the application of these criteria to assignments of suppliers and establishment of new base period uses in all circumstances, nevertheless some general principles may be prescribed.

(b) *Whether to Assign a Supplier-Purchaser Relationship.*

Three of the criteria which must be taken into account in deciding whether to assign the new outlet a supplier are whether granting the application in question would promote "economic efficiency;" minimize "economic distortion, inflexibility, and unnecessary interference with market mechanisms," and promote the equitable distribution of petroleum products at equitable prices among all regions of the country and segments of the industry. (See § 205.35(b) (1) (viii), (ix), and (vi).) These three criteria together can be read as stating that even within the context of the regulatory program, free market forces should be allowed to function to the extent possible. Thus, in the absence of other countervailing considerations, FEA should start with a strong but rebuttable presump-

tion in favor of assigning a supplier/purchaser relationship for a proposed new retail sales outlet. In particular cases there might also be other relevant criteria favoring the application, such as the maintenance of public services and agricultural operations. (See § 205.35(1) (ii) and (iii).)

A possible countervailing consideration may be the preservation of a competitively viable independent section of the industry.

Thus, in each case the facts must be reviewed to determine whether the general presumption in favor of granting the application should be overridden or sustained by a weighing of these other countervailing considerations.

(i) *Effect on Supplier's Other Purchasers.* Attention should be paid to the effect of any assignment upon the supplier's other customers, particularly the supplier's branded and non-branded independent purchasers. If the assignment will significantly lower the supplier's allocation fraction below one (1.0) then the assignment should be questioned. In general, if the assignment can be expected to reduce the supplier's most recently reported allocation fraction by more than one percentage point (0.010), the reduction may be significant and would warrant especially careful assessment of the supplier's future supply position.

(ii) *Effect on Independent Competitors.* In evaluating applications, the comments solicited from independent and small refiners and branded and non-branded independent marketers operating stations within the same trading area as any new station which will not be operated by an independent marketer or small or independent refiner should be carefully reviewed to determine whether or not granting of the application may seriously jeopardize the competitive viability of small and independent refiners and branded and non-branded independent marketers.

The existence of substantial evidence that granting the application would result in probable severe and irreversible damage to the existing independent segment in the proposed market may be the basis for denial of an application. Such evidence would not consist of a showing of probable financial impairment to a particular independent marketer, but rather would require evidence that the volume of business enjoyed by the independent segment in that marketplace would probably be substantially and permanently reduced.

Although these judgments are extremely difficult to make, FEA cannot ignore clear and compelling evidence that the operation of a new retail sales outlet which is not operated by an independent marketer will so dominate a trading area as to substantially impair the competitive viability of independent marketers. Generally such evidence is not present if: (1) independent marketers in the trading area can remain competitively viable by relying upon customers who will patronize such stations because of the availability of supplementary products and services not provided by the new station; (2) there are other large volume low profit margin stations in the trading area or in other nearby trading areas, and the presence of such stations has not impaired the competitive viability of independent marketers;³ and (3) there is a reasonable prospect of considerable growth in demand within the trading area so that the new station, notwithstanding its advantages, will not necessarily acquire most of its business at the expense of the other stations in the area.

This is not meant to be an exhaustive listing of the kinds of evidence that would sustain the granting of such an application notwithstanding a showing of adverse impact upon the various aggrieved parties. Indeed, given the rebuttable presumption in favor of granting such applications in any event, the burden is on those opposing the application to make a clear and convincing showing that the competitive viability of the independent marketing sector within the trading area will be substantially impaired by the opening of a new station which is not to be operated by an independent marketer. This showing is not made merely by a showing of financial harm to, or even of impending bankruptcy by, one or more independent marketers. Finally, such a showing cannot rest upon unsubstantiated assertions or mere speculation. There must be evidence of the specific adverse impacts of the new station's opening before FEA can perform the analysis outlined above and conclude that the application must be denied.

(iii) *Consideration of Applications for Retail Sales Outlets to be Built in the Future.* FEA has encouraged operators of potentially new retail sales outlets to

³The FEA must consider, however, whether, given limited demand within the trading area (see item (3) following), the new station, in conjunction with the existing high-volume station, will destroy the competitive viability of the remaining independent marketers.

apply for FEA assignment of a supplier-purchaser relationship and a base period use prior to construction of the new outlet. (See § 211.12(c).) This policy was established to prevent any hardship which might result from a failure to obtain an assigned supplier or base period use following the operator's expenditure of construction funds and assumption of other obligations connected with the proposed new retail sales outlet. Consequently, consideration of an application should not be delayed because a retail sales outlet is not currently operational or may not become operational before the expiration date of the EPAA. Approvals of such applications may be conditioned upon the retail sales outlets being operational within a certain period of time. Of course, such assignments should be made effective only upon the retail sales outlets becoming operational.

(iv) New Retail Sales Outlets Operating Solely on Supplies of Surplus Product.

In some cases new retail sales outlets are being operated with gasoline purchased from suppliers which have certified their gasoline to be surplus product as permitted by § 211.10(c). Such retail sales outlets, however, are new suppliers as defined by § 211.10(c) which must receive FEA approval before they commence operations. Such approval should ordinarily be freely granted to gasoline retail sales outlets provided it is made clear that such approvals do not create a supplier-purchaser relationship between the retail sales outlet and the supplier of the surplus product and does not establish a base period use for the retail sales outlet. Approvals pursuant to § 211.10(c)(2) need not be conditioned upon application for a supplier and an assigned base period use. Operators of new retail sales outlets under § 211.10(c)(2) should understand, however, that unless they have been assigned a supplier and a base period use pursuant to § 211.12(c), they have no future claim to a supplier or a pro rata share of available supplies in a period when there is no surplus product.

(c) Assignment of Base Period Use. Once a decision to assign a supplier-purchaser relationship for a new retail sales outlet is made, FEA must determine the appropriate base period use to be assigned the retail sales outlet. As a general rule, the average base period use for retail sales outlets of a similar size (number of pumps) and nature (full service, gas only, self service, car wash, etc.) in the same market area will be the appropriate assigned base period use. Thus, for example, a station of a particular size and type should receive a base period use approximately equal to other stations of the same kind in the market area. When a new type of station is constructed in a market area, it should receive an allocation commensurate with the relative treatment of the new type of station compared to existing types in the nearest market area where such comparisons may be made.

The delineation of the market area will vary in each case, and ultimately will be determined by FEA. There can be no hard and fast criteria, but some general guidelines may be observed:

- (i) In a city over 25,000 population, the market area to be considered should be the area within a one-mile radius of the proposed new outlet.
- (ii) In a suburban area (housing developments, shopping centers, apartments) the market area to be considered should be the area within a two-to-three mile radius of the proposed new outlet, depending upon the density of recent growth and traffic pattern characteristics in the area.
- (iii) On a non-urban arterial highway with full control of access, the market area should include the area within one-fourth mile of the access point at the proposed location of the new outlet and the next two access points in each direction from the proposed location of the new outlet.
- (iv) On a non-urban arterial highway with uncontrolled access or partially controlled access, the market area should include five miles in either direction along the highway.
- (v) On a through street or through highway in a rural area, the market area should be that area within a five mile radius of the proposed new outlet.
- (vi) In a town under 25,000 population, the market area should be a two mile radius from the proposed outlet.

As used in the above guidelines, the following terms have the following meanings:

"Arterial highway" means a highway primarily for through traffic, usually on a continuous route.

"Full control of access" means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only and by prohibiting crossings at grade or direct private driveway connections.

"Partially controlled access" means that the authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at grade and some private driveway connections.

"Through street or through highway" means every highway or portion thereof at the entrance to which vehicular traffic from intersecting highways is required by law to stop or yield before entering or crossing and where appropriate signs are erected as provided by law unless entry or crossing is made on the proper indication of traffic control.

"Uncontrolled access" means that the authority having jurisdiction over a highway, street, or road, does not limit the number of points of ingress or egress, except through the exercise of control over the placement and the geometrics of connections as necessary for the safety of the travelling public.

ATTACHMENT A

NOTICE

Pursuant to 10 CFR § 205.83(c), this is to notify you that [redacted] has applied to the Federal Energy Administration for an order assigning to it a base period volume of [more than] [less than] [redacted] gallons per month for a retail gasoline station it intends to operate at [redacted]. This retail station will be owned by [redacted] and operated by [redacted].

You are invited to submit written comments to FEA in support of or in opposition to the application. If you oppose the application on the ground that approval of it would adversely affect your business, you should set forth in detail the following minimum information:

1. Your name and address.
2. The person or persons who have an ownership interest in the business which you allege would be adversely affected, and the extent of each such person's ownership interest.
3. The location of your business in relation to the retail station for which the application for assignment was made.
4. The person or company from whom you presently purchase gasoline, and whether your business operates under the trademark of your supplier.
5. The volume, in gallons, of gasoline sold by your business in each month from January 1, 1972 until the present.
6. Whether or not there is a demand for gasoline in the trading area in which your business is located which cannot be met by existing retail stations.
7. The adverse effect which you believe approval of the application would have on your business.
8. Detailed factual data and information which support your claim that approval of the application will have an adverse effect on your business. Such data and information should include, at a minimum, audited or unaudited balance sheets and profit and loss statements for a recent, representative time period.

FEA can consider alleged adverse effects on your business only if such allegations are supported by the best available data. Broad and unsubstantiated allegations of adverse impact will be disregarded.

FEA will consider your written comments along with those submitted by the applicant and other interested persons. If you submit written comments, you will be notified of FEA's decision. FEA may, at its discretion, hold a public hearing to consider the application, in which event you will be notified. A copy of that portion of FEA's procedural regulations applicable to these proceedings is enclosed for your information.

Your written comments should be hand delivered or received by mail not later than [redacted] to the following address:

Unless you claim confidential treatment for your submission, a copy of your comments should be delivered to the applicant. If you want the FEA to treat as confidential the information which you submit to it, it will do so if you so request and if the information is of a type entitled to such confidential treatment under the Freedom of Information Act, 5 U.S.C. 552, as amended, 18 U.S.C. 1905, 10 CFR 205.9, or under other Federal statutes, regulations or rules. Trade secrets and certain commercial and financial information are entitled to confidential treatment if you so request. If you request confidential treatment, you should designate on the original version of your written comments the information which you wish to be kept confidential and submit to FEA and the applicant another version of the document with such confidential information deleted. Information

which is not designated as confidential or is not entitled by law or regulation to confidential treatment will be disclosed to the applicant and perhaps to other interested persons.

Sincerely,

(Name and Title)

Enclosure.

[FR Doc.75-12273 Filed 5-6-75; 1:07 pm]

FEDERAL ENERGY ADMINISTRATION,
San Francisco, Calif., November 26, 1974.

POLICY NOTICE, PROGRAM PARTICIPANTS AND FEA STAFF

This Notice Transmits: Policy for the reporting and investigating gas wars as an indication of supply imbalances within Region IX.

Purpose: For several months, there has been an abundant supply of motor gasoline in most areas of Region IX, although some areas and sectors of the market continue to report shortages. There have lately been vague, unconfirmed reports that supply in some areas is so excessive as to precipitate gasoline price wars. The Regional Office believes that any situations of this sort are an indication that product may be poorly distributed. (Section 211.13(f) of the Mandatory Petroleum Allocations Regulations requires that any purchaser (including retail outlets) whose needs decline, shall apply to his supplier for a downward adjustment to base period use.) Hence, it is not the intention of FEA that larger allocations be used for engaging in gas wars. The regulations prohibit suppliers from increasing volumes to a station in order to support gas war activity.

This Policy Notice rescinds: First notice on this subject.

WILLIAM C. ARNTZ,
Regional Administrator.

**POLICY FOR REPORTING AND INVESTIGATING GAS WARS AS AN INDICATION OF SUPPLY
IMBALANCES WITHIN REGION IX**

PROCEDURES

1. Reporting of gas wars:

A. All FEA employees are to report any "gas wars" they are aware of, giving names, addresses and specific activity (such as gas war signs, low prices being charged, etc.) to the Director, Compliance and Enforcement Division.

B. Complaints from public will be accepted by FEA provided the details listed in 1A are given. Initial contact may be made by telephone to the local FEA office but should be followed up by a brief summary in writing to the Director, Compliance and Enforcement Division, 111 Pine Street, San Francisco, California 94111.

2. FEA Region IX will review all reports and will investigate those determined to have merit. The investigation will determine if the stations involved are being allocated product by their suppliers in accordance with the regulations.

3. If FEA determines that violations of the Regulations have occurred, enforcement action will be taken.

4. If FEA determines that there is an excess of product in the area involved, action will be taken under Section 211.14 of the Regulations to redirect the excess product into areas still experiencing shortages.

P R E S S R E L E A S E

FOR IMMEDIATE RELEASE
June 24, 1975

COMMITTEE ON FINANCE
UNITED STATES SENATE
2227 Dirksen Senate Office Bldg.

FINANCE COMMITTEE SETS HEARINGS ON
ENERGY CONSERVATION AND CONVERSION ACT (H.R. 6860)

The Honorable Russell B. Long (D., La.), Chairman of the Senate Committee on Finance, announced today that the Committee would hold hearings on the Energy Conservation and Conversion Act (H.R. 6860), a bill passed by the House on June 19, 1975.

The hearings will begin on Thursday, July 10, 1975 at 10:00 a.m., and will be held in Room 2221, Dirksen Senate Office Building. On Monday, July 14, at 10:00 a.m., the Committee will hear testimony from the Honorable William E. Simon, Secretary of the Treasury and the Honorable Frank G. Zarb, Administrator, Federal Energy Office, who will present the Administration's position on the legislation.

The House-passed bill would impose import quotas and tariffs on petroleum, would set automobile efficiency standards, would establish a trust fund for energy research and development, and would levy taxes on certain business uses of oil and gas. The Chairman stated that the Committee would welcome witnesses to testify not only on the specific provisions included in H.R. 6860, but also on other proposals within the Finance Committee's jurisdiction relating to energy production, conversion, and conservation.

Requests to Testify.--Senator Long advised that witnesses desiring to testify during this hearing must make their request to testify to Michael Stern, Staff Director, Committee on Finance, 2227 Dirksen Senate Office Building, Washington, D.C. 20510, not later than Thursday, July 3, 1975. Witnesses will be notified as soon as possible after this cutoff date as to when they are scheduled to appear. Once the witness has been advised of the date of his appearance, it will not be possible for this date to be changed. If for some reason the witness is unable to appear on the date scheduled, he may file a written statement for the record of the hearing in lieu of a personal appearance.

Consolidated Testimony.--Senator Long also stated that the Committee urges all witnesses who have a common position or with the same general interest to consolidate their testimony and designate a single spokesman to present their common viewpoint orally to the Committee. This procedure will enable the Committee to receive a wider expression of views than it might otherwise obtain. Senator Long urged very strongly that all witnesses exert a maximum effort, taking into account the limited advance notice, to consolidate and coordinate their statements.

Legislative Reorganization Act.--In this respect, he observed that the Legislative Reorganization Act of 1946, as amended, requires all witnesses appearing before the Committees of Congress "to file in advance written statements of their proposed testimony, and to limit their oral presentations to brief summaries of their argument."

- 2 -

Senator Long stated that in light of this statute and in view of the large number of witnesses who desire to appear before the Committee in the limited time available for the hearing, all witnesses who are scheduled to testify must comply with the following rules:

- (1) A copy of the statement must be filed by the close of business the day before the witness is scheduled to appear.
- (2) All witnesses must include with their written statement a summary of the principal points included in the statement.
- (3) The written statements must be typed on letter-size paper (not legal size) and at least 50 copies must be submitted before the beginning of the hearing.
- (4) Witnesses are not to read their written statements to the Committee, but are to confine their ten-minute oral presentations to a summary of the points included in the statement.
- (5) Not more than ten minutes will be allowed for the oral summary. Witnesses who fail to comply with these rules will forfeit their privilege to testify.

Written Statements.--Witnesses who are not scheduled for oral presentation, and others who desire to present their views to the Committee, are urged to prepare a written statement for submission and inclusion in the printed record of the hearings. These written statements should be submitted to Michael Stern, Staff Director, Committee on Finance, Room 2227 Dirksen Senate Office Building not later than July 18, 1975.

PR #27

94TH CONGRESS
1ST SESSION

H. R. 6860

IN THE SENATE OF THE UNITED STATES

JUNE 23 (legislative day, JUNE 6), 1975

Read twice and referred to the Committee on Finance

AN ACT

To provide a comprehensive national energy conservation and conversion program.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled.*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Energy Conservation and
5 Conversion Act of 1975".

6 **SEC. 2. TABLE OF CONTENTS.**

Sec. 1. Short title.

Sec. 2. Table of contents.

Sec. 3. Amendment of 1954 Code.

TITLE I—IMPORT TREATMENT OF OIL

Sec. 101. Statement of purpose.

PART I—QUOTAS

Sec. 111. Imposition of quantitative restrictions.

Sec. 112. Establishment of import licensing system.

II

TITLE I—IMPORT TREATMENT OF OIL—Continued

PART II—DUTIES

Sec. 121. Rates of duty on oil.

PART III—ADMINISTRATIVE AND MISCELLANEOUS PROVISIONS

Sec. 131. Import restrictions and rates of duty to be reflected in the Tariff Schedules of the United States.

Sec. 132. Annual reports.

Sec. 133. Definitions.

PART IV—OFFICE OF PETROLEUM IMPORT LICENSING

Sec. 141. Establishment of office.

Sec. 142. Functions of the Deputy Administrator.

Sec. 143. Conforming amendment.

TITLE II—OTHER ENERGY CONSERVATION PROGRAMS

PART I—AUTOMOBILE-FUEL MILEAGE

Sec. 211. Definitions.

Sec. 212. Average fuel economy standards applicable to each manufacturer.

Sec. 213. Duties and powers of the Secretary and Administrator.

Sec. 214. Labeling and advertising.

Sec. 215. Prohibited conduct.

Sec. 216. Civil penalty.

Sec. 217. Relationship to State law.

PART II—INTERCITY BUSES, RADIAL TIRES, AND REREFINED OIL

Sec. 221. Repeal of excise tax on buses used in intercity public transportation.

Sec. 222. Repeal of excise tax on radial tires.

Sec. 223. Rerefined lubricating oil.

PART III—TAX INCENTIVES FOR CERTAIN ENERGY-RELATED IMPROVEMENTS OF BUILDINGS

Sec. 231. Insulation of principal residence.

Sec. 232. Residential solar energy equipment.

Sec. 233. Qualified electric motor vehicles.

TITLE III—ENERGY CONSERVATION AND CONVERSION TRUST FUND

Sec. 311. Establishment of Energy Conservation and Conversion Trust Fund.

Sec. 312. Expenditures from Trust Fund for energy projects and programs.

Sec. 313. Energy Conservation and Conversion Trust Fund Review Board.

Sec. 314. Requirement of annual authorizations and appropriations.

**TITLE IV—ENCOURAGING BUSINESS CONVERSION FOR
GREATER ENERGY SAVING**

PART I—BUSINESS USE OF PETROLEUM AND PETROLEUM PRODUCTS

Sec. 411. Excise tax on business use of petroleum and petroleum products.

PART II—AMORTIZATION FOR CERTAIN ENERGY-RELATED PROPERTY

Sec. 421. Amortization of qualified energy use property.

Sec. 422. Amortization of qualified railroad equipment.

Sec. 423. Amendments relating to amortization of certain railroad rolling stock.

Sec. 424. Technical and conforming amendments.

PART III—TAX CREDIT CHANGES RELATING TO ENERGY CONSERVATION

Sec. 431. Changes in investment credit relating to insulation, solar energy, and air conditioning.

Sec. 432. Generating facilities powered by petroleum and petroleum products.

1 **SEC. 3. AMENDMENT OF 1954 CODE.**

2 Except as otherwise expressly provided, whenever in
3 this Act an amendment or repeal is expressed in terms of
4 an amendment to, or repeal of, a section or other provision,
5 the reference shall be considered to be made to a section
6 or other provision of the Internal Revenue Code of 1954.

7 **TITLE I—IMPORT TREATMENT**
8 **OF OIL**

9 **SEC. 101. STATEMENT OF PURPOSE.**

10 The purpose of this title is—

11 (1) to reduce the dependence of the United States
12 on foreign oil by imposing restrictions on imports of
13 oil so as to reduce such imports as rapidly as practicable
14 without contributing to serious economic dislocation,

15 (2) to decrease imports of oil so that not later

1 than 1985 the amount of such imports should not ex-
 2 ceed 25 percent of the amount of domestic oil consump-
 3 tion, and

4 (3) to place the United States, as soon as practi-
 5 cable, in a position to deal with any oil embargo by
 6 foreign nations through a combination of any strategic
 7 reserve for oil which may be provided by law, other
 8 available sources of oil, and economies in the domestic
 9 consumption of oil which may be effectuated.

10 The purpose of this title is to be certain that oil conservation
 11 which is obtained under this Act results in the reduction of
 12 oil imports and not in the reduction of domestic oil produc-
 13 tion.

14 PART I—QUOTAS

15 SEC. 111. IMPOSITION OF QUANTITATIVE RESTRICTIONS.

16 (a) QUANTITATIVE RESTRICTIONS.—Except as other-
 17 wise provided in this section, the maximum average
 18 daily quantity of petroleum and petroleum products which
 19 may be imported into the United States shall be determined
 20 in accordance with the following table:

Calendar year:	Maximum average daily number of barrels (in millions)
1975	6.0
1976	6.0
1977	6.5
1978	6.0
1979	6.0
1980 and thereafter.....	6.5

1 In the case of the calendar year 1975, this subsection shall
2 apply only with respect to articles entered or withdrawn
3 from warehouse for consumption on or after the first day on
4 which the import licensing system established under section
5 112 takes effect.

6 (b) AUTHORITY TO VARY SCHEDULE.—

7 (1) IN GENERAL.—Whenever the President deter-
8 mines that, by reason of variations in domestic con-
9 sumption caused by economic factors or the weather,
10 by reason of delays in obtaining domestic production of
11 oil or in achieving oil conservation goals, or by reason
12 of other similar factors, it is in the national interest to
13 vary the average daily quantity of oil which may be im-
14 ported during any period, he shall appropriately modify
15 the figure set forth in subsection (a) applicable to such
16 period.

17 (2) LIMITATION.—Any modification under this
18 subsection for any period may not change the maximum
19 average daily number of barrels of petroleum and petro-
20 leum products which may be imported into the United
21 States during any calendar year to a quantity which is
22 above or below the figure for such calendar year set
23 forth in subsection (a) by more than—

1 (A) in the case of 1975, 1976, or 1977,
2 1,000,000 barrels a day,

3 (B) in the case of 1978 or 1979, 1,500,000
4 barrels a day, or

5 (C) in the case of a calendar year after 1979,
6 2,000,000 barrels a day.

7 (c) SAVINGS IN DOMESTIC CONSUMPTION TO BE
8 REFLECTED IN REDUCTIONS IN IMPORTS.—The President
9 shall establish quantitative restrictions lower than the quan-
10 titative restrictions set forth in subsection (a) to the extent
11 necessary to ensure that savings in United States con-
12 sumption of oil will be fully reflected by at least equivalent
13 reductions in the imports of oil.

14 (d) PETROCHEMICAL FEEDSTOCKS.—For purposes of
15 the quantitative restrictions imposed pursuant to this sec-
16 tion, petrochemical feedstocks shall not be counted against
17 the maximum average daily number of barrels of petroleum
18 and petroleum products which may be imported into the
19 United States.

20 (e) NEEDS OF GEOGRAPHICAL AREAS AND INDUS-
21 TRIES FOR PARTICULAR PRODUCTS TO BE TAKEN INTO
22 ACCOUNT.—The President shall divide any quantitative
23 restrictions imposed pursuant to this section for any period
24 among petroleum and petroleum products where such divi-
25 sion is necessary to avoid substantial adverse impact on the

1 various economic and health needs of geographical areas and
2 industries within the United States.

3 (f) CERTAIN DISTILLATE AND RESIDUAL FUEL OILS
4 IMPORTED FOR USE AS FUEL.—

5 (1) MINIMUM QUANTITIES IMPORTED BEFORE
6 1978.—Nothing in this section shall prevent the im-
7 portation into the United States for use as fuel (other
8 than for the propulsion of motor vehicles) of distillate
9 fuel oil and residual fuel oil (provided for in item 475.05
10 or 475.10 of the Tariff Schedules of the United States)
11 in average daily quantities which are equal to 2,000,000
12 barrels per day in the years 1975, 1976, and 1977, of
13 which not more than 400,000 barrels per day in any
14 such year may be for such distillate fuel oil.

15 (2) COORDINATION WITH SUBSECTION (a).—Any
16 quantities of distillate fuel oil and residual fuel oil re-
17 ferred to in paragraph (1) which are imported into the
18 United States during any calendar year before 1978 and
19 which are not greater than the applicable minimum quan-
20 tities set forth in paragraph (1) shall be charged against
21 the quantitative restrictions set forth in subsection (a)
22 which apply for such year.

23 (g) APPLICATION OF QUANTITATIVE RESTRICTIONS.—
24 No quantitative restriction imposed pursuant to this section
25 shall apply with respect to any quantity of oil which is

1 imported into the United States during any period for storage
2 in any strategic reserve for oil which may be provided by
3 law.

4 (h) QUARTERLY REVIEW OF QUANTITATIVE RESTRIC-
5 TIONS.—Not less frequently than once each calendar quarter,
6 the President shall review the quantitative restrictions estab-
7 lished by subsection (a) and any modifications made pur-
8 suant to subsections (b) and (c).

9 (i) PROCLAIMING OF QUANTITATIVE RESTRICTIONS;
10 CERTIFICATIONS.—

11 (1) QUARTERLY PROCLAMATION OF QUANTITA-
12 TIVE RESTRICTIONS.—Before the beginning of each cal-
13 endar quarter, the President shall proclaim the aggregate
14 quantities of petroleum and petroleum products which
15 under subsection (a) may be imported into the United
16 States during such calendar quarter (as modified pur-
17 suant to subsections (b) and (c)).

18 (2) CERTIFICATION.—The President shall certify
19 any modification made under subsection (b) or (c) to
20 the Secretary of the Treasury and to the Deputy Admin-
21 istrator for Petroleum Import Licensing.

22 (j) ADMINISTRATION.—The Secretary of the Treasury
23 shall take such actions under the customs laws of the United
24 States as may be necessary and appropriate to ensure that
25 the aggregate quantities of oil imported into the United

1 States during any period do not exceed the quantities estab-
2 lished by subsection (a) as modified pursuant to subsections
3 (b) and (c).

4 **SEC. 112. ESTABLISHMENT OF IMPORT LICENSING**
5 **SYSTEM**

6 (a) **IN GENERAL.**—Before December 31, 1975, the
7 President shall establish an import licensing system for petro-
8 leum and petroleum products which are imported into the
9 United States. Import licenses issued under this subsection
10 shall be distributed on the basis of public auctions in which
11 bidding is by sealed bids, and such licenses shall be fully
12 marketable.

13 (b) **SEPARATE LICENSES FOR SMALL REFINERS AND**
14 **INDEPENDENT MARKETERS.**—

15 (1) **ESTABLISHMENT OF SEPARATE LICENSING**
16 **SYSTEM.**—

17 (A) The President shall establish a separate
18 import licensing system for small refiners and in-
19 dependent marketers of petroleum or petroleum
20 products. Except as provided in subparagraph (B),
21 import licenses issued under this subsection shall
22 be distributed on the basis of public auctions in
23 which bidding is by sealed bids. Import licenses
24 issued under this subsection shall not be marketable;
25 except that, under the circumstances and to the ex-

1 tent provided by regulations, they may be resold to
2 the Deputy Administrator for Petroleum Import
3 Licensing.

4 (B) In any case in which any small refiner or
5 independent marketer establishes to the satisfac-
6 tion of the Deputy Administrator for Petroleum
7 Import Licensing—

8 (i) that he has made reasonable efforts to
9 secure the import licenses necessary to carry out
10 his business at its regular level of operation but
11 has not been able to secure such licenses, or

12 (ii) that the destruction of, or damage to,
13 any of his business facilities or any other emer-
14 gency situation requires that he be issued im-
15 port licenses in order to continue his business
16 operation,

17 the Deputy Administrator may issue one or more
18 import licenses to such refiner or marketer. The
19 price for import licenses issued under this sub-
20 paragraph shall be the average price for import
21 licenses established at public auctions conducted
22 pursuant to subsection (a).

23 (2) **SMALL REFINER AND INDEPENDENT MAR-**
24 **KETER DEFINED.**—For purposes of this section—

25 (A) **SMALL REFINER.**—The term “small

1 refiner" means a refiner whose total refinery capac-
 2 ity (including the refinery capacity of any person
 3 who controls, is controlled by, or is under common
 4 control with such refiner) does not exceed 50,000
 5 barrels per day.

6 (B) INDEPENDENT MARKETER.—The term
 7 "independent marketer" means a person who is
 8 engaged in the marketing or distributing of refined
 9 petroleum products, but who (i) is not a refiner,
 10 and (ii) is not a person who controls, is controlled
 11 by, is under common control with, or is affiliated
 12 with a refiner (other than by means of a supply
 13 contract).

14 (c) PROCEDURES FOR LICENSING SYSTEM.—

15 (1) IN GENERAL.—The Administrator of the Fed-
 16 eral Energy Administration shall establish procedures
 17 for the administration of this section through the pro-
 18 mulgation of regulations.

19 (2) REGULATIONS FOR SUBSECTIONS (a) AND
 20 (b).—The regulations promulgated under this section
 21 with respect to subsections (a) and (b) shall include
 22 provisions authorizing the Deputy Administrator for
 23 Petroleum Import Licensing—

24 (A) to schedule frequent auctions during each
 25 calendar quarter;

1 (B) to require that the bidding be for small
2 units, but to permit persons to bid for a number
3 of units;

4 (C) to establish a maximum limit on the num-
5 ber of units which may be acquired by related per-
6 sons during any period;

7 (D) to establish a time limit on the period
8 during which the rights under any import license
9 may be exercised;

10 (E) to reject bids—

11 (i) where there is evidence of collusion as
12 to the bidding or as to failure to bid, or

13 (ii) where such bids are substantially
14 below the market price which exists for the
15 resale of import license;

16 (F) to deal with identical high bids for any
17 unit by rejecting all bids, by awarding the unit to
18 the high bidder who has acquired fewer units during
19 a specified period than any other high bidder, or
20 otherwise; and

21 (G) to bar from acquiring or using import
22 license issued pursuant to subsection (a) or (b)
23 persons convicted of committing any felony or mis-
24 demeanor under the laws of the United States gov-
25 erning oil imports, oil allocations, or price controls

1 on oil, and to provide procedures for removing such
2 bar in appropriate cases.

3 (3) ADDITIONAL REGULATIONS FOR SUBSECTION
4 (b).—In addition to the regulations referred to in para-
5 graph (2); the regulations promulgated under this
6 section shall include provisions—

7 (A) to ensure that small refiners and independ-
8 ent marketers applying for import licenses under
9 subsection (b) are bona fide refiners or bona fide
10 marketers who have established distribution chan-
11 nels, and

12 (B) to limit import licenses under subsection
13 (b) to such additional amounts of petroleum or any
14 petroleum product as may be necessary to ensure
15 that—

16 (i) any small refiner can operate his re-
17 fineries at capacity; and

18 (ii) any independent marketer can ade-
19 quately supply his regular distribution channels.

20 (d) PRESIDENT MAY REQUIRE USER OF IMPORT LI-
21 CENSES TO REPORT COUNTRY OF ORIGIN.—If the President
22 finds such action to be necessary or appropriate to the
23 national interest, the President may require each person
24 importing petroleum or a petroleum product into the United
25 States under an import license issued pursuant to this section

1 to report to the Deputy Administrator for Petroleum Import
2 Licensing the foreign country of which such petroleum or
3 petroleum product is a product.

4 (e) REFINERS LOCATED IN THE POSSESSIONS, ETC.—
5 The President shall take such steps as may be necessary to
6 ensure that refineries located in the territories and possessions
7 of the United States and foreign trade zones of the United
8 States will participate in all appropriate aspects of the
9 provisions of this title upon terms not less favorable than
10 those accorded to refineries and importers of petroleum
11 products located in the customs territory of the United States.
12 Nothing in this subsection shall be treated as removing any
13 quantitative restriction or duty imposed by or pursuant to
14 this title.

15 PART II—DUTIES

16 SEC. 121. RATES OF DUTY ON OIL.

17 (a) STATUTORY RATES OF DUTY.—Effective with
18 respect to articles entered or withdrawn from warehouse for
19 consumption on or after the 60th day after the date of the
20 enactment of this Act—

21 (1) the rate of duty with respect to petroleum
22 shall be 2 percent ad valorem; and

23 (2) the rate of duty with respect to any petroleum
24 product described in section 133 (a) (3) shall be 5 per-
25 cent ad valorem.

1 Such rates of duty shall replace the rates of duty heretofore
2 provided by, or pursuant to, law.

3 (b) **AUTHORITY TO ADJUST RATES OF DUTY.**—Sub-
4 ject to the limitations set forth in subsections (c) and (d),
5 the President may make, from time to time, such adjustments
6 in the rates of duty established by subsection (a), and in the
7 rates of duty resulting from adjustment under this subsection,
8 as he finds are necessary to carry out the purposes of this Act
9 in the light of overall considerations of the national interest;
10 except that the President may not make any adjustment
11 under this subsection before the close of the 2-year period
12 beginning on the date of the enactment of this Act which
13 results in a rate of duty of more than 5 percent ad valorem on
14 any distillate fuel oil or residual fuel oil (provided for in item
15 475.05 or 475.10 of the Tariff Schedules of the United
16 States) imported for use as fuel (other than for the propul-
17 sion of motor vehicles).

18 (c) **LIMITATIONS ON ADJUSTMENTS.**—No adjustment
19 made under subsection (b) to any rate of duty may result in
20 a rate of duty which—

21 (1) is more than the higher of 10 percent ad
22 valorem or \$1 a barrel, or

23 (2) is less than 2 percent ad valorem.

24 (d) **ADJUSTMENTS INCREASING RATES OF DUTY.**—

25 (1) **SUBMISSION OF ANY PROPOSED INCREASE IN**

1 DUTY TO THE CONGRESS.—The President shall transmit
2 to the House of Representatives and to the Senate on
3 the same day, and to each House while it is in session, a
4 document setting forth any adjustment which he pro-
5 poses to make under subsection (b) which increases any
6 rate of duty.

7 (2) TAKING EFFECT OF ANY SUCH INCREASE.—No
8 adjustment proposed to be made under subsection (b)
9 which increases any rate of duty may take effect sooner
10 than the close of the 60th day after the day on which the
11 document relating to such adjustment is delivered to
12 Congress under paragraph (1).

13 (e) PROCLAIMING OF ADJUSTMENTS TO RATES OF
14 DUTY.—Subject to the provisions of section (d), the Presi-
15 dent shall proclaim any adjustment to any rate of duty made
16 by him under subsection (b).

17 (f) COORDINATION WITH OTHER LAWS.—

18 (1) (A) Section 232 (b) of the Trade Expansion
19 Act of 1962 (relating to national security) is amended
20 by adding at the end thereof the following new sentence:
21 “Nothing in this subsection shall be deemed to authorize the
22 President, after the date of the enactment of this sentence, to
23 adjust imports of petroleum and petroleum products; except
24 that the President may adjust imports of petroleum and
25 petroleum products during any period in which—

1 “(1) the Congress declares war,

2 “(2) United States Armed Forces are introduced
3 into hostilities pursuant to specific statutory authoriza-
4 tion,

5 “(3) a national emergency is created by attack upon
6 the United States, its territories or possessions, or its
7 Armed Forces, or

8 “(4) United States Armed Forces are introduced
9 into such hostilities, situations, or places, or are enlarged
10 in any foreign nation, under circumstances which require
11 a report by the President to the Congress pursuant to
12 section 4 (a) of the War Powers Resolution (50 U.S.C.
13 1453 (a)),

14 but any adjustment made pursuant to this exception shall not
15 apply with respect to articles entered or withdrawn from
16 warehouse for consumption on or after the 60th day after the
17 closing date of the hostilities concerned.”

18 (B) Effective with respect to articles entered or
19 withdrawn from warehouse for consumption on or after
20 the 60th day after the date of the enactment of this Act,
21 no adjustment action taken under section 232 (b) of the
22 Trade Expansion Act of 1962 before such date of enact-
23 ment shall have any force or effect with respect to
24 petroleum or any petroleum product.

1 oil which have been effectuated, the increases in domestic
2 production of oil which have taken place, the factors taken
3 into account in making any modification under subsection
4 (b) or (c) of section 111, and any other information which
5 may be appropriate in assessing the way in which the pro-
6 visions of this Act are being administered.

7 **SEC. 133. DEFINITIONS.**

8 (a) **IN GENERAL.**—For purposes of this title—

9 (1) The term “oil” means petroleum and petroleum
10 products.

11 (2) The term “petroleum” means crude petroleum
12 provided for in item 475.05 or 475.10 of the Tariff
13 Schedules of the United States.

14 (3) The term “petroleum product” means any arti-
15 cle provided for in part 10 of schedule 4 of the Tariff
16 Schedules of the United States, other than petroleum,
17 natural gas provided for under item 475.15, greases pro-
18 vided for under item 475.55 or 475.60, and mixtures of
19 hydrocarbons in other than liquid form provided for
20 under item 475.70.

21 (b) **ADDITIONAL ARTICLES MAY BE TREATED AS**
22 **PETROLEUM PRODUCTS FOR PURPOSES OF QUANTITATIVE**
23 **RESTRICTIONS.**—For purposes of this title (other than sec-
24 tion 121), the term “petroleum products” may include, but

1 only if the President proclaims such inclusion to be necessary
2 to carry out the purposes of this Act, one or more of the
3 following articles:

4 (1) Coal tar articles (benzene, cumene, toluene,
5 and xylene) provided for under item 401.10, 401.26,
6 401.72, or 401.74 of such Schedules.

7 (2) Mixtures, consisting wholly of two or more of
8 the coal tar articles referred to in paragraph (1), pro-
9 vided for under item 401.80.

10 (3) Hydrocarbons provided for under item 429.50
11 or 429.52.

12 PART IV—OFFICE OF PETROLEUM IMPORT

13 LICENSING

14 SEC. 141. ESTABLISHMENT OF OFFICE.

15 (a) IN GENERAL.—There is hereby established within
16 the Federal Energy Administration the Office of Petroleum
17 Import Licensing (hereinafter in this title referred to as the
18 “Office”).

19 (b) ADMINISTRATION.—The Office shall be headed by
20 a Deputy Administrator for Petroleum Import Licensing
21 (hereinafter in this title referred to as the “Deputy Admin-
22 istrator”) who, in the performance of his duties under this
23 title, shall be under the supervision of the Administrator of
24 the Federal Energy Administration.

1 **SEC. 142. FUNCTIONS OF THE DEPUTY ADMINISTRATOR.**

2 The Deputy Administrator shall administer the import
3 licensing system established under section 112.

4 **SEC. 143. CONFORMING AMENDMENT.**

5 Section 4 (c) of the Federal Energy Administration Act
6 of 1974 is amended to read as follows:

7 “(c) There shall be in the Administration three Deputy
8 Administrators (one of whom shall be the Deputy Adminis-
9 trator for Petroleum Import Licensing), who shall be
10 appointed by the President, by and with the advice and
11 consent of the Senate, and who shall receive compensa-
12 tion at the rate prescribed for offices and positions at level III
13 of the Executive Schedule (5 U.S.C. 5314).”

14 **TITLE II—OTHER ENERGY CON-**
15 **SERVATION PROGRAMS**

16 **PART I—AUTOMOBILE-FUEL MILEAGE**

17 **SEC. 211. DEFINITIONS.**

18 (a) As used in this part:

19 (1) The term “EPA Administrator” means the
20 Administrator of the Environmental Protection Agency.

21 (2) The term “automobile” means a four-wheeled
22 vehicle propelled by fuel which is manufactured primar-
23 ily for use on public streets, roads, and highways

1 (except any vehicle operated exclusively on a rail or
2 rails), and which is rated at ten thousand pounds gross
3 vehicle weight or less.

4 (3) The term "passenger automobile" means any
5 automobile which has as its primary intended function
6 the transportation of not more than ten individuals.

7 (4) The term "light-duty truck and multipurpose
8 passenger vehicle" means any automobile which is not
9 a passenger automobile.

10 (5) The term "average fuel economy" (except for
11 purposes of section 212 (a) (4) of this Act) means (A)
12 the total number of passenger automobiles manufactured
13 in a given model year by a manufacturer (including all
14 passenger automobiles manufactured by persons who con-
15 trol, or are controlled by or under common control with
16 such manufacturer, but excluding any passenger auto-
17 mobile exported in the model year) divided by (B) a
18 sum of terms, each term of which is a fraction created
19 by dividing—

20 (i) the number of passenger automobiles of a
21 given model type manufactured in such model
22 year by

23 (ii) the fuel economy measured for such model
24 type rounded to the nearest mile per gallon, as
25 determined by the EPA Administrator.

1 (6) The term "dealer" means any person engaged
2 in the business of selling new automobiles to purchasers
3 who buy for purposes other than resale.

4 (7) The term "fuel" means any liquid or gaseous
5 fuel.

6 (8) The term "fuel economy" refers to the average
7 number of miles traveled by an automobile per gallon of
8 fuel consumed, as determined by the EPA Administrator
9 in accordance with test procedures established under sec-
10 tion 212 (d) of this Act.

11 (9) The term "manufacturer" means any person
12 engaged in the manufacture, assembly, or importation
13 of automobiles.

14 (10) The term "to manufacture" (except for pur-
15 poses of section 212 (a) (2) of this Act) means to manu-
16 facture in the United States or to import into the United
17 States.

18 (11) The term "model type" means a particular
19 class of automobile, as defined by the EPA Adminis-
20 trator.

21 (12) The term "model year" with reference to
22 any specific calendar year means the manufacturer's an-
23 nual production period (as determined by the EPA
24 Administrator) which includes January 1 of such calen-
25 dar year. If the manufacturer has no annual production

1 period, the term "model year" shall mean the calendar
2 year.

3 (13) The term "Secretary" means the Secretary
4 of Transportation.

5 (b) (1) In calculating the average fuel economy under
6 subsection (a) (5), the EPA Administrator shall separate
7 the total passenger automobiles manufactured by a manu-
8 facturer into two categories:

9 (A) Passenger automobiles domestically manu-
10 factured by such manufacturer.

11 (B) Passenger automobiles not domestically manu-
12 factured by such manufacturer.

13 The EPA Administrator shall calculate the average fuel
14 economy of each such separate category and each category
15 shall be treated as manufactured by a separate manufacturer
16 for purposes of this part.

17 (2) For purposes of this subsection, an automobile
18 shall be considered domestically manufactured if at least 75
19 percent of the cost to the manufacturer of such automobile is
20 attributable to value added in the United States or Canada,
21 unless the assembly of such automobile is completed in
22 Canada and such automobile is not imported into the United
23 States prior to the expiration of 30 days after the end of such
24 model year.

1 **SEC. 212. AVERAGE FUEL ECONOMY STANDARDS APPLI-**
 2 **CABLE TO EACH MANUFACTURER.**

3 (a) (1) Except as otherwise provided in paragraph (2)
 4 and in subsection (b) (3) (B), the average fuel economy for
 5 all passenger automobiles manufactured by any manufac-
 6 turer in any model year after model year 1977 shall not be
 7 less than the number of miles per gallon determined under
 8 the following table:

Model year:	Average fuel economy (in miles per gallon)
1978 -----	18.5.
1979 -----	19.5.
1980 -----	20.5.
1981 -----	Determined by Secretary under subsection (b).
1982 -----	Determined by Secretary under subsection (b).
1983 -----	Determined by Secretary under subsection (b).
1984 -----	Determined by Secretary under subsection (b).
1985 or thereafter -----	28.0.

9 (2) On application of a manufacturer, who manufac-
 10 tured (whether or not in the United States) fewer than ten
 11 thousand automobiles in the second model year preceding
 12 the model year for which the application is made, the Sec-
 13 retary may by rule exempt such manufacturer from para-
 14 graph (1). Such exemption may only be granted if (A)
 15 such exemption will not significantly detract from the pur-
 16 poses of this part, and (B) such exemption is necessary to
 17 avoid an unreasonable burden on such manufacturer. Simul-

1 taneously with the issuance of any such exemptions, the
2 Secretary shall establish alternative average fuel economy
3 standards for such manufacturer which shall represent the
4 maximum feasible level of fuel economy for such manufac-
5 turer. In determining the number of automobiles manufac-
6 tured by a manufacturer for purposes of this paragraph, there
7 shall be included all automobiles manufactured by persons
8 who control, are controlled by, or are under common con-
9 trol with such manufacturer.

10 (3) Beginning in 1977, the Secretary shall review, not
11 later than January 1 of each calendar year, standards pro-
12 mulgated pursuant to this part which will take effect in
13 future model years and shall publish the results of such re-
14 view in the Federal Register and shall send such review to
15 the members of the Commerce Committees of the Senate
16 and House of Representatives. The review required to be
17 published by January 1, 1979, and sent to the Congress
18 shall include a comprehensive analysis of the program re-
19 quired by this part. Such analysis shall include an assessment
20 of the ability of the Nation to meet the average fuel economy
21 requirements for 1985 as specified in subsection (a) (1) of
22 this section, and any legislative recommendations the Sec-
23 retary might have for improving the program required by
24 this part.

25 (4) The Secretary shall, by rule, prescribe average

1 fuel economy standards for all light-duty trucks and multi-
2 purpose passenger vehicles manufactured by any manufac-
3 turer in any model year after model year 1977. Such a rule
4 may provide for separate standards for different classes of
5 such trucks and vehicles and shall be based upon the maxi-
6 mum feasible average fuel economy level which the Secretary
7 determines manufacturers of light-duty trucks and multipur-
8 pose passenger vehicles or classes thereof are able to achieve
9 in each model year after year 1977.

10 (b) (1) Not later than July 1, 1977, the Secretary
11 shall establish, by rule, average fuel economy standards for
12 new automobiles manufactured in model years 1981 through
13 1984. The standards, which shall be ~~equally~~ applicable to
14 each manufacturer, shall be set for each such model year at a
15 level which the Secretary determines is the maximum feasi-
16 ble level and shall be promulgated in a manner which will
17 result in steady progress toward meeting an average fuel
18 economy level of 28 miles per gallon for model year 1985.

19 (2) Any standard prescribed under paragraph (1),
20 and any amendment prescribed under paragraph (3), shall
21 be promulgated not later than 18 months prior to the begin-
22 ning of the model years to which such standard or amend-
23 ment will apply.

24 (3) (A) The Secretary may, from time to time, upon
25 the basis of new information, amend any average fuel econ-

1 omy performance standard established under paragraph (1),
2 except that no such amendment, modification, or revision
3 may reduce the standard for average fuel economy below
4 that necessary to meet the model year 1980 average fuel
5 economy level specified in subsection (a) (1).

6 (B) If in the course of preparing the review required
7 to be published on January 1, 1979, pursuant to subsection
8 (a) (3) of this section, the Secretary finds that the model
9 year 1985 average fuel economy level specified in subsection
10 (a) (1) should be modified because such level cannot reason-
11 ably be attained or because a higher level may reasonably be
12 attained, the Secretary may by rule modify such level, to a
13 level that represents the maximum feasible average fuel
14 economy level. The Secretary shall transmit to the Congress
15 notice of the establishment of such modified level. Such
16 modified level shall take effect 60 days on the date or dates
17 specified in such notice, but not sooner than the end of the
18 first period of fifteen calendar days of continuous session of
19 Congress (within the meaning of section 906 (b) of title 5,
20 United States Code) after the date on which such amend-
21 ment is transmitted to it; except that such an amendment
22 shall not take effect if, between the date of transmittal and
23 the end of such fifteen-day period, either House passes a
24 resolution of that House, the matter after the resolving clause
25 of which is as follows: "That the does not

1 favor the modification of the average fuel economy standard,
2 transmitted to the Congress by the President on _____,
3 19 ____ .”, the first blank space therein being filled with the
4 name of the resolving House and the other blank spaces
5 therein being appropriately filled.

6 (C) Section 908 and sections 910 through 913 of
7 title 5, United States Code, shall apply to any resolution
8 described in subparagraph (B), and for purposes of con-
9 sideration of a resolution under this paragraph, the twenty
10 calendar days specified in section 911 of title 5, United States
11 Code, shall be shortened to five calendar days, any reference
12 to a resolution under section 908 and sections 910 through
13 913 of title 5, United States Code, shall be deemed a ref-
14 erence to a resolution described in subparagraph (B), and
15 any reference to a reorganization plan shall be deemed a ref-
16 erence to an amendment to which this paragraph applies.

17 (4) For purposes of this subsection, in determining the
18 maximum feasible average fuel economy, the Secretary shall
19 consider:

20 (A) technological feasibility;

21 (B) economic practicality;

22 (C) relationship to other Federal motor vehicle
23 standards (except as otherwise provided in subsection

24 (c) (4)); and

25 (D) the purposes of this Act.

1 (c) (1) If the Secretary (after consultation with the
2 EPA Administrator) determines under paragraph (3) that
3 in any model year there will be an emission standards
4 penalty, he shall adjust the fuel economy rate applicable to
5 such year by subtracting a number of miles per gallon
6 (rounded off to the nearest tenth of a mile per gallon) equal
7 to the amount of such penalty.

8 (2) For purposes of this subsection:

9 (A) The term "emission standards penalty" means
10 the number of miles per gallon which the Secretary
11 determines is equal to (i) the average fuel economy
12 which all passenger automobiles sold in a model year
13 would achieve, if such automobiles were subject only to
14 the 1975 emission standards, less (ii) the average fuel
15 economy which all such automobiles are likely to achieve
16 while meeting the emission standards actually applicable
17 to such automobiles.

18 (B) The term "1975 emission standards" means
19 the following standards:

20 (i) For hydrocarbons, 1.5 grams per mile.

21 (ii) For carbon monoxide, 15 grams per mile.

22 (iii) For oxides of nitrogen, 3.1 grams per mile.

23 (C) The term "fuel economy rate" means the rate
24 under subsection (a) (1), as such rate may be modified
25 under subsection (b).

1 (3) The Secretary shall commence a proceeding with
2 respect to a determination under paragraph (1) on petition
3 of any manufacturer. Such a petition may be filed only within
4 the 18-month period preceding the beginning of the model
5 year to which it relates. The Secretary shall allow interested
6 persons an opportunity for oral as well as written presenta-
7 tions of data, views, and arguments. He shall render a deci-
8 sion in any such proceeding within 60 days after the filing of
9 the petition.

10 (4) The Secretary may not make any modification of
11 fuel economy rates to take account of any decrease in fuel
12 economy associated with emissions standards except in ac-
13 cordance with this subsection.

14 (d) (1) Compliance by a manufacturer with subsection
15 (a) shall be determined by the EPA Administrator (in
16 accordance with test procedures established by the EPA
17 Administrator by rule) —

18 (A) by calculating for purposes of subsection (a)
19 (1) the average fuel economy of all passenger auto-
20 mobiles manufactured by such manufacturer during such
21 model year, and

22 (B) by calculating for purposes of subsection (a)
23 (4) the fuel economy of all light duty trucks and multi-
24 purpose passenger vehicles (or each class thereof, as

1 may be appropriate) manufactured by such manufac-
2 turer in such model year.

3 Test procedures so established shall be the procedures utilized
4 by the EPA Administrator for model year 1975 (weighted
5 55 percent urban cycle, and 45 percent highway cycle) or
6 procedures which yield comparable results. Such procedures,
7 to the extent practicable, shall require that fuel economy
8 tests be conducted in conjunction with emissions test con-
9 ducted under section 206 of the Clean Air Act (42 U.S.C.
10 1875f-5). The EPA Administrator shall report the findings
11 of such compliance determinations to the Secretary.

12 (2) In determining whether a manufacturer has com-
13 plied with subsection (a)—

14 (A) if the average fuel economy of a manufacturer
15 is less than 0.5 miles per gallon less than the applicable
16 standard under subsection (a), the manufacturer shall
17 be deemed to have complied with subsection (a), and

18 (B) if the average fuel economy of a manufacturer
19 exceeds the applicable standard under subsection (a) for
20 a model year by more than 0.5 miles per gallon—

21 (i) he may carry back such excess to the pre-
22 ceding model year to the extent that his average fuel
23 economy was more than 0.5 miles per gallon less
24 than the applicable standard for such preceding
25 year, and

1 (ii) to the extent such excess was not carried
2 back to the preceding year, he may carry forward
3 the excess to the year succeeding the year of the
4 excess.

5 The Secretary shall prescribe rules to carry out this sub-
6 section. To the extent that a carryback under clause (i)
7 reduces a manufacturer's liability for a civil penalty paid
8 under section 216, the Secretary shall refund to such manu-
9 facturer an amount equal to the amount of such reduction.

10 (e) (1) Any person who may be adversely affected by
11 any rule promulgated under this section may at any time
12 prior to 60 days after such rule is promulgated file a petition
13 in the United States Court of Appeals for the District of
14 Columbia, or any circuit wherein such person resides or has
15 his or her principal place of business, for judicial review of
16 such rule. A copy of the petition shall be forthwith trans-
17 mitted by the clerk of such court to the officer who prescribed
18 the rule. Such officer shall thereupon cause to be filed in such
19 court the record of the proceedings upon which the rule which
20 is under review was based, as provided in section 2112 of
21 title 28, United States Code. Upon the filing of such petition,
22 the court shall have jurisdiction to review the rule in accord-
23 ance with chapter 7 of title 5, United States Code, and to
24 grant appropriate relief as provided in such chapter.

1 (2) If the petitioner applies to the court for leave to
2 adduce additional evidence, and shows to the satisfaction of
3 the court that such additional evidence is material and that
4 there were reasonable grounds for the failure to adduce such
5 evidence in the proceeding before the officer who prescribed
6 the rule, the court may order such additional evidence (and
7 evidence in rebuttal thereof) to be taken before such officer,
8 and be adduced in a hearing, in such manner and upon such
9 terms and conditions as the court may deem proper. Such
10 officer may modify any earlier finding as to the facts, or
11 make new findings, by reason of the additional evidence so
12 taken, and shall file such modified or new findings, and rec-
13 ommendations, if any, for the modification or setting aside
14 of the previously promulgated rule, with the return of such
15 additional evidence.

16 (3) The judgment of the court affirming or setting
17 aside, in whole or in part, any such rule of the officer who
18 prescribed the rule shall be final, subject to review by the
19 Supreme Court of the United States upon certiorari or certifi-
20 cation as provided in section 1254 of title 28, United States
21 Code.

22 (4) The remedies provided for in this section shall be
23 in addition to and not in lieu of any other remedies provided
24 by law.

25 (f) (1) The Secretary shall prescribe regulations requir-

1 ing each manufacturer to submit a report to the Secretary
2 during the 30-day period preceding the beginning of each
3 model year, and during the 30-day period beginning on
4 the 180th day of each model year. Each such report shall
5 contain a statement as to whether such manufacturer will
6 comply with applicable requirements under subsection (a);
7 a plan which describes the steps the manufacturer intends
8 to take in order to comply with such requirements; and such
9 other matter as the Secretary may require.

10 (2) Whenever a manufacturer determines that a plan
11 submitted under paragraph (1) which he stated was suf-
12 ficient to insure compliance with applicable requirements is
13 not sufficient to insure such compliance, he shall submit a
14 report containing a revised plan which specifies any addi-
15 tional measures which he intends to take in order to comply
16 with such requirements, and a statement as to whether such
17 plan is sufficient to insure such compliance.

18 **SEC. 213. DUTIES AND POWERS OF THE SECRETARY AND**
19 **ADMINISTRATOR.**

20 (a) (1) For the purpose of carrying out the pro-
21 visions of this part, the Secretary or the EPA Administra-
22 tor, or their duly designated agents, may hold such hear-
23 ings, take such testimony, sit and act at such times and
24 places, administer such oaths, and require, by subpoena or
25 otherwise, the attendance and testimony of such witnesses

1 and the production of such books, papers, correspondence,
2 memorandums, contracts, agreements, or other records as
3 the Secretary, EPA Administrator, or such agents deem
4 advisable. The Secretary, EPA Administrator, or their duly
5 designated agents, shall at all reasonable times have access
6 to, and for the purpose of examination, the right to copy any-
7 documentary evidence of any person having materials or
8 information relevant to any function of the Secretary or
9 EPA Administrator under this part. The Secretary or EPA
10 Administrator is authorized to require, by general or special
11 orders, any person to file, in such form as the Secretary or
12 EPA Administrator may prescribe, reports or answers in
13 writing to specific questions relating to any function of the
14 Secretary or EPA Administrator under this part. Such
15 reports and answers shall be made under oath or otherwise,
16 and shall be filed with the Secretary or EPA Administrator
17 within such reasonable period as he may prescribe.

18 (2) The district courts of the United States for a judi-
19 cial district in the jurisdiction of which an inquiry is carried
20 on may, in the case of contumacy or refusal to obey a duly
21 authorized subpoena or order of the Secretary, the EPA Ad-
22 ministrator, or their duly designated agents, issued under
23 paragraph (1) of this subsection, issue an order requiring
24 compliance with such subpoena or order. Any failure to obey

1 such an order of the court may be punished by such court
2 as a contempt thereof.

3 (3) Witnesses summoned pursuant to this subsection
4 shall be paid the same fees and mileage that are paid wit-
5 nesses in the courts of the United States.

6 (b) (1) Every manufacturer of automobiles shall estab-
7 lish and maintain such records, make such reports, conduct
8 such tests, and provide such items and information as the
9 Secretary or EPA Administrator may reasonably require to
10 enable the Secretary or EPA Administrator to carry out
11 their duties under this part and under any rules or regula-
12 tions promulgated pursuant to this part. Such manufacturer
13 shall, upon request of a duly designated agent of the Sec-
14 retary or EPA Administrator, permit such agent to inspect
15 finished automobiles and appropriate books, papers, records,
16 and documents. Such manufacturer shall make available all
17 of such items and information in accordance with such
18 reasonable rules as the Secretary or EPA Administrator may
19 prescribe.

20 (2) The district courts of the United States for a judi-
21 cial district in which an inspection is carried out or requested
22 may, if a manufacturer of automobiles refuses to accede to
23 any reasonable requirement or request, issued or made under
24 paragraph (1) of this subsection, issue an order requiring

1 compliance with such requirement or request. Any failure to
2 obey such an order of the court may be punished by such
3 court as a contempt thereof.

4 (c) (1) Except as provided in paragraph (2), the
5 Secretary or EPA Administrator shall disclose information
6 obtained under this part to the public in accordance with sec-
7 tion 552 of title 5, United States Code, except that infor-
8 mation may be withheld from disclosure on the grounds
9 specified in subsection (b) (4) of such section only if it
10 contains a trade secret which if disclosed would result in
11 significant competitive damage.

12 (2) Information contained in a report submitted under
13 section 212 (f), disclosure of which the Secretary determines
14 may cause significant competitive damage, may not be dis-
15 closed until after the close of the model year to which such
16 report relates; except (A) in a proceeding under section 212
17 (b) (1), (b) (3), or (c); (B) to duly authorized officers or
18 employees of the United States; or (C) to committees of
19 Congress.

20 **SEC. 214. LABELING AND ADVERTISING.**

21 (a) (1) Beginning no later than 90 days after the date
22 of enactment of this Act, each manufacturer shall cause to
23 be affixed and each dealer shall cause to be maintained on
24 each new automobile, in a prominent place, a sticker indi-
25 cating the fuel economy which a prospective purchaser can

1 expect from such automobile, representative average annual
2 fuel costs associated with the operation of such automobile,
3 and the range of fuel economy performance of automobiles
4 of similar size and weight (as determined by the EPA
5 Administrator). If the fuel economy of an automobile manu-
6 factured in a model year is less than the miles per gallon
7 level specified in the average fuel economy standard specified
8 by rule under section 212 (a) (1) of this Act, such sticker
9 shall disclose that such automobile's fuel economy is less
10 than the Federal standard for average fuel economy. Such
11 sticker shall include a written statement that written in-
12 formation respecting the fuel economy of other automobiles
13 manufactured in such model year is available from the dealer
14 in a simple and readily understandable form in order to
15 facilitate comparison among the various model types. The
16 form and content of such sticker shall be prescribed by the
17 EPA Administrator by rule, after consultation with the
18 Federal Trade Commission and the Secretary.

19 (2) The EPA Administrator, not later than Feb-
20 ruary 1, 1976, shall by rule establish procedures requiring
21 dealers to make available to prospective purchasers informa-
22 tion compiled by the EPA Administrator under paragraph
23 (1).

24 (b) Section 3 of the Automobile Information Disclo-
25 sure Act (15 U.S.C. 1232) is amended by striking out in

1 the first paragraph "disclosing the following information con-
2 cerning" and inserting in lieu thereof "disclosing the informa-
3 tion required by section 214 (a) of the Energy Conservation
4 and Conversion Act of 1975, together with the following
5 information concerning".

6 **SEC. 215. PROHIBITED CONDUCT.**

7 The following conduct is prohibited:

8 (1) the failure to comply with any requirement
9 of section 212 (a) of this Act;

10 (2) the failure to comply with any provision of
11 this part (other than section 212 (a) of this Act) or
12 any standard, rule, regulation, or order issued pursuant
13 to such a provision;

14 (3) the failure to provide information as required
15 in accordance with this part;

16 (4) the failure to permit inspection pursuant to
17 this part; and

18 (5) the failure to comply with any requirement
19 under section 214 (a) (2) of this Act.

20 **SEC. 216. CIVIL PENALTY.**

21 (a) (1) If through testing, inspection, investigation, or
22 research carried out pursuant to this Act, or otherwise, the
23 Secretary determines that any manufacturer has not com-
24 plied with any requirement of section 212 of this Act, he
25 shall immediately notify such manufacturer and shall publish

1 notice of such determination in the Federal Register. The
2 notification to the manufacturer shall include all information
3 upon which the determination of the Secretary is based. Such
4 notification (including such information) shall be available
5 to any interested person. The Secretary shall afford such
6 manufacturer an opportunity to present data, views,
7 and arguments to establish that there is no violation of
8 section 212 and shall afford other interested persons an
9 opportunity to present data, views, and arguments respecting
10 the determinations of the Secretary.

11 (2) If, after such presentations by the manufacturer
12 and interested persons, the Secretary determines that such
13 manufacturer has not complied with any requirement under
14 section 212 of this Act, the Secretary shall assess the penal-
15 ties provided for under subsection (b).

16 (b) (1) (A) Any manufacturer who the Secretary de-
17 termines under subsection (a) to have violated a provision of
18 section 212 (a) (1) of this Act, shall be liable to the United
19 States for a civil penalty equal to (i) \$5.00 for each tenth
20 of a mile per gallon by which the average fuel economy of
21 the automobile manufactured by such manufacturer during
22 such model year is exceeded by the applicable average fuel
23 economy standard established under section 212 (a) (1) of
24 this Act, multiplied by (ii) the total number of automobiles
25 manufactured by such manufacturer during such model year.

1. Such penalty shall be assessed by the Secretary and collected
2 in a civil action brought by the Attorney General.

3 (B) Any fuel economy measurement for purposes of
4 paragraph (A) shall be rounded off to the nearest one-tenth
5 gallon (in accordance with rules of the EPA Administrator).

6 (2) Any person who the Secretary determines after op-
7 portunity for presentation of data, views, and arguments to
8 have violated a provision of section 215 of this Act, other
9 than paragraph (1) thereof, shall be liable to the United
10 States for a civil penalty of not more than \$10,000 for each
11 violation; each day of a continuing violation constituting a
12 separate violation.

13 (3) The amount of such civil penalty shall be assessed
14 by the Secretary by written notice. The Secretary shall have
15 the discretion to compromise, modify, or remit, with or with-
16 out conditions, any civil penalty assessed against a manu-
17 facturer only to the extent (A) necessary to prevent the
18 insolvency or bankruptcy of such manufacturer, or (B) such
19 manufacturer shows that noncompliance resulted from an
20 act of God, a strike, or a fire.

21 **SEC. 217. RELATIONSHIP TO STATE LAW.**

22 After the effective date of any standard issued or effec-
23 tive under this part relating to fuel economy performance
24 standards for any automobile or to fuel economy labeling or
25 advertising of any new automobile, no State or political sub-

1 division thereof may adopt or enforce any law or regulation
2 relating to such matters which is applicable to such auto-
3 mobile, unless such law or regulation is identical to a stand-
4 ard under this part.

5 **PART II—INTERCITY BUSES, RADIAL TIRES, AND**
6 **REREFINED OIL**

7 **SEC. 221. REPEAL OF EXCISE TAX ON BUSES USED IN**
8 **INTERCITY PUBLIC TRANSPORTATION.**

9 (a) **GENERAL RULE.**—Paragraph (6) of section 4063
10 (relating to exemption from excise tax for local transit buses)
11 is amended to read as follows:

12 “(6) **PUBLIC TRANSPORTATION BUSES.**—The tax
13 imposed under section 4061 (a) shall not apply in the
14 case of automobile bus chassis or automobile bus bodies
15 which are to be used predominantly by the purchaser in
16 public passenger transportation service.”

17 (b) **EFFECTIVE DATE.**—

18 (1) **IN GENERAL.**—The amendment made by sub-
19 section (a) shall apply with respect to articles sold on-
20 or after the date of the enactment of this Act.

21 (2) **WHEN SOLD.**—For purposes of paragraph (1),
22 an article shall not be considered sold before the date
23 of the enactment of this Act unless possession or right
24 to possession passes to the purchaser before such date.

1 (3) TRANSITIONAL RULE FOR LEASES, INSTALL-
2 MENT CONTRACTS, ETC.—In the case of—

3 (A) a lease,

4 (B) a contract for the sale of an article where
5 it is provided that the price shall be paid by in-
6 stallments and title to the article sold does not pass
7 until a future date notwithstanding partial payment
8 by installments,

9 (C) a conditional sale, or

10 (D) a chattel mortgage arrangement wherein
11 it is provided that the sale price shall be paid in
12 installments,

13 entered into before the date of the enactment of this
14 Act, payments made on or after such date with respect
15 to the article leased or sold shall, for purposes of para-
16 graph (1), be considered as payments made with re-
17 spect to an article sold on or after such date, if the
18 lessor or vendor establishes that the amount of payments
19 payable on or after such date with respect to such
20 article has been reduced by an amount equal to that
21 portion of the tax applicable with respect to the lease
22 or sale of such article which is due and payable on or
23 after such date. If the lessor or vendor does not establish
24 that the payments have been so reduced, they shall be

1 treated as payments made with respect to an article
2 sold before the date of the enactment of this Act.

3 **SEC. 222. REPEAL OF EXCISE TAX ON RADIAL TIRES.**

4 (a) **REPEAL OF TAX ON NEW RADIAL TIRES.**—Section
5 4073 (relating to exemptions from tax on tires and tubes) is
6 amended by adding at the end thereof the following new
7 subsection:

8 “(d) **RADIAL TIRES.**—The tax imposed by section
9 4071 shall not apply to radial tires.”

10 (b) **REPEAL OF TAX ON TREAD RUBBER USED TO**
11 **RETREAD OR RECAP RADIAL TIRES.**—Subsection (c) of
12 section 4073 (relating to exemption from tax on tread
13 rubber in certain cases) is amended by striking out “such
14 person” and all that follows and inserting in lieu thereof the
15 following: “such person—

16 “(1) in the recapping or retreading of radial tires,

17 or

18 “(2) otherwise than in the recapping or retread-
19 ing of tires of the types used on highway vehicles.”

20 (c) **DEFINITION OF RADIAL TIRE.**—Section 4072 (re-
21 lating to definitions) is amended by adding at the end there-
22 of the following new subsection:

23 “(d) **RADIAL TIRE.**—For purposes of this part, the
24 term ‘radial tire’ means a tire of the type used on highway

1 vehicles in which the ply cords which extend to the beads
2 of such tire are laid at substantially 90 degrees to the center
3 line of the tire's tread."

4 (d) TECHNICAL AMENDMENT.—Subparagraph (L) of
5 section 6416 (b) (2) (relating to specified uses and resales)
6 is amended to read as follows:

7 " (L) in the case of tread rubber in respect of
8 which tax was paid under section 4071 (a) (4),
9 used or sold for use (i) in recapping or retreading
10 radial tires (as defined in section 4072 (d)) or (ii)
11 otherwise than in the recapping or retreading of
12 tires of the type used on highway vehicles (as de-
13 fined in section 4072 (c)), unless credit or refund of
14 such tax is allowable under subsection (b) (3) ;".

15 (e) EFFECTIVE DATE.—

16 (1) IN GENERAL.—The amendments made by this
17 section shall apply with respect to sales of radial tires
18 (as defined in section 4072 (d) of the Internal Revenue
19 Code of 1954), and tread rubber (as defined in section
20 4072 (b) of such Code), after March 17, 1975.

21 (2) FLOOR STOCKS REFUNDS.—Section 6412 (a)
22 (relating to floor stocks refunds) is amended by insert-
23 ing immediately before paragraph (2) the following
24 new paragraph:

25 " (1) RADIAL TIRES.—Where before March 18,

1 1975, any radial tire (as defined in section 4072 (d))
2 subject to the tax imposed by section 4071 (a) has been
3 sold by the manufacturer, producer, or importer and on
4 such date is held by a dealer and has not been used and
5 is intended for sale, there shall be credited or refunded
6 (without interest) to the manufacturer, producer, or
7 importer an amount equal to the tax paid by such manu-
8 facturer, producer, or importer on his sale of such tire if
9 claim for such credit or refund is filed with the Secretary
10 or his delegate on or before December 31, 1975, based
11 upon a request submitted to the manufacturer, producer,
12 or importer before October 1, 1975, by the dealer who
13 held such tire in respect of which the credit or refund is
14 claimed, and, on or before December 31, 1975, reim-
15 bursement has been made to such dealer by such manu-
16 facturer, producer, or importer for the tax on such tire or
17 written consent has been obtained from such dealer to
18 allowance of such credit or refund.”

19 **SEC. 223. REREFINED LUBRICATING OIL.**

20 (a) **IN GENERAL.**—Section 4093 (relating to exemp-
21 tion of sales to producers) is amended to read as follows:

22 **“SEC. 4093. EXEMPTIONS.**

23 **“(a) SALES TO MANUFACTURERS OR PRODUCERS FOR**
24 **RESALE.**—Under regulations prescribed by the Secretary or
25 his delegate, no tax shall be imposed by section 4091 on

1 lubricating oils sold to a manufacturer or producer of lubri-
 2 cating oils for resale by him.

3 “(b) USE IN PRODUCING REREFINED OIL.—

4 “(1) SALES TO REREFINERS.—Under regulations
 5 prescribed by the Secretary or his delegate, no tax shall
 6 be imposed by section 4091 on lubricating oil sold for
 7 use in mixing with used or waste lubricating oil which
 8 has been cleaned, renovated, or rerefined. Any person
 9 to whom lubricating oil is sold tax-free under this para-
 10 graph shall be treated as the producer of such lubricat-
 11 ing oil.

12 “(2) USE IN PRODUCING REREFINED OIL.—Under
 13 regulations prescribed by the Secretary or his delegate,
 14 no tax shall be imposed by section 4091 on lubricating
 15 oil used in producing rerefined oil to the extent that the
 16 amount of such lubricating oil does not exceed 55 per-
 17 cent of such rerefined oil.

18 “(3) REREFINED OIL DEFINED.—For purposes of
 19 this subsection, the term ‘rerefined oil’ means oil 25
 20 percent or more of which is used or waste lubricating
 21 oil which has been cleaned, renovated, or rerefined.”

22 (b) CONFORMING AMENDMENT.—Section 4092 (a) is
 23 amended by striking out “4093” and inserting in lieu thereof
 24 “4093 (a)”.

25 (c) CLERICAL AMENDMENT.—The table of sections for

1 subpart B of part III of subchapter A of chapter 32 is
 2 amended by striking out the item relating to section 4093
 3 and inserting in lieu thereof the following:

“Sec. 4093. Exemptions.”

4 (d) **EFFECTIVE DATE.**—The amendments made by this
 5 section shall apply to sales after March 17, 1975.

6 **PART III—TAX INCENTIVES FOR CERTAIN**
 7 **ENERGY-RELATED IMPROVEMENTS OF BUILD-**
 8 **INGS**

9 **SEC. 231. INSULATION OF PRINCIPAL RESIDENCE.**

10 (a) **GENERAL RULE.**—Subpart A of part IV of sub-
 11 chapter A of chapter 1 (relating to credits allowable) is
 12 amended by inserting immediately before section 45 the
 13 following new section:

14 **“SEC. 44A. INSULATION OF PRINCIPAL RESIDENCE.**

15 “(a) **GENERAL RULE.**—In the case of an individual,
 16 there shall be allowed as a credit against the tax imposed by
 17 this chapter for the taxable year an amount equal to 30 per-
 18 cent of the qualified insulation expenditures paid by the tax-
 19 payer during the taxable year with respect to any residence
 20 to the extent that such expenditures do not exceed \$500.

21 “(b) **LIMITATIONS.**—

22 “(1) **APPLICATION WITH OTHER CREDITS.**—The
 23 credit allowed by subsection (a) shall not exceed the
 24 amount of the tax imposed by this chapter for the tax-

1 able year reduced by the sum of the credits allowable
2 under—

3 “(A) section 33 (relating to foreign tax
4 credit),

5 “(B) section 37 (relating to retirement in-
6 come),

7 “(C) section 38 (relating to investment in cer-
8 tain depreciable property),

9 “(D) section 40 (relating to expenses of work
10 incentive programs),

11 “(E) section 41 (relating to contributions to
12 candidates for public office),

13 “(F) section 42 (relating to credit for personal
14 exemptions), and

15 “(G) section 44 (relating to purchase of new
16 principal residence).

17 “(2) PRIOR EXPENDITURES TAKEN INTO AC-
18 COUNT.—If—

19 “(A) the taxpayer made qualified insulation
20 expenditures with respect to any residence in any
21 prior taxable year, or

22 “(B) any prior occupant of any residence made
23 qualified insulation expenditures with respect to such
24 residence,

25 then subsection (a) shall be applied with respect to

1 such residence for the taxable year by reducing (but
2 not below zero) the \$500 amount contained in such
3 subsection by the aggregate of the expenditures de-
4 scribed in subparagraphs (A) and (B).

5 “(3) VERIFICATION.—No credit shall be allowed
6 under subsection (a) with respect to any qualified insula-
7 tion expenditures unless such expenditures are verified in
8 such manner as the Secretary or his delegate shall pre-
9 scribe by regulations.

10 “(c) DEFINITIONS AND SPECIAL RULES.—For pur-
11 poses of this section—

12 “(1) QUALIFIED INSULATION EXPENDITURES.—
13 The term ‘qualified insulation expenditures’ means any
14 amount paid by an individual for any installation (other
15 than pursuant to a reconstruction of the dwelling unit)
16 which occurs after March 17, 1975, and before Janu-
17 ary 1, 1978, of insulation in any dwelling unit which—

18 “(A) at the time of such installation is used by
19 the individual as his principal residence; and

20 “(B) is in existence on March 17, 1975, and
21 used on such date by one or more individuals as a
22 residence.

23 Such term shall only include amounts paid for the
24 original installation of any insulation in a dwelling unit.

1 “(2) INSULATION.—The term ‘insulation’ means
2 any insulation, storm (or thermal) window or door, or
3 any other similar item—

4 “(A) which is specifically and primarily de-
5 signed to reduce, when installed in or on a building,
6 the heat loss or gain of such building,

7 “(B) the original use of which commences
8 with the taxpayer,

9 “(C) which has a useful life to the taxpayer
10 of at least 3 years, and

11 “(D) which meets such performance standards
12 as the Secretary or his delegate may prescribe by
13 regulations after consultation with the Administra-
14 tor of the Federal Energy Administration and the
15 Secretary of Housing and Urban Development.

16 “(3) JOINT OCCUPANCY.—In the case of any
17 dwelling unit which is jointly occupied and is used
18 during any calendar year as a principal residence, by
19 two or more individuals—

20 “(A) the amount of the credit allowable under
21 subsection (a) (after applying subsection (b) (2))
22 with respect to any qualified insulation expenditures
23 paid during such calendar year by any of such indi-
24 viduals with respect to such dwelling unit shall be
25 determined by treating all of such individuals as one

1 taxpayer whose taxable year is such calendar year;
2 and

3 “(B) each of such individuals shall be allowed
4 a credit under subsection (a) for the taxable year
5 in which such calendar year ends (subject to the
6 limitation of subsection (b) (1)) in an amount
7 which bears the same ratio to the amount deter-
8 mined under subparagraph (A) as the amount paid
9 by such individual during such calendar year for
10 such expenditures bears to the aggregate of the
11 amounts paid by all of such individuals during such
12 calendar year for such expenditures.

13 “(4) TENANT-STOCKHOLDER IN COOPERATIVE
14 HOUSING CORPORATION.—In the case of an individual
15 who holds stock as a tenant-stockholder (as defined in
16 section 216) in a cooperative housing corporation (as
17 defined in such section), such individual—

18 “(A) shall be treated as owning the dwelling
19 unit which he is entitled to occupy as such stock-
20 holder; and

21 “(B) shall be treated as having paid his tenant-
22 stockholder’s proportionate share (as defined in sec-
23 tion 216 (b) (3)) of any qualified insulation ex-
24 penditures paid by such corporation.

25 “(d) REDUCTION OF BASIS.—The basis of any prop-

erty shall not be increased by the amount of any qualified insulation expenditures made with respect to such property to the extent of the amount of any credit allowed under this section with respect to such expenditures.

“(e) TERMINATION.—This section shall not apply to any amount paid after December 31, 1977.”

(b) TECHNICAL AND CONFORMING AMENDMENTS.—

(1) The table of sections for such subpart A is amended by inserting immediately before the item relating to section 45 the following new item:

“Sec. 44A. Insulation of principal residence.”

(2) Section 56(a)(2) (relating to imposition of minimum tax) is amended by striking out “and” at the end of clause (vi), by striking out “; and” at the end of clause (vii) and inserting in lieu thereof “, and”, and by inserting after clause (vii) the following new clause:

“(viii) section 44A (relating to insulation of principal residence); and”.

(3) Section 56(c)(1) (relating to tax carryovers) is amended by striking out “and” at the end of subparagraph (F), by striking out “exceed” at the end of subparagraph (G) and inserting in lieu thereof “and”, and by inserting after subparagraph (G) the following new subparagraph:

1 “(H) section 44A (relating to insulation of
2 principal residence), exceed”.

3 (4) Subsection (a) of section 1016 (relating to
4 adjustments to basis) is amended by striking out the
5 period at the end of paragraph (22) and inserting in
6 lieu thereof a semicolon and by inserting after para-
7 graph (22) the following new paragraph:

8 “(23) to the extent provided in section 44A (d),
9 in the case of property with respect to which a credit
10 has been allowed under section 44A.”

11 (5) Section 6096 (b) (relating to designation of
12 income tax payment to Presidential Election Campaign
13 Fund) is amended by striking out “and 44” and in-
14 serting in lieu thereof “44, and 44A”.

15 (c) **EFFECTIVE DATE.**—The amendments made by
16 this section shall apply to amounts paid after March 17,
17 1975, in taxable years ending after such date.

18 **SEC. 232. RESIDENTIAL SOLAR ENERGY EQUIPMENT.**

19 (a) **GENERAL RULE.**—Subpart A of chapter IV of sub-
20 chapter A of chapter 1 (relating to credits allowable) is
21 amended by inserting immediately before section 45 the
22 following new section:

23 **“SEC. 44B. RESIDENTIAL SOLAR ENERGY EQUIPMENT.**

24 “(a) **GENERAL RULE.**—In the case of an individual,

1 there shall be allowed as a credit against the tax imposed by
2 this chapter for the taxable year an amount equal to 25
3 percent of the qualified solar heating and cooling equipment
4 expenditures paid by the taxpayer during the taxable year
5 with respect to any residence to the extent that such ex-
6 penditures do not exceed \$8,000.

7 “(b) LIMITATIONS.—

8 “(1) APPLICATION WITH OTHER CREDITS.—The
9 credit allowed by subsection (a) shall not exceed the
10 amount of the tax imposed by this chapter for the
11 taxable year reduced by the sum of the credits allowable
12 under—

13 “(A) section 33 (relating to foreign tax
14 credit),

15 “(B) section 37 (relating to retirement in-
16 come),

17 “(C) section 38 (relating to investment in cer-
18 tain depreciable property),

19 “(D) section 40 (relating to expenses of work
20 incentive programs),

21 “(E) section 41 (relating to contributions to
22 candidates for public office),

23 “(F) section 42 (relating to credit for personal
24 exemptions),

1 “(G) section 44 (relating to purchase of new
2 principal residence), and

3 “(H) section 44A (relating to insulation of
4 principal residence).

5 “(2) PRIOR EXPENDITURES TAKEN INTO AC-
6 COUNT.—If—

7 “(A) the taxpayer made qualified solar energy
8 equipment expenditures with respect to any resi-
9 dence in any prior taxable year, or

10 “(B) any prior owner of such residence made
11 qualified solar energy equipment expenditures with
12 respect to such residence,

13 then subsection (a) shall be applied with respect to
14 such residence for the taxable year by reducing (but
15 not below zero) the dollar amount contained in such
16 subsection by the aggregate of the expenditures described
17 in subparagraphs (A) and (B).

18 “(c) DEFINITIONS AND SPECIAL RULES.—For pur-
19 poses of this section—

20 “(1) QUALIFIED SOLAR ENERGY EQUIPMENT EX-
21 PENDITURES.—The term ‘qualified solar energy expend-
22 itures’ means any amount paid by an individual for any
23 installation which occurs after March 17, 1975, and
24 before January 1, 1981, of solar energy equipment, in

1 any dwelling unit which at the time of such installation
2 is owned by the individual and used by him as his prin-
3 cipal residence (within the meaning of section 1034).

4 “(2) SOLAR ENERGY EQUIPMENT.—The term ‘so-
5 lar energy equipment’ means equipment—

6 “(A) which, when installed in or on, or when
7 connected to, a building—

8 “(i) uses solar energy to heat or cool
9 such building or provide hot water for use with-
10 in such building; and

11 “(ii) meets the interim or definitive per-
12 formance criteria prescribed by the Secretary of
13 Housing and Urban Development under the
14 Solar Heating and Cooling Demonstration Act
15 of 1974;

16 “(B) the original use of which commences
17 with the taxpayer; and

18 “(C) which has a useful life of at least 3 years.

19 “(3) JOINT OWNERSHIP.—In the case of any build-
20 ing which is jointly owned, and is used during any
21 calendar year as a principal residence, by two or more
22 individuals—

23 “(A) the amount of the credit allowable under
24 subsection (a) (after applying subsection (b) (2))
25 with respect to any qualified solar energy equipment

1 expenditures paid during such calendar year by any
2 of such individuals with respect to such building
3 shall be determined by treating all of such individ-
4 uals as one taxpayer whose taxable year is such
5 calendar year; and

6 “(B) each of such individuals shall be allowed
7 a credit under subsection (a) for the taxable year
8 in which such calendar year ends (subject to the
9 limitation of subsection (b) (1)) in an amount
10 which bears the same ratio to the amount deter-
11 mined under subparagraph (A) as the amount paid
12 by such individual during such calendar year for
13 such expenditures bears to the aggregate of the
14 amounts paid by all of such individuals during such
15 calendar year for such expenditures.

16 “(4) TENANT-STOCKHOLDER IN COOPERATIVE
17 HOUSING CORPORATION.—In the case of an individual
18 who holds stock as a tenant-stockholder (as defined in
19 section 216) in a cooperative housing corporation (as
20 defined in such section), such individual—

21 “(A) shall be treated as owning the dwelling
22 unit which he is entitled to occupy as such stock-
23 holder; and

24 “(B) shall be treated as having paid his tenant-
25 stockholder’s proportionate share (as defined in sec-

1 tion 216(b)(3)) of any qualified solar energy
2 equipment expenditures paid by such corporation.

3 “(d) REDUCTION OF BASIS.—The basis of any property
4 shall not be increased by the amount of any qualified solar
5 energy equipment expenditures made with respect to such
6 property to the extent of the amount of any credit allowed
7 under this section with respect to such expenditures.

8 “(e) TERMINATION.—This section shall not apply to
9 any amount paid after December 31, 1980.”

10 (b) TECHNICAL AND CONFORMING AMENDMENTS.—

11 (1) The table of sections for such subpart A is
12 amended by inserting before the item relating to sec-
13 tion 45 the following:

 “Sec. 44B. Residential solar energy equipment.”

14 (2) Section 56(a)(2) (relating to imposition of
15 minimum tax) is amended by striking out “and” at the
16 end of clause (vii), by striking out “; and” at the end of
17 clause (viii) and inserting in lieu thereof “, and”, and
18 by inserting after clause (viii) the following new clause:

 “(ix) section 44B (relating to residential
20 solar energy equipment); and”.

21 (3) Section 56(c)(1) (relating to tax carry-
22 overs) is amended by striking out “and” at the end of
23 subparagraph (G), by striking out “exceed” at the
24 end of subparagraph (H) and inserting in lieu thereof

1 “and”, and by inserting after subparagraph (H) the
2 following new subparagraph:

3 “(I) section 44B (relating to residential solar
4 energy equipment), exceed”.

5 (4) Subsection (a) of section 1016 (relating to
6 adjustments to basis) is amended by striking out the
7 period at the end of paragraph (23) and inserting in
8 lieu thereof a semicolon and by inserting after paragraph
9 (23) the following new paragraph:

10 “(24) to the extent provided in section 44B (d), in
11 the case of property with respect to which a credit has
12 been allowed under section 44B.”

13 (5) Section 6096 (b) (relating to designation of
14 income tax payment to Presidential Election Campaign
15 Fund) is amended by striking out “and 44A” and in-
16 serting in lieu thereof “44A, and 44B”.

17 (c) EFFECTIVE DATE.—The amendments made by this
18 section shall apply to amounts paid after March 17, 1975,
19 in taxable years ending after such date.

20 **SEC. 233. QUALIFIED ELECTRIC MOTOR VEHICLES.**

21 (a) GENERAL RULE.—Subpart A of part IV of sub-
22 chapter A of chapter 1 (relating to credits allowable) is
23 amended by inserting immediately before section 45 the fol-
24 lowing new section:

1 "SEC. 44C. QUALIFIED ELECTRIC MOTOR VEHICLES.

2 " (a) GENERAL RULE.—In the case of an individual,
3 there shall be allowed as a credit against the tax imposed by
4 this chapter for the taxable year an amount equal to 25 per-
5 cent of the amount paid by the taxpayer during the taxable
6 year for a qualified electric motor vehicle to the extent that
7 the aggregate amount paid by the taxpayer during such tax-
8 able year and all prior taxable years for such vehicle does
9 not exceed \$3,000.

10 " (b) LIMITATIONS.—

11 " (1) APPLICATION WITH OTHER CREDITS.—The
12 credit allowed by subsection (a) shall not exceed the
13 amount of the tax imposed by this chapter for the tax-
14 able year reduced by the sum of the credits allowable
15 under—

16 " (A) section 33 (relating to foreign tax
17 credit),

18 " (B) section 37 (relating to retirement in-
19 come),

20 " (C) section 38 (relating to investment in cer-
21 tain depreciable property),

22 " (D) section 40 (relating to expenses of work
23 incentive programs),

1 “(E) section 41 (relating to contributions to
2 candidates for public office),

3 “(F) section 42 (relating to credit for personal
4 exemptions),

5 “(G) section 44 (relating to purchase of new
6 principal residence),

7 “(H) section 44A (relating to insulation of
8 principal residence), and

9 “(I) section 44B (relating to residential solar
10 energy equipment).

11 “(2) VERIFICATION.—No credit shall be allowed
12 under subsection (a) with respect to any qualified
13 electric motor vehicle unless such expenditures are
14 verified in such manner as the Secretary or his dele-
15 gate shall prescribe by regulations.

16 “(c) QUALIFIED NEW ELECTRIC MOTOR VEHICLE
17 DEFINED.—For purposes of this section, the term ‘qualified
18 electric motor vehicle’ means any highway vehicle—

19 “(1) which is powered primarily by an electric
20 motor drawing current from rechargeable storage bat-
21 teries or other portable sources of electric current,

22 “(2) which is purchased by the taxpayer after
23 June 3, 1975, and before January 1, 1979, for the per-
24 sonal use of the taxpayer or a member of his family, and

1 “(3) the original use of which begins with the tax-
2 payer or a member of his family.

3 “(d) TERMINATION.—This section shall not apply
4 to any amount paid after December 31, 1978.”.

5 (b) TECHNICAL AND CONFORMING AMENDMENTS.—

6 (1) The table of sections for such subpart A is
7 amended by inserting immediately before the item re-
8 lating to section 45 the following new item:

 “Sec. 44C. Qualified electric motor vehicles.”

9 (2) Section 56(a) (2) (relating to imposition of
10 minimum tax) is amended by striking out “and” at the
11 end of clause (viii), by striking out “; and” at the end
12 of clause (ix) and inserting in lieu thereof “, and”, and
13 by inserting after clause (ix) the following new clause:

14 “(x) section 44C (relating to qualified
15 electric motor vehicles) ; and”.

16 (3) Section 56(c) (1) (relating to tax carry-
17 overs) is amended by striking out “and” at the end of
18 subparagraph (II), by striking out “exceed” at the end
19 of subparagraph (I) and inserting in lieu thereof “and”,
20 and by inserting after subparagraph (I) the following
21 new subparagraph:

22 “(J) section 44C (relating to qualified electric
23 motor vehicles), exceed”.

24 (4) Section 6096(b) (relating to designation of

1 income tax payment to Presidential Election Campaign
2 Fund) is amended by striking out "and 44B" and
3 inserting in lieu thereof "44B, and 44C".

4 (c) EFFECTIVE DATE.—The amendments made by this
5 section shall apply to amounts paid after June 3, 1975, in
6 taxable years ending after such date.

7 **TITLE III—ENERGY CONSERVATION** 8 **AND CONVERSION TRUST FUND**

9 **SEC. 311. ESTABLISHMENT OF ENERGY CONSERVATION** 10 **AND CONVERSION TRUST FUND.**

11 (a) CREATION OF TRUST FUND.—There is established
12 in the Treasury of the United States a trust fund to be known
13 as the "Energy Conservation and Conversion Trust Fund"
14 (hereinafter in this title referred to as the "Trust Fund"),
15 consisting of such amounts as may be appropriated or cred-
16 ited to the Trust Fund as provided in this section.

17 (b) TRANSFER TO TRUST FUND OF AMOUNTS EQUIV-
18 ALENT TO CERTAIN TAXES.—

19 (1) IN GENERAL.—There are hereby appropriated
20 to the Trust Fund amounts determined by the Secretary
21 of the Treasury (hereinafter in this title referred to as
22 the "Secretary") to be equivalent to the following
23 amounts received in the Treasury before October 1,
24 1985:

1 (A) the amount of the taxes under section 4991
2 of the Internal Revenue Code of 1954 (relating to
3 tax on certain business uses of petroleum and petro-
4 leum products) ;

5 (B) the duties under section 121 of this Act
6 (relating to rates of duty on oil), except for duties
7 collected in Puerto Rico and required to be paid to
8 the treasury of Puerto Rico under section 4 of the
9 Act of April 12, 1900 (48 U.S.C. 740) ; and

10 (C) to the extent provided by any law enacted
11 after the date of the enactment of this Act, proceeds
12 to the United States from oil and gas properties in
13 which the United States has an interest.

14 (2) **METHOD OF TRANSFER.**—The amounts appro-
15 priated by paragraph (1) shall be transferred at least
16 quarterly from the general fund of the Treasury to the
17 Trust Fund on the basis of estimates made by the Sec-
18 retary of the amounts referred to in paragraph (1) re-
19 ceived in the Treasury. Proper adjustments shall be made
20 in the amounts subsequently transferred to the extent
21 prior estimates were in excess of or less than the amounts
22 required to be transferred.

23 (c) **ANNUAL CEILING ON AMOUNTS WHICH MAY BE**
24 **PLACED IN TRUST FUND.**—The amount appropriated by
25 subsection (b) (1) for any fiscal year shall not exceed—

1 (1) in the case of any fiscal year ending on or
2 before September 30, 1983, \$5,000,000,000; and

3 (2) in the case of the fiscal year ending September
4 30, 1984, \$2,500,000,000.

5 No amount shall be appropriated to the Trust Fund after
6 September 30, 1984. Any amount which, but for this sub-
7 section, would be appropriated to the Trust Fund shall re-
8 main in the general fund of the Treasury.

9 (d) OVERALL LIMITATION ON AMOUNT IN THE TRUST
10 FUND.—

11 (1) IN GENERAL.—If at any time during a fiscal
12 year ending on or before September 30, 1984, the
13 Secretary determines that the amount in the Trust Fund
14 which is not obligated for expenditure exceeds \$10,000,-
15 000,000, the Secretary shall transfer the amount of such
16 excess to the general fund of the Treasury.

17 (2) FISCAL YEAR 1985.—If at any time during the
18 fiscal year ending on September 30, 1985, the Secretary
19 determines that the amount in the Trust Fund which
20 is not obligated for expenditure exceeds \$5,000,000,000,
21 the Secretary shall transfer the amount of such excess
22 to the general fund of the Treasury.

23 (e) MANAGEMENT OF TRUST FUND.—

24 (1) REPORT.—It shall be the duty of the Secre-
25 tary to hold the Trust Fund, and to report to the Con-

1 gress each year on the financial condition and the results
2 of the operations of the Trust Fund during the preced-
3 ing fiscal year and on its expected condition and opera-
4 tions during the next 5 fiscal years. Such report shall be
5 printed as a House document of the session of the Con-
6 gress to which the report is made.

7 (2) INVESTMENT.—

8 (A) IN GENERAL.—It shall be the duty of the
9 Secretary to invest such portion of the Trust Fund
10 as is not, in his judgment, required to meet current
11 withdrawals. Such investments may be made only in
12 interest-bearing obligations of the United States or
13 in obligations guaranteed as to both principal and
14 interest by the United States. For such purpose, such
15 obligations may be acquired (i) on original issue at
16 the issue price, or (ii) by purchase of outstanding
17 obligations at the market price.

18 (B) SALE OF OBLIGATIONS.—Any obligation
19 acquired by the Trust Fund may be sold by the
20 Secretary at the market price.

21 (C) INTEREST ON CERTAIN PROCEEDS.—The
22 interest on, and the proceeds from the sale or re-
23 demption of, any obligations held in the Trust Fund
24 shall be credited to and form a part of the Trust
25 Fund.

1 (f) **TERMINATION.**—The Secretary shall transfer from
2 the Trust Fund into the general fund of the Treasury any
3 amount in the Trust Fund on October 1, 1985, which is not
4 obligated for expenditure.

5 **SEC. 312. EXPENDITURES FROM TRUST FUNDS FOR**
6 **ENERGY PROJECTS AND PROGRAMS.**

7 (a) **IN GENERAL.**—Amounts in the Trust Fund shall
8 be available, as provided by appropriation Acts, for making
9 expenditures before October 1, 1985, for purposes of con-
10 serving energy resources and expanding energy supplies
11 through—

12 (1) basic and applied research programs related
13 to new energy technologies, including (but not limited
14 to)—

15 (A) solar energy,

16 (B) geothermal energy,

17 (C) advanced transportation power systems,

18 (D) environmental impact (and human
19 safety),

20 (E) energy conversion,

21 (F) energy transmission,

22 (G) energy conservation,

23 (H) synthetic fuels from fossil sources,

24 (I) utilization of solid waste,

25 (J) fusion, and

- 1 (K) an engine for an efficient pollution-free
2 automobile;
- 3 (2) development and demonstration of new energy
4 technologies, including (but not limited to) —
- 5 (A) coal liquefaction and gasification demon-
6 stration projects,
- 7 (B) aid for powerplant conversions to coal,
- 8 (C) loans or subsidies for solid waste energy
9 conversion plants (including production of methane
10 gas from organic wastes),
- 11 (D) loans or subsidies for shale oil production,
- 12 (E) price guarantees on long-term purchase
13 contracts for other new energy sources,
- 14 (F) strip mining reclamation and mine safety
15 programs,
- 16 (G) engines for efficient pollution-free auto-
17 mobiles,
- 18 (H) loans and subsidies relating to solar energy
19 systems, and
- 20 (I) demonstration and development of hot wa-
21 ter heating systems, or space heating and cooling
22 systems, for home use;
- 23 (3) programs relating to the development of energy
24 resources from properties (including offshore properties)
-

1 in which the United States has an interest, including
2 (but not limited to)—

3 (A) geothermal energy development, and

4 (B) energy related environmental protection
5 programs and research; and

6 (4) research projects, or capital expenditures for
7 demonstration projects, relating to local and regional
8 transportation systems, including (but not limited to)—

9 (A) mass transit by bus,

10 (B) fixed guideway mass transit,

11 (C) commuter rail transportation,

12 (D) intercity rail passenger service,

13 (E) mass transit terminal facilities,

14 (F) mass transit operational facilities, and

15 (G) exclusive or preferential bus lanes.

16 Nothing in this subsection shall be deemed to authorize any
17 program, project, or other activity not otherwise author-
18 ized by law. Amounts required for purposes of this subsection
19 shall be included in the appropriation requests of those Fed-
20 eral agencies authorized to carry out the program, project, or
21 activity.

22 (b) PROGRAM EVALUATION CRITERIA, ETC.—Not later
23 than 270 days after the date of the enactment of this Act,

1 the Energy Conservation and Conversion Trust Fund Re-
2 view Board shall—

3 (1) develop criteria for evaluating the programs,
4 projects, and activities referred to in paragraphs (1),
5 (2), (3), and (4) of subsection (a),

6 (2) evaluate potential programs, projects, and
7 activities on the basis of such criteria, and

8 (3) submit to the Congress a report containing the
9 criteria developed under paragraph (1) together with
10 the Board's recommendations for the proportion of the
11 Trust Fund which should be available for expenditure for
12 each fiscal year for programs, projects, and activities
13 referred to in each paragraph of subsection (a).

14 **SEC. 313. ENERGY CONSERVATION AND CONVERSION**
15 **TRUST FUND REVIEW BOARD.**

16 (a) **ESTABLISHMENT OF BOARD.**—There is hereby
17 established a review board to be known as the “Energy
18 Conservation and Conversion Trust Fund Review Board”
19 (hereinafter in this section referred to as the “Board”).

20 (b) **MEMBERSHIP.**—

21 (1) **NUMBER AND APPOINTMENT.**—

22 (A) **IN GENERAL.**—The Board shall be com-
23 posed of 5 members appointed by the President by
24 and with the advice and consent of the Senate.

1 (B) LIMITATIONS.—An individual may not
2 be appointed as a member of the Board if—

3 (i) at any time during the 5-year period
4 ending on the date of his nomination such in-
5 dividual held interests in one or more energy
6 related industries and the aggregate fair market
7 value of such interests exceeded \$2,500; or

8 (ii) for any taxable year beginning or end-
9 ing during such 5-year period such individual
10 received or accrued gross income in excess of
11 \$10,000 from one or more energy related
12 industries.

13 Any individual who after appointment as a member
14 acquires any interest in, or receives or accrues any
15 income from, an energy related industry may not
16 thereafter hold such position. For purposes of this
17 paragraph, an individual shall be deemed to hold
18 any interest held by such individual's spouse or by
19 any child of the individual who has not attained 18
20 years of age.

21 (C) ENERGY RELATED INDUSTRY.—For pur-
22 poses of this paragraph, the term "energy related
23 industry" means an industry engaged in the trade
24 or business of—

1 (i) the generation, transmission, distribu-
2 tion, or sale of electrical or other energy,

3 (ii) the production, transmission, distribu-
4 tion, or sale of oil or gas, or primary products
5 of oil and gas,

6 (iii) production, importation, distribution,
7 or sale of motor vehicles, or

8 (iv) the furnishing or sale of transportation.

9 (2) TERMS.—

10 (A) Except as provided in subparagraphs (B)
11 and (C), members shall be appointed for terms of
12 5 years.

13 (B) Of the members first appointed—

14 (i) one shall be appointed for a term of 1
15 year,

16 (ii) one shall be appointed for a term of 2
17 years,

18 (iii) one shall be appointed for a term of 3
19 years,

20 (iv) one shall be appointed for a term of 4
21 years, and

22 (v) one shall be appointed for a term of 5
23 years,

24 as designated by the President at the time of
25 appointment.

1 (C) Any member appointed to fill a vacancy
2 occurring before the expiration of the term for which
3 his predecessor was appointed shall be appointed
4 only for the remainder of such term. A member
5 may serve after the expiration of his term until his
6 successor has taken office.

7 (3) PAY AND TRAVEL EXPENSES.—

8 (A) Except as provided in subparagraph (B),
9 members of the Board shall each be entitled to re-
10 ceive \$100 for each day (including traveltime) dur-
11 ing which they are engaged in the actual perform-
12 ance of duties vested in the Board.

13 (B) Members of the Board who are full-time
14 officers or employees of the United States or Mem-
15 bers of Congress shall receive no additional pay on
16 account of their service on the Board.

17 (C) While away from their homes or regular
18 places of business in the performance of services for
19 the Board, members of the Board shall be allowed
20 travel expenses, including per diem in lieu of sub-
21 sistence, in the same manner as persons employed
22 intermittently in the Government service are allowed
23 expenses under section 5703 (b) of title 5 of the
24 United States Code.

1 (4) **CHAIRMAN.**—The Chairman of the Board shall
2 be elected by the members of the Board.

3 (c) **DUTIES.**—The Board shall review the expenditures
4 made from the Trust Fund under section 312 and report to
5 the Congress each year regarding expenditures so made
6 during the preceding fiscal year. Such report shall contain
7 evaluations of the programs and projects for which such
8 expenditures were made, and such recommendations for such
9 changes as the Board considers necessary to ensure that
10 future expenditures made from the Trust Fund best carry out
11 the purposes of this title.

12 (d) **STAFF.**—The Board shall appoint such employees
13 as it deems necessary. Such employees shall be appointed
14 subject to the provisions of title 5, United States Code, gov-
15 erning appointments in the civil service, and shall be paid in
16 accordance with the provisions of chapter 51 and subchapter
17 III of chapter 53 of such title, relating to classification and
18 General Schedule pay rates.

19 (e) **APPROPRIATION AUTHORIZATION.**—There are
20 authorized to be appropriated from time to time such sums
21 as may be necessary to carry out the purposes of this section.

22 **SEC. 314. REQUIREMENT OF ANNUAL AUTHORIZATIONS**
23 **AND APPROPRIATIONS.**

24 Amounts required for the purposes of this title (other
25 than section 311) shall be established by annual authoriza-
26 tion and appropriation Acts.

1 **TITLE IV—ENCOURAGING BUSINESS**
 2 **CONVERSION FOR GREATER**
 3 **ENERGY SAVING**

4 **PART I—BUSINESS USE OF PETROLEUM AND**
 5 **PETROLEUM PRODUCTS**

6 **SEC. 411. EXCISE TAX ON BUSINESS USE OF PETROLEUM**
 7 **AND PETROLEUM PRODUCTS.**

8 (a) IN GENERAL.—Subtitle D (relating to miscel-
 9 laneous excise taxes) is amended by adding at the end
 10 thereof the following new chapter:

11 **“CHAPTER 45—TAX ON BUSINESS USE OF**
 12 **PETROLEUM AND PETROLEUM PRODUCTS**

“Sec. 4991. Imposition of tax.

“Sec. 4992. Definitions and special rules.

13 **“SEC. 4991. IMPOSITION OF TAX.**

14 “(a) IN GENERAL.—There is hereby imposed a tax on
 15 each taxable use of a taxable petroleum or petroleum product.

16 “(b) AMOUNT OF TAX.—The amount of the tax im-
 17 posed by subsection (a) shall be—

18 “(1) FOR NATURAL GAS.—In the case of natural
 19 gas—

“If the taxable use occurs during calendar year	The tax per 1,000 cubic feet is:
1977	4 cents.
1978	8 cents.
1979	12 cents.
1980 or thereafter.....	18 cents.

20 “(2) FOR CRUDE OIL AND OTHER PETROLEUM

1 PRODUCTS.—In the case of crude oil and other petroleum
 2 products—

“If the taxable use occurs during calendar year	The tax per barrel is:
1977 -----	17 cents.
1978 -----	33 cents.
1979 -----	50 cents.
1980 -----	67 cents.
1981 -----	83 cents.
1982 or thereafter-----	\$1.

3 “(c) LIABILITY FOR TAX.—The tax imposed by this
 4 section shall be paid by the user.

5 “SEC. 4992. DEFINITIONS AND SPECIAL RULES.

6 “(a) TAXABLE USE.—

7 “(1) IN GENERAL.—For purposes of this chapter,
 8 the term ‘taxable use’ means any use as a fuel in a trade
 9 or business other than a use described in paragraph (2).

10 “(2) CERTAIN USES EXCEPTED.—For purposes of
 11 this chapter, the term ‘taxable use’ does not include any
 12 use as a fuel—

13 “(A) in a vehicle, vessel, or aircraft,

14 “(B) in an apartment, hotel, motel, or other
 15 residential facility,

16 “(C) for the extraction of a mineral to the
 17 extent such extraction constitutes mining within the
 18 meaning of section 613 (c),

19 “(D) on a farm for farming purposes (deter-
 20 mined in a manner similar to that provided by sec-
 21 tion 6420 (c)),

1 “(E) in a facility for the generation of elec-
2 trical power if—

3 “(i) such facility is acquired by the user
4 before January 1, 1976,

5 “(ii) the physical construction, recon-
6 struction, or erection of such facility by the
7 user is begun before January 1, 1976, or

8 “(iii) such facility is constructed, recon-
9 structed, or erected for the user, or acquired
10 by the user, pursuant to a contract which is on
11 December 31, 1975, and at all times
12 thereafter, binding on the user,

13 “(F) by an organization described in section
14 501 (c) (3) which is exempt from tax under section
15 501 (a) other than in an unrelated trade or business
16 (as defined in section 513),

17 “(G) in the preparation process and drying,
18 bleaching, dyeing, and printing and finishing proc-
19 esses for textiles, including carpets, and apparel
20 products, and

21 “(H) in the process of melting, fining, feeding,
22 conditioning, polishing, glazing, coating, annealing,
23 or other industrial finishing of glass manufactured
24 products.

1 Subparagraph (E) shall not apply to any use after
2 December 31, 1981.

3 “(b) TAXABLE PETROLEUM OR PETROLEUM PROD-
4 UCT.—For purposes of this chapter, the term ‘taxable petro-
5 leum or petroleum product’ means any petroleum or petro-
6 leum product other than gasoline (as defined in section
7 4082 (b)).

8 “(c) PETROLEUM AND PETROLEUM PRODUCTS.—For
9 purposes of this chapter, the term ‘petroleum or petroleum
10 product’ includes natural gas.”

11 (b) CLERICAL AMENDMENT.—The table of chapters for
12 subtitle D is amended by adding at the end thereof the
13 following:

“CHAPTER 45. Tax on business use of petroleum and petro-
leum products.”

14 (c) REPORT BY THE ADMINISTRATOR OF THE FEDERAL
15 ENERGY ADMINISTRATION.—

16 (1) IN GENERAL.—The Administrator of the Fed-
17 eral Energy Administration (hereinafter in this subsec-
18 tion referred to as the “Administrator”) shall conduct a
19 study of the uses of petroleum or petroleum products (in-
20 cluding natural gas) to identify—

21 (A) the industries or industrial processes where
22 there is no economically feasible alternative to the
23 use of petroleum or petroleum products,

1 (B) the areas of the country where conversion
2 to the use of fuels other than petroleum or petroleum
3 products is not feasible because of Federal, State, or
4 local laws relating to pollution, and

5 (C) all other factors bearing on uses which
6 should be exempted from the application of section
7 4991 of the Internal Revenue Code of 1954.

8 (2) REPORT.—Not later than June 1, 1976, the
9 Administrator shall submit to Congress a report of his
10 findings under the study conducted under paragraph (1),
11 together with such recommendations as he may deem
12 advisable.

13 (d) EFFECTIVE DATE.—The amendments made by sub-
14 sections (a) and (b) shall apply to petroleum and petroleum
15 products (as defined in section 4992(c) of the Internal
16 Revenue Code of 1954) used after December 31, 1976.

17 **PART II—AMORTIZATION FOR CERTAIN ENERGY-**
18 **RELATED PROPERTY**

19 **SEC. 421. AMORTIZATION OF QUALIFIED ENERGY USE**
20 **PROPERTY.**

21 Part VI of subchapter B of chapter 1 (relating to
22 itemized deductions for individuals and corporations) is
23 amended by adding at the end thereof the following new
24 section:

1 **“SEC. 189. AMORTIZATION OF QUALIFIED ENERGY USE**
2 **PROPERTY.**

3 “(a) ALLOWANCE OF DEDUCTION.—Every person, at
4 his election, shall be entitled to a deduction with respect to
5 the amortization of any qualified energy use property (as
6 defined in subsection (b)), based on a period of 60 months.

7 “(b) QUALIFIED ENERGY USE PROPERTY.—For pur-
8 poses of this section—

9 “(1) QUALIFIED ENERGY USE PROPERTY.—The
10 term ‘qualified energy use property’ means—

11 “(A) qualified waste equipment,

12 “(B) qualified shale oil conversion equipment,

13 “(C) qualified coal processing equipment,

14 “(D) a qualified coal pipeline,

15 “(E) qualified solar energy equipment, or

16 “(F) qualified deep mining coal equipment.

17 “(2) QUALIFIED WASTE EQUIPMENT.—The term
18 ‘qualified waste equipment’ means any machinery or
19 equipment (of a character subject to the allowance for
20 depreciation) —

21 “(A) necessary to permit the use of waste as a
22 fuel in a facility burning only waste or a combina-
23 tion of waste and oil as its principal fuel (including
24 unloading equipment, feeding systems, and refuse-
25 firing ports for waste fuels),

1 “(B) used to process waste into a fuel, or

2 “(C) used to sort and prepare solid waste
3 for recycling or used for recycling solid waste.

4 “(3) QUALIFIED SHALE OIL CONVERSION EQUIP-
5 MENT.—The term ‘qualified shale oil conversion equip-
6 ment’ means any machinery or equipment (of a char-
7 acter subject to the allowance for depreciation) nec-
8 essary—

9 “(A) to reach the oil shale,

10 “(B) to extract the oil shale, or

11 “(C) to convert the oil shale into oil or gas.

12 “(4) QUALIFIED COAL PROCESSING EQUIPMENT.—
13 The term ‘qualified coal processing equipment’ means
14 any machinery or equipment (of a character subject to
15 the allowance for depreciation) for processing coal into
16 a liquid or gaseous state.

17 “(5) QUALIFIED COAL PIPELINE.—The term
18 ‘qualified coal pipeline’ means a coal slurry pipeline or
19 any other pipeline (of a character subject to the allow-
20 ance for depreciation) for the transportation of coal from
21 the mine or other gathering point.

22 “(6) QUALIFIED SOLAR ENERGY EQUIPMENT.—
23 The term ‘qualified solar energy equipment’ means solar
24 energy equipment, as defined in section 44B(c)(2).

25 “(7) QUALIFIED DEEP MINING COAL EQUIP-

1 MENT.—The term ‘qualified deep mining coal equip-
2 ment’ means any machinery or equipment or structural
3 component of a coal mine which is of a character subject
4 to the allowance for depreciation and which is neces-
5 sary—

6 “(A) to reach the coal,

7 “(B) to extract the coal, or

8 “(C) to bring the coal to the mouth of the mine.

9 Such term does not include any property used in the
10 surface mining of coal.

11 “(8) COAL INCLUDES LIGNITE.—The term ‘coal’
12 includes lignite.

13 “(c) AMOUNT OF DEDUCTION.—The amortization
14 deduction for any qualified energy use property shall be an
15 amount, with respect to each month of the 60-month period
16 within the taxable year, equal to the adjusted basis of the
17 qualified energy use property at the end of such month
18 divided by the number of months (including the month
19 for which the deduction is computed) remaining in the
20 period. Such adjusted basis at the end of the month shall
21 be computed without regard to the amortization deduction
22 for such month. The amortization deduction provided by this
23 section with respect to any qualified energy use property for
24 any month shall be in lieu of the depreciation deduction with
25 respect to such property for such month provided by sec-

1 tion 167. The 60-month period shall begin, as to any quali-
2 fied energy use property, at the election of the taxpayer,
3 with the month following the month in which such property
4 was placed in service or with the succeeding taxable year.

5 “(d) SPECIAL RULES FOR ADJUSTED BASIS.—

6 “(1) For purposes of this section, the adjusted basis
7 of any qualified energy use property with respect to
8 which an election has been made under subsection (e)
9 shall not be increased for amounts chargeable to capital
10 account for additions or improvements after the amorti-
11 zation period has begun.

12 “(2) The depreciation deduction provided by sec-
13 tion 167 shall, notwithstanding subsection (c), be al-
14 lowed with respect to the portion of the adjusted basis
15 which is not taken into account in applying this section.

16 “(e) ELECTION OF AMORTIZATION.—The election of
17 the taxpayer to take the amortization deduction, and the
18 election to begin the 60-month period with the month follow-
19 ing the month in which the qualified energy use property is
20 placed in service or with the taxable year succeeding the tax-
21 able year in which such property is placed in service, shall be
22 made by filing with the Secretary or his delegate, in such
23 manner, in such form, and within such time as the Secretary
24 or his delegate may by regulations prescribe, a statement of
25 such election.

1 “(f) TERMINATION OF ELECTION.—

2 “(1) BY THE TAXPAYER.—A taxpayer which has
3 elected under subsection (c) to take the amortization
4 deduction with respect to any qualified energy use
5 property may, at any time after making such elec-
6 tion, discontinue the amortization deduction with respect
7 to the remainder of the amortization period, such discon-
8 tinuance to begin as of the beginning of any month spe-
9 cified by the taxpayer in a notice in writing filed with the
10 Secretary or his delegate before the beginning of such
11 month. The depreciation deduction provided under sec-
12 tion 167 shall be allowed, beginning with the first month
13 as to which the amortization deduction does not apply,
14 and the taxpayer shall not be entitled to any further
15 amortization deduction under this section with respect
16 to such property.

17 “(2) CONSTRUCTIVE TERMINATION.—If at any
18 time during the amortization period any qualified en-
19 ergy use property ceases to meet the requirements
20 of subsection (b) or becomes property with respect to
21 which an amortization deduction under this section is
22 not allowable by reason of subsection (g), the taxpayer
23 shall be deemed to have terminated under paragraph (1)
24 his election under this section. Such termination shall
25 be effective beginning with the month in which such

1 cessation occurs or in which a lease exists which causes
2 disallowance under subsection (g).

3 “(g) **NONCORPORATE LESSORS.**—No amortization de-
4 duction shall be allowed under this section with respect to
5 any property of which a person which is not a corporation is
6 the lessor. In the case of property of which a partnership is
7 the lessor, the amortization deduction otherwise allowable
8 under this section with respect to such property to any part-
9 ner which is a corporation shall be allowed notwithstanding
10 the preceding sentence and subsection (f) (2). For purposes
11 of this subsection, an electing small business corporation (as
12 defined in section 1371) shall be treated as a person which
13 is not a corporation.

14 “(h) **LIFE TENANT AND REMAINDERMAN.**—In the
15 case of any qualified energy use property held by one per-
16 son for life with remainder to another person, the deduction
17 under this section shall be computed as if the life tenant
18 were the absolute owner of the property and shall be allow-
19 able to the life tenant.

20 “(i) **APPLICATION OF SECTION.**—

21 “(1) **IN GENERAL.**—Except as provided in para-
22 graph (2), the amortization deduction provided by this
23 section shall apply to that portion of the basis which is
24 attributable to construction, reconstruction, or erection
25 after March 17, 1975, with respect to property which is

1 placed in service after such date and before January 1,
2 1981.

3 “(2) PRE-1981 PORTION.—In the case of property
4 constructed, reconstructed, or erected by the taxpayer,
5 or for the taxpayer pursuant to a contract which is bind-
6 ing on the taxpayer on January 1, 1981, and at all
7 times thereafter, which is placed in service on or after
8 January 1, 1981, the amortization deduction provided
9 by this section shall apply to that portion of the basis
10 which is attributable to construction, reconstruction, or
11 erection before January 1, 1981.

12 “(j) CROSS REFERENCE.—

“For treatment of certain gain derived from the dispo-
sition of property the adjusted basis of which is deter-
mined with regard to this section, see section 1245.”

13 **SEC. 422. AMORTIZATION OF QUALIFIED RAILROAD EQUIP-**
14 **MENT.**

15 Part VI of subchapter B of chapter 1 (relating to item-
14 ized deductions of individuals and corporations) is amended
15 by adding at the end thereof the following new section:

16 **“SEC. 190. AMORTIZATION OF QUALIFIED RAILROAD**
17 **EQUIPMENT.**

18 “(a) ALLOWANCE OF DEDUCTION.—Every person, at
19 his election, shall be entitled to a deduction with respect to
20 the amortization of any qualified railroad equipment (as
21 defined in subsection (b)), based on a period of 60 months.

1 “(b) QUALIFIED RAILROAD EQUIPMENT DEFINED.—

2 “(1) IN GENERAL.—For purposes of this section,
3 the term ‘qualified railroad equipment’ means equipment
4 described in paragraph (2) of this subsection used by a
5 common carrier engaged in the furnishing or sale of
6 transportation by railroad and subject to the jurisdic-
7 tion of the Interstate Commerce Commission if—

8 “(A) such equipment is—

9 “(i) used by a domestic common carrier
10 by railroad, or

11 “(ii) owned and used by a car line com-
12 pany or a switching or terminal company at
13 least 95 percent of whose stock is owned
14 by one or more domestic common carriers by
15 railroad, and

16 “(B) the original use of such equipment com-
17 mences with the taxpayer after December 31, 1974.

18 “(2) EQUIPMENT.—The equipment referred to in
19 paragraph (1) of this subsection is tangible property
20 which is of a character subject to the allowance for
21 depreciation provided in section 167 (not including a
22 building or its structural components) if such property—

23 “(A) is used as an integral part of—

24 “(i) a communications, signal, or traffic
25 control system:

1 “(ii) a rolling stock classification yard;

2 or

3 “(iii) a facility for loading and unload-
4 ing trailers and containers on and from railroad
5 flatcars; or

6 “(B) is an improvement or betterment in track
7 account.

8 “(c) AMOUNT OF DEDUCTION.—The amortization
9 deduction for any qualified railroad equipment shall be an
10 amount, with respect to each month of the 60-month period
11 within the taxable year, equal to the adjusted basis of the
12 qualified railroad equipment at the end of such month divided
13 by the number of months (including the month for which the
14 deduction is computed) remaining in the period. Such
15 adjusted basis at the end of the month shall be computed
16 without regard to the amortization deduction for such month.
17 The amortization deduction provided by this section with re-
18 spect to any qualified railroad equipment for any month shall
19 be in lieu of the depreciation deduction with respect to such
20 equipment for such month provided by section 167. The 60-
21 month period shall begin, as to any qualified railroad equip-
22 ment, at the election of the taxpayer, with the month
23 following the month in which such equipment was placed in
24 service or with the succeeding taxable year.

25 “(d) SPECIAL RULES.—

1 “(1) ADJUSTED BASIS.—

2 “(A) For purposes of this section, the adjusted
3 basis of any qualified railroad equipment with
4 respect to which an election has been made under
5 subsection (e) shall not be increased for amounts
6 chargeable to capital account for additions or
7 improvements after the amortization period has
8 begun.

9 “(B) Costs incurred in connection with a used
10 unit of railroad equipment which are properly
11 chargeable to a capital account shall be treated as a
12 separate unit of railroad equipment for purposes of
13 this section.

14 “(C) The depreciation deduction provided by
15 section 167 shall, notwithstanding subsection (c),
16 be allowed with respect to the portion of the ad-
17 justed basis which is not taken into account in apply-
18 ing this section.

19 “(2) METHOD OF ACCOUNTING FOR DATE PLACED
20 IN SERVICE.—For purposes of subsections (a) and (e)
21 in the case of qualified railroad equipment placed in serv-
22 ice after December 31, 1974, and before January 1,
23 1980, the taxpayer may elect to begin the 60-month
24 period with the date when such equipment is treated
25 as having been placed in service under a method of

1 **accounting for acquisitions and retirements of property**
2 **which—**

3 **“(A) prescribes a date when property is**
4 **placed in service, and**

5 **“(B) is consistently followed by the taxpayer.**

6 **“(e) ELECTION OF AMORTIZATION.—The election of**
7 **the taxpayer to take the amortization deduction, and the elec-**
8 **tion to begin the 60-month period with the month following**
9 **the month in which the qualified railroad equipment is placed**
10 **in service or with the taxable year succeeding the taxable**
11 **year in which such equipment is placed in service, shall be**
12 **made by filing with the Secretary or his delegate, in such**
13 **manner, in such form, and within such time as the Secretary**
14 **or his delegate may by regulations prescribe, a statement of**
15 **such election.**

16 **“(f) TERMINATION OF ELECTION.—**

17 **“(1) BY THE TAXPAYER.—A taxpayer which has**
18 **elected under subsection (e) to take the amortization**
19 **deduction with respect to any qualified railroad equip-**
20 **ment may, at any time after making such election,**
21 **discontinue the amortization deduction with respect to**
22 **the remainder of the amortization period, such discon-**
23 **tinuance to begin as of the beginning of any month**
24 **specified by the taxpayer in a notice in writing filed**
25 **with the Secretary or his delegate before the beginning**

1 of such month. The depreciation deduction provided
2 under section 167 shall be allowed, beginning with the
3 first month as to which the amortization deduction does
4 not apply, and the taxpayer shall not be entitled to any
5 further amortization deduction under this section with
6 respect to such equipment.

7 “(2) CONSTRUCTIVE TERMINATION.—If at any
8 time during the amortization period any qualified rail-
9 road equipment ceases to meet the requirements of
10 subsection (d) (1) or becomes property with respect
11 to which an amortization deduction under this section
12 is not allowable by reason of subsection (g), the tax-
13 payer shall be deemed to have terminated under para-
14 graph (1) his election under this section. Such
15 termination shall be effective beginning with the month
16 in which such cessation occurs or in which the lease exists
17 which causes disallowance.

18 “(g) NONCORPORATE LESSORS.—No amortization de-
19 duction shall be allowed under this section with respect to
20 any property of which a person which is not a corporation
21 is the lessor. In the case of property of which a partnership
22 is the lessor, the amortization deduction otherwise allowable
23 under this section with respect to such property to any
24 partner which is a corporation shall be allowed notwithstand-
25 ing the preceding sentence and subsection (f) (2). For pur-

1 poses of this subsection, an electing small business corporation
 2 (as defined in section 1371) shall be treated as a person
 3 which is not a corporation.

4 “(h) LIFE TENANT AND REMAINDERMAN.—In the
 5 case of any qualified railroad equipment held by one person
 6 for life with remainder to another person, the deduction un-
 7 der this section shall be computed as if the life tenant were
 8 the absolute owner of the equipment and shall be allowable
 9 to the life tenant.

10 “(i) APPLICATION OF SECTION.—This section shall
 11 apply to qualified railroad equipment placed in service after
 12 December 31, 1974, and before January 1, 1980.

13 “(j) CROSS REFERENCE.—

“For treatment of certain gain derived from the dispo-
 sition of property the adjusted basis of which is deter-
 mined with regard to this section, see section 1245.”

14 SEC. 423. AMENDMENTS RELATING TO AMORTIZATION OF
 15 CERTAIN RAILROAD ROLLING STOCK.

16 (a) EXTENSION OF PERIOD DURING WHICH RAIL-
 17 ROAD ROLLING STOCK MAY QUALIFY FOR 5-YEAR
 18 AMORTIZATION.—Section 184 (e) (relating to amortization
 19 of railroad rolling stock) is amended—

20 (1) by striking out “1976” in paragraph (1) and
 21 inserting in lieu thereof “1980”, and

22 (2) by striking out “January 1, 1976” in paragraph
 23 (7) and inserting in lieu thereof “January 1, 1980”.

1 (b) CERTAIN COAL CARS AND RAILROAD FERRY VES-
2 SELS.—Subsection (d) of section 184 (defining qualified
3 railroad rolling stock) is amended to read as follows:

4 “(d) QUALIFIED RAILROAD ROLLING STOCK.—Except
5 as provided in subsection (c) (4), the term ‘qualified rail-
6 road rolling stock’ means, for purposes of this section—

7 “(1) rolling stock of the type used by a common
8 carrier engaged in the furnishing or sale of transporta-
9 tion by railroad and subject to the jurisdiction of the
10 Interstate Commerce Commission if—

11 “(A) such rolling stock is—

12 “(i) used by a domestic common carrier by
13 railroad on a full-time basis, or on a part-time
14 basis if its only additional use is an incidental
15 use by a Canadian or Mexican common carrier
16 by railroad on a per diem basis, or

17 “(ii) owned and used by a switching or
18 terminal company all of whose stock is owned
19 by one or more domestic common carriers by
20 railroad, and

21 “(B) the original use of such rolling stock com-
22 mences with the taxpayer after December 31, 1968;

23 “(2) any railroad rolling stock not described in
24 paragraph (1)—

25 “(A) which is a car used by the taxpayer pre-

1 dominantly in the hauling within the United States
2 of coal which is used (other than for resale) by the
3 taxpayer in his trade or business, and

4 “ (B) the original use of which commences with
5 the taxpayer after May 7, 1975; and

6 “ (3) any vessel—

7 “ (A) which is used predominantly by the tax-
8 payer in hauling railroad rolling stock between ter-
9 minals located within the United States, and

10 “ (B) the original use of which commences with
11 the taxpayer after May 7, 1975.”

12 (c) DENIAL OF AMORTIZATION TO NONCORPORATE
13 LESSORS.—

14 (1) IN GENERAL.—Section 184 is amended by re-
15 designating subsection (g) as subsection (h) and by in-
16 serting after subsection (f) the following new subsec-
17 tion:

18 “ (g) NONCORPORATE LESSORS.—No amortization de-
19 duction shall be allowed under this section with respect to
20 any property of which a person which is not a corporation is
21 the lessor. In the case of property of which a partnership is
22 the lessor, the amortization deduction otherwise allowable
23 under this section with respect to such property to any part-
24 ner which is a corporation shall be allowed notwithstanding
25 the preceding sentence and subsection (e) (6). For pur-

1 poses of this subsection, an electing small business corpora-
2 tion (as defined in section 1371) shall be treated as a person
3 which is not a corporation.”

4 (2) CONSTRUCTIVE TERMINATION.—Paragraph
5 (6) of section 184 (e) is amended by striking out “sub-
6 section (d) (1)” and inserting in lieu thereof “subsec-
7 tion (d) or becomes property with respect to which an
8 amortization deduction under this section is not allow-
9 able by reason of subsection (g)”.

10 (d) EFFECTIVE DATE.—The amendments made by
11 this section shall apply to property placed in service by the
12 taxpayer after May 7, 1975.

13 SEC. 424. TECHNICAL AND CONFORMING AMENDMENTS.

14 (a) COORDINATION WITH INVESTMENT CREDIT.—

15 (1) IN GENERAL.—Paragraph (3) of section 48
16 (a) (defining section 38 property) is amended by
17 striking out “184,” and by inserting at the end thereof
18 the following new sentence: “Qualified solar energy
19 equipment with respect to which an election under sec-
20 tion 189 applies shall not be treated as section 38
21 property.”

22 (2) USEFUL LIFE.—The second sentence of section
23 46 (c) (2) (defining applicable percentage for purposes
24 of determining qualified investment) is amended by
25 striking out the period at the end thereof and inserting

1 in lieu thereof “ (or, if the taxpayer has elected an amor-
2 tization deduction with respect to the property, the
3 amortization period).”

4 (3) EFFECTIVE DATE.—The amendments made by
5 this subsection shall apply to property placed in service
6 after March 17, 1975.

7 (b) CONFORMING AMENDMENTS.—

8 (1) Section 642 (f) (relating to amortization de-
9 duction for estates and trusts) is amended by striking
10 out “and 188” and inserting in lieu thereof “188, 189,
11 and 190”.

12 (2) Section 1082 (a) (2) (B) (relating to basis in
13 certain exchanges) is amended by striking out “or 188”
14 and inserting in lieu thereof “188, 189, or 190”.

15 (3) Section 1245 (a) (relating to gain from dis-
16 positions of certain depreciable property) is amended by
17 striking out “or 188” each place it appears in paragraph
18 (2) and inserting in lieu thereof “188, or 189”.

19 (c) CLERICAL AMENDMENTS.—The table of sections
20 for part VI of subchapter B of chapter 1 is amended by
21 adding at the end thereof the following:

“Sec. 189. Amortization of qualified energy use property.
“Sec. 190. Amortization of qualified railroad equipment.”

1 **PART III—TAX CREDIT CHANGES RELATING**
 2 **TO ENERGY CONSERVATION**
 3 **SEC. 431. CHANGES IN INVESTMENT CREDIT RELATING**
 4 **TO INSULATION, SOLAR ENERGY, AND AIR**
 5 **CONDITIONING.**

6 (a) **INSULATION AND SOLAR ENERGY.**—Section 48
 7 (relating to definitions and special rules for purposes of the
 8 investment credit) is amended by redesignating subsection
 9 (k) as subsection (l) and by adding after subsection (j)
 10 the following new subsection:

11 “(k) **TEMPORARY RULES FOR INSULATION AND**
 12 **SOLAR ENERGY.**—

13 “(1) **TREATMENT OF SECTION 38 PROPERTY.**—

14 **Any—**

15 “(A) insulation installed (other than pursuant
 16 to a reconstruction of the building) after March 17,
 17 1975, and before January 1, 1978, in a structure
 18 which was in existence on March 17, 1975, and was
 19 used on such date in a trade or business (or held
 20 for the production of income) or

21 “(B) solar energy equipment installed after
 22 March 17, 1975, and before January 1, 1981,
 23 shall be treated as section 38 property.

1 “(2) LODGING RULE NOT TO APPLY.—For pur-
 2 poses of this subsection, paragraph (3) of subsection
 3 (a) (relating to property used for lodging) shall not
 4 apply.

5 “(3) DEFINITIONS.—For purposes of this subsec-
 6 tion—

7 “(A) INSULATION.—The term ‘insulation’ has
 8 the meaning given to such term by section 44A (c)
 9 (2).

10 “(B) SOLAR ENERGY EQUIPMENT.—The term
 11 ‘solar energy equipment’ means equipment—

12 “(i) which, when installed in or on a build-
 13 ing, uses solar energy to heat or cool such build-
 14 ing or provide hot water for use within such
 15 building and meets such criteria as the Secretary
 16 or his delegate shall by regulations prescribe;

17 “(ii) the original use of which commences
 18 with the taxpayer; and

19 “(iii) which has a useful life of at least
 20 3 fixed years.

21 The Secretary or his delegate shall initially pre-
 22 scribe regulations under clause (i) not later than
 23 2 years after the date of the enactment of this section.

24 “(4) TERMINATION.—This subsection shall not
 25 apply to —

1 “(A) amounts paid or incurred with respect to
2 insulation after December 31, 1977, or

3 “(B) amounts paid or incurred with respect
4 to solar energy equipment after December 31,
5 1980.”

6 (b) AIR CONDITIONING, SPACE HEATERS, ETC.—Sub-
7 paragraph (A) of section 48 (a) (1) (defining section 38
8 property) is amended to read as follows:

9 “(A) tangible personal property (other than
10 an air conditioning or heating unit), or”.

11 (c) EFFECTIVE DATES.—

12 (1) The amendments made by subsection (a) shall
13 apply to amounts paid or incurred after March 17, 1975.

14 (2) The amendment made by subsection (b) shall
15 apply to property placed in service after the date of the
16 enactment of this Act.

17 **SEC. 432. GENERATING FACILITIES POWERED BY PETRO-**
18 **LEUM AND PETROLEUM PRODUCTS.**

19 (a) IN GENERAL.—Paragraph (1) of section 48 (a)
20 (defining section 38 property) is amended by adding at the
21 end thereof the following new sentence: “Such term does
22 not include any electrical generating property fueled by
23 petroleum or petroleum products (including natural gas).”

24 (b) EFFECTIVE DATE.—

25 (1) IN GENERAL.—The amendment made by sub-

1 section (a) shall apply to property which is placed in
2 service after April 17, 1975.

3 (2) **BINDING CONTRACTS.**—The amendment made
4 by subsection (a) shall not apply to property which is
5 constructed, reconstructed, erected, or acquired pur-
6 suant to a contract which was, on April 17, 1975, and
7 at all times thereafter, binding on the taxpayer.

8 (3) **PLANT FACILITY RULE.**—

9 (A) **GENERAL RULE.**—If—

10 (i) pursuant to a plan of the taxpayer in
11 existence on April 17, 1975 (which plan was
12 not substantially modified at any time after such
13 date and before the taxpayer placed the plant
14 facility in service), the taxpayer has con-
15 structed, reconstructed, or erected a plant facil-
16 ity, and either

17 (ii) the construction, reconstruction, or
18 erection of such plant facility was commenced
19 by the taxpayer before April 18, 1975, or

20 (iii) more than 50 percent of the aggregate
21 adjusted basis of all the property of a character
22 subject to the allowance for depreciation making
23 up such plant facility is attributable to either
24 property the construction, reconstruction, or
25 erection of which was begun by the taxpayer

1 before April 18, 1975, or property the acqui-
2 sition of which by the taxpayer occurred before
3 such date,

4 then the amendment made by subsection (a) shall
5 not apply to all property comprising such plant
6 facility. For purposes of clause (iii) of the preced-
7 ing sentence, the rules of paragraphs (2) and (4)
8 shall be applied.

9 **(B) PLANT FACILITY DEFINED.**—For purposes
10 of this paragraph, the term “plant facility” means
11 a facility which does not include any building (or of
12 which buildings constitute an insignificant portion)
13 and which is—

14 (i) a self-contained, single operating unit
15 or processing operation,

16 (ii) located on a single site, and

17 (iii) identified, on April 17, 1975, in the
18 purchasing and internal financial plans of the
19 taxpayer as a single unitary project.

20 **(C) COMMENCEMENT OF CONSTRUCTION.**—
21 For purposes of subparagraph (A) (ii), the con-
22 struction, reconstruction, or erection of a plant facil-
23 ity shall not be considered to have commenced until
24 construction, reconstruction, or erection has com-
25 menced at the site of such plant facility. The pre-

1 ceding sentence shall not apply if the site of such
2 plant facility is not located on land.

3 (4) **MACHINERY OR EQUIPMENT RULE.**—The
4 amendment made by subsection (a) shall not apply to
5 any piece of machinery or equipment—

6 (A) more than 50 percent of the parts and
7 components of which (determined on the basis of
8 cost) were held by the taxpayer on April 17, 1975,
9 or are acquired by the taxpayer pursuant to a bind-
10 ing contract which was in effect on such date (and
11 all times thereafter), for inclusion or use in such
12 piece of machinery or equipment, and

13 (B) the cost of the parts and components of
14 which is not an insignificant portion of the total
15 cost.

16 (5) **CERTAIN LEASE-BACK TRANSACTIONS, ETC.**—
17 Where a person who is a party to a binding contract
18 described in paragraph (2) transfers rights in such
19 contract (or in the property to which such contract
20 relates) to another person but a party to such contract
21 retains a right to use the property under a lease with
22 such other person, then to the extent of the transferred
23 rights such other person shall, for purposes of para-
24 graph (2), succeed to the position of the transferor
25 with respect to such binding contract and such property.

1 The preceding sentence shall apply, in any case in which
2 the lessor does not make an election under section 48 (d)
3 of the Internal Revenue Code of 1954, only if a party
4 to such contract retains a right to use the property under
5 the long-term lease.

6 (c) **QUALIFIED PROGRESS EXPENDITURES.**—Nothing
7 in the amendment made by subsection (a) shall be construed
8 to deny any investment credit for qualified progress expendi-
9 tures described in section 46(d) of the Internal Revenue
10 Code of 1954 for any taxable year beginning before April
11 17, 1975.

Passed the House of Representatives June 19, 1975.

Attest:

W. PAT JENNINGS,

Clerk.

STATEMENT OF ELLIOTT M. ESTES, PRESIDENT AND CHIEF OPERATING OFFICER, GENERAL MOTORS CORP., ACCOMPANIED BY DR. HENRY L. DUNCOMBE, JR., VICE PRESIDENT AND CHIEF ECONOMIST, GENERAL MOTORS CORP.

Mr. ESTES. Thank you very much, Mr. Chairman.

I am Elliott M. Estes, president of General Motors Corp. With me today is Mr. Henry L. Duncombe, Jr., vice president and chief economist of GM. We are pleased to have the opportunity to testify on H.R. 6860, and particularly on title II, part I, that promises to have a profoundly adverse effect on the automobile buyers and the national economy.

In the interest of conserving time, I will read a summary of our full statement, and I request that the full statement appear in the record.*

The American consumer is just now beginning to see some signs of hope of economy recovery, and consumer confidence, as measured by national surveys, is beginning to increase. Yet the public remains cautious in two major respects: home buying and auto purchases. One contributing factor is the confusion about energy availability, energy prices, and national energy policy. For example, there have been conflicting news stories about whether or not people are going to be able to buy gasoline this summer. Also, there has been a wide range of figures quoted for future prices of gasoline. Obviously, people are not going to buy new cars if they are not sure they will be able to drive them.

Both the home building and automobile industries play important roles in national economic recovery and both industries are heavily influenced by consumer uncertainty. An additional reason for comparing them is that H.R. 6860 applies two quite different energy policy philosophies for these two industries. That is, while consumers use about 22 percent of the national energy in their residential structures, H.R. 6860 provides tax incentives for home insulation and storm windows. It does not impose an arbitrary or punitive limit on the size or fuel consumption of new homes, nor should it. In contrast, while consumers use about 13 percent of national energy for automotive transportation, H.R. 6860 establishes fuel economy standards that will, by 1981, result in substantial arbitrary restrictions on the types of cars that can be made available to the public.

The turmoil in the energy situation is bringing about drastic changes in the importance that people attach to fuel economy in automobiles. In order to meet the fuel economy demands of the public, GM has embarked on the most ambitious and costly new-design program in our industry's peacetime history. In all, General Motors plans to spend billions of dollars to provide the highest practicable fuel economy in cars of all sizes in the next few years.

Since the oil embargo ended some 14 months ago we have introduced six new smaller models, which, taken together, average better than 21 miles per gallon, sales weighted, on the EPA composite urban/highway test.

The 1975 model program is only the first stage in our efforts to meet the fuel economy demands of our customers. In the 1976 model

*See p. 172.

years, we will introduce America's smallest, most fuel efficient car. Still to come are programs to reduce the exterior size and weight of our larger cars while maintaining present levels of roominess and of comfort.

One result of our programs to provide consumers with improved fuel efficiency will be a major change in the weight classes of cars we will be offering in 1976 and later model years. Only about 20 percent of our current products are in inertia weight classes of 3,500 pounds and under, that is, a curb weight of about 3,000 pounds; by 1980, we expect these classes to account for more than 70 percent of our sales.

Looking at our full-size cars, about one-third of our total production in 1975 is in inertia weight classes of 5,000 pounds and up. By 1980 we expect cars of this weight class to represent a negligible percentage of our sales. We are taking weight out of virtually every car we build—at least 700 pounds from our full-size cars.

This drastic shift in the weight class of the cars we are building, along with changes in engines, reduced size engines, drivetrains and axles, improved aerodynamics and other fuel economy measures will, because of market demands, enable us to keep our commitment to the Federal Government to meet or exceed 53-percent improvement in the fuel economy of our cars between 1974 and 1980.

As a result of these fuel economy improvements, made in response to consumer demands brought about by higher gasoline prices, total gasoline consumption for all cars on the road will decline between now and 1980. The projected savings in oil, as estimated by the Federal Energy Administration, is 587,000 barrels per day by 1980. There is no other energy consuming sector of our economy that is approaching this negative energy growth. If there were, our country would be well on its way to solving its energy problems.

Why then do some people feel it is necessary to establish fuel economy standards for automobiles? Because of several misconceptions about the automobile market and automotive technology.

One of these misconceptions is that there is some magic new technology that we could use, if only we would, to achieve fuel economy improvements of 50 percent or more in a given car. I assure you, this is not the case.

Another aspect of the misconception about technological solutions is that European and Japanese manufacturers rely on superior technology to achieve fuel economy that is generally better than the fuel economy of the American cars. This is simply not true.

The high miles-per-gallon figures associated with some of the foreign cars result from the simple fact that they are smaller and lighter than any currently built American car. One needs only to examine the 1975 EPA fuel economy ratings and make a comparison between GM models and comparable imports to see that our technology is as good as any in the world. Note that in charts A, B, and C, which make up the last pages of this statement, in every weight class in which we compete, a domestic General Motors car ranks either at the top or near the top for fuel economy.

Our analysis of this legislation has indicated that it could cause a substantial loss of sales and jobs as early as the 1980 model year. Much more drastic consequences could be expected in post-1980 model years

as the standards jump an average of 1.5 miles per gallon per year to reach 28 miles per gallon in 1985.

The idea that General Motors can build the kinds of cars it wants to build, then use its advertising power to somehow make the American public want to buy those cars is a myth. This point was amply proven by the experience in car sales in the 1974 and 1975 model years. On the contrary, we try to put the kinds of cars on the market that the American people have indicated they want to buy. If we are required to meet standards that force us to build cars that do not conform with what the American people want to buy, they simply will not be sold and the entire economy will suffer.

H.R. 6860 mandates 20.5 miles per gallon for 1980, which represents a 68-percent improvement over General Motors' 1974 level of fuel economy—28 miles per gallon mandated for 1985 represents an improvement in fuel economy of 130 percent for GM. There is no evidence that such stringent fuel economy standards as called for in this legislation for the 1981–85 model years can be achieved without serious disruptions of the national economy and intolerable unemployment consequences.

The 1985, 28 miles per gallon, standard cannot be achieved through technological developments alone. It must be achieved by restrictions on the size and weight of cars that can be built. Beginning this fall General Motors, as I said, will offer a small, light, relatively low-powered vehicle that is smaller than the smallest subcompact car now being produced in the United States.

If we were required to meet a 28-miles-per-gallon standard for our entire production, the vast majority of our cars would have to be the size of the Vega and our new minicar or smaller.

If the American public cannot purchase vehicles that will be suited to their needs, many owners of larger cars are likely to keep them rather than trading them in on new, more fuel efficient cars. Thus, rather than conserving fuel, standards in the area of 28 miles per gallon would have the effect of perpetuating the use of less fuel efficient cars, and this would result in increased gasoline consumption, contrary to the purpose of the bill.

Mr. Chairman, I would like to turn now to comments directed specifically to the legislation before this committee, H.R. 6860. The Senate Commerce Committee also has reported out a bill, S. 1883, that would mandate stringent fuel economy standards. Most of our comments apply to that bill as well.

We believe it is a serious mistake for Congress to set standards by legislation, and the problems encountered with the Clean Air Act bear this out. There is widespread agreement that the automotive standard for NO_x in the Act was established in error, is not necessary to achieve air quality goals and blocks the introduction of alternate power plants. Yet Congress has not yet changed that requirement, despite the urging to do so by the Environmental Protection Agency nearly 2 years ago.

Section 212(c) (1) of the bill, as passed by the House, gives the Secretary authority to determine if an emission standards penalty exists for any model year compared to the fuel economy that would have resulted if the cars were required only to meet 1975 emission

standards. This section correctly recognizes that there is likely to be a fuel economy penalty associated with meeting future emission standards that are more stringent than current standards. This section fails to recognize, however, that emissions requirements on auto manufacturers are made more stringent not only by lowering the numerical standards but also by changes in test procedures and other regulations promulgated by the administrative agency.

Thus, unless section 212(c) provides for adjustment in the fuel economy standards for changes in emission regulations and procedures that adversely affect fuel economy as well as for changes in the emission standards, it will not be fully effective.

If this legislation is passed, there is likely to be conflict between the EPA and the auto manufacturers over determining the magnitude of the fuel economy penalty. Since the punitive penalty for a manufacturer of 4 million cars would be \$20 million for each one-tenth mile per gallon below the standards, an accurate determination of the emission standards penalty could be of vital concern.

It is extremely important that this committee understand the relationship between legislation mandating fuel economy standards and legislation being considered by other committees of Congress that will establish the emission standards that the automobile companies will be required to meet in future model years. We have urged the Congress not to proceed with fuel economy standards until such time as congressional decisions on emission standards have been made.

There are a number of other specific provisions in the automotive standards section of H.R. 6860 on which General Motors would like to comment. In the interest of conserving time, however, I will not cover these in my oral testimony today.

In conclusion, General Motors currently is working as hard as it can to improve the fuel economy of its cars, and we plan to continue that effort on which we are spending billions of dollars.

A 53-percent improvement in the fuel economy of our cars in 5 model years, which we have committed to achieve under the voluntary program, represents a dramatic and unprecedented contribution to achieving the energy goals of the Nation. Automobiles account for only 13 percent of total energy use, and if similar improvements were made in other energy consuming areas that account for 87 percent of energy use, the energy crisis would soon end.

We recognize, of course, that it is not reasonable to expect as much conservation in other energy consuming sectors as will be achieved in the automotive sector. That is why our Nation's energy policy must include measures to increase production of energy as well as steps to conserve energy. We in General Motors, urge that the following steps be taken in addition to the voluntary passenger car fuel economy improvement program:

One, decontrol energy prices to encourage production and reduce consumption. Two, if free market actions are insufficient, impose a tariff on imported oil for the limited time needed to effect greater conservation. Three, impose a tax on gasoline and other motor fuels if price decontrol and import tariff are inadequate. Four, legislatively enact a program to monitor the automobile industry's progress toward meeting the 1980 fuel economy improvement goal and require periodic

reports to Congress. And five, continue the present 49-State vehicle emission standards through the 1981 model year.

We believe these measures represent a sound, well-balanced program that would make a significant contribution to achievement of the Nation's energy goals. We urge Congress to direct its attention to these areas rather than to fuel economy standards that could have a drastic negative effect on the well-being of Americans.

The CHAIRMAN. I am going to ask, in order that we might receive this in the proper context, and because we have full attendance at this moment, that we hear the statement in chief from the other three automobile manufacturers and that then we can direct questions at all three at the same time. I think that will expedite the procedure. So I will ask now that Mr. Fred Secrest, executive vice president of the Ford Motor Co. present the Ford statement, and then I will ask for the Chrysler statement, and then we will ask all three of you gentlemen to take the witness stand and field the questions.

STATEMENT OF F. G. SECREST, EXECUTIVE VICE PRESIDENT, OPERATIONS STAFFS, FORD MOTOR CO.

Mr. SECREST. Mr. Chairman, and members of the Senate Finance Committee, I am Fred Secrest, executive vice president of Ford Motors.

I have filed with the committee an 8-page statement and in the interest of time, I will read a condensed version.

The CHAIRMAN. Insofar as your statement merely repeats what Mr. Estes said, you could indicate that he has spoken for the two of you, and insofar as you have a different opinion, I think you ought to stress that part of it.

Mr. SECREST. I will try to do that, Mr. Chairman, although I just read Mr. Estes' statement a few minutes ago, so I am not certain that I can isolate for you the areas of difference if any, between our position and that of General Motors.

The CHAIRMAN. Well, you have got an old expert in testifying before the committee sitting behind you there, in Mr. Mark. If he would help, I think you can concentrate on the parts where you might be at odds with Mr. Estes.

Mr. SECREST. The bill before the committee, H.R. 6860, requires that motor vehicle manufacturers meet fuel economy standards beginning in model year 1978 at levels 32 percent higher than 1974 models. It provides severe fines for manufacturers whose average vehicle production does not meet these standards. It establishes even tighter standards for future years, culminating in a 28-mile-per-gallon average by 1985.

It is Ford Motor Company's conviction that fuel economy improvement is one area where there is no need for regulation. With gasoline at 57 cents a gallon in June, increases just last week of 3 to 5 cents a gallon, and potentially much higher prices, consumers do not need a law to force them to look for the best fuel economy. Compacts and subcompacts are currently running 57 percent of Ford's sales, compared with 41 percent in 1973.

Nor does the manufacturer need a law to force him to provide what consumers are demanding. A few weeks ago, Ford introduced eight new so-called MPG cars giving the customer a choice of several models that deliver 27 miles per gallon in the EPA combined metro/highway test, or 34 miles per gallon on the highway test alone. During the past 5 years, we have spent nearly \$2 billion to develop new small cars and to expand our small car capacity. By 1980, we expect to spend an additional \$2 billion on more efficient car designs and better fuel economy, through engine and drivetrain improvements and product downsizing. We expect Ford's 1976 model average fuel economy to be 3 miles per gallon, or more than 20 percent, better than this year. These changes are expensive, but we are making them because we must respond to the demands of the marketplace. The cost of mandating and deadlining these changes by Government regulation is likely to be very high, for several reasons.

First, conversion of facilities and redesign and engineering programs to meet the timetables indicated in this bill would be enormously expensive and disruptive. In the 6 months ending March 31, 1975, Ford had before-tax losses of over \$200 million. As a result we have had to increase our borrowing substantially. While we, of course, anticipate a recovery from the present automotive depression, the losses will have a significant effect on our investment capability. Our present plans for fuel economy improvement, the \$2 billion I mentioned, represent the maximum we can afford, and some other manufacturers may well prove unable to do this much.

Even with no limit on the capital available for investment, there would be a serious risk that a manufacturer might fail to achieve some of the standards under the rigid timetable prescribed in the bill. The risks include unpredictable variability of test results, wide variations in new car sales mix in response to consumers demands, which would change a manufacturers average car fuel economy, and the potential inability of the manufacturers to put together on the stated date all of the individual technical improvements that may be required to achieve the overall target. Failure, even briefly, or to a very minor extent, to meet the target for any of these reasons, would mean massive financial penalties. The consumer would pay the extra cost inherent in rush programs aimed at meeting arbitrary deadlines. And he would also pay at least some portion of any penalties.

Perhaps most importantly, the standards may discourage actions aimed at the real objective of the legislation, that is, continuing improvements in fuel efficiency for the entire car fleet. Changes made during a model year might not count at all for the purpose of measuring the average results. The introduction of high-risk advanced technology would be slowed because the penalty for failure would be so much greater than in a free market. Under a mandated standard, manufacturers would have to place their limited financial and technical resources almost entirely on sure things. Finally, the 28 miles per gallon standard could rule out efforts to improve the fuel economy of larger cars, forcing those owners who believe they have a genuine need for family sedans or station wagons to retain, as long as possible, their less efficient older models.

We believe that mandatory fuel economy legislation is unnecessary, that it could prove costly to consumers and that it would impose an

unnecessary and unreasonable burden on the domestic automobile industry. If Congress nevertheless believes that mandating fuel economy is essential, we would hope that any bill would have three important objectives: First, to accomplish the goal with the least possible interference in the marketplace and with minimum disruption to employment; second, to set standards that are technologically and financially achievable; and third, to assure the availability of vehicles adequate to meet the transportation needs of the people.

Further, the automotive fuel conservation goals should be consistent with whatever conservation actions may be mandated for other energy uses. Accordingly, if such legislation is deemed necessary, we strongly urge the following modifications to H.R. 6860.

First, delete the 28 miles per gallon standard for 1985. It seems probable that a 28 mile per gallon average cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. market. Only 10 of the 320 passenger cars listed in the 1975 EPA Buyer's Guide achieve a Metro/highway average of 28 miles per gallon or better. All 10 of these are imports and all except the Peugeot diesel are in the 2,500 pound weight class or lighter. A manufacturer could hardly make long-term investments in more efficient full-sized vehicles, because even with improvement of 50 percent or more, they still may not come close to the 1985 standard. The six-passenger sedan and the station wagon would disappear from the new-car market. Such a standard would require a total restructuring of the industry, including the writeoff of billions of dollars worth of facilities. Major unemployment would be unavoidable during the long transition period. Further, domestic vehicle prices would have to reflect the enormous cost of this facility conversion; while most foreign manufacturers, who are already building 2,500-pound cars for their home markets, would have considerably less task and cost.

We believe, therefore, that a standard at this level would turn over a further large share of the market to the imports, with, of course, severe effects on U.S. jobs and the balance of payments.

The flexibility given to the Secretary of Transportation to modify the 28 miles per gallon goal would not resolve this problem. Product and facility plans would have to be based on the statutory standard until a determination of modification was made in 1979 or later. Any modifications would probably come only at the last minute.

There is no doubt that continued improvement in automotive fuel economy is necessary and possible after 1980. We believe that this improvement will occur as a result of market forces, and that by 1980 it will become obvious that a costly regulatory structure is not needed to achieve the goal. If Congress wishes to assume a continuing need for regulation, however, it should authorize the administering agency to set post-1980 fuel economy standards only after careful assessment of technological and financial feasibility; a thorough analysis of consumer needs; analysis of the impact on safety; and reassessment of the Nation's energy requirements and supplies. There is simply no basis today for mandating a standard of 28 miles per gallon or any other number for a period that is 10 years away. Second, we believe the penalties must be modified. The level of penalties in H.R. 6860 is exorbitant and could be considered confiscatory.

If Ford should achieve an average fuel economy of 19 miles per gallon in 1980, the shortfall of 1.5 miles per gallon or only 8 percent from the proposed statutory standard would result in a civil penalty of about \$225 million, equivalent to before-tax profits of \$450 million. Our dividend payments, at an annual rate, are \$225 million a year today. Fines of this magnitude would deprive manufacturers of needed funds to make heavy investments in conversions and fuel economy technology. In fact, such huge contingent liabilities would, in our judgment, seriously jeopardize our company's ability to raise the capital funds needed to attain major fuel economy improvements. In view of our concern about the effect of these provisions on how investors and lenders would evaluate the industry's securities, we suggest that the committee might wish to seek testimony from Government and private experts on the subject.

There are a number of ways in which the penalties could be moderated, such as use of the production-weighted average application of the penalty only to those cars not meeting the standard, which I think is essentially the suggestion made by Mr. Estes; reduction of the dollar amount of the penalty; provision that the maximum penalty should not exceed some stated percentage, perhaps 10 to 25 percent of a manufacturer's profit; or making the penalty tax deductible. Such changes could still result in potential penalties that would assure maximum effort to avoid them, without the shattering consequences of shortfall under the schedule set forth in 6860.

Third, we believe that any requirements for truck fuel economy standards should be deleted. The lowest operating cost is a prime objective for truck operators, and fuel economy is therefore an especially important purchasing criterion for trucks. Trucks are designed primarily to haul goods. A reduction in truck size which might be required to meet fuel economy standards would not necessarily result in an overall reduction in fuel consumption, if more trips would be needed to carry the same amount of goods.

Further, today there are no EPA data indicating the average fuel economy of the Nation's new truck fleet, because EPA's testing methods for many trucks do not yield meaningful fuel economy figures. The wide variety of truck usage patterns, loading conditions and vehicle configurations have dictated engine only rather than vehicle testing.

And fourth, permit inclusion of cars presently imported by the manufacturer in overall fuel economy average. As initially proposed in the House by Representative Sharp, each manufacturer would have determined an import base equal to his imports in 1973 or 1974 as a percentage of the total vehicles sold by him in those years. This import base would be included in determining the manufacturer's average fuel economy in future years. The House, however, accepted a substitute provision requiring that all imports, except from Canada, be excluded in determining a manufacturer's basic fleet-average fuel economy.

The provision as originally proposed would clearly prohibit a manufacturer from initiating so-called runaway-plant actions in order to achieve the fuel economy standard. We think this original provision seemed to be a reasonable safeguard, and we urge its incorporation.

We are gratified that the House, in H.R. 6860, has recognized that there must be adjustments for the fact that, for any given vehicle and powertrain, tighter emission controls means a loss in fuel economy.

And finally, we want to emphasize that the single most helpful thing that Congress could do to improve automotive fuel economy would be to act to defer any further tightening of emission standards and retain the already-stringent present standards for 5 additional years. The President has recently recommended such a deferral, based on an analysis indicating substantial fuel economy degradation in moving to the 1978 statutory levels. I must stress that as an absolute prerequisite for the degree of fuel economy improvement envisaged by this bill between now and 1980 is a freeze in emission standards at or near today's levels.

Mr. Chairman, we are preparing a copy of H.R. 6860 with specific amendments to accommodate these suggestions we have made today that would, in our judgment, remedy the serious problems I have discussed and clarify and improve the bill with respect to a number of technical details.

We have also included some additional suggested minor amendments, together with their rationale that time restraints have not permitted me to cover today. I request permission to file his document for the record.

Senator TALMADGE [presiding]. Without objection, it is so ordered.* Mr. Secrest, if you will file those suggested amendments, the committee will give it consideration.

Thank you sir.

The next witness is Mr. A. G. Loofbourrow, vice president of engineering, the Chrysler Corp.

**STATEMENT OF ALAN G. LOOFBOURROW, VICE PRESIDENT,
ENGINEERING, CHRYSLER CORP.**

Mr. LOOFBOURROW. Thank you, Mr. Chairman. Because of the limited time available to me, I would like to state our position briefly, and to submit for the record a more complete statement describing the engineering considerations involved in improving gasoline mileage, and the drawbacks to legislative solutions to the problem.

Senator TALMADGE. You may submit your full statement for the record. We would be delighted to have it, sir.

Mr. LOOFBOURROW. Thank you, sir.

In our view, this legislation is unnecessary. It poses a serious threat to the economic health of the automobile industry, its thousands of supplier industries, and to many thousands of their employees.

It imposes unnecessary and arbitrary restrictions on the freedom of choice that has been a critical force in the success of the free market system. Discriminatory legislation that effectively outlaws larger cars would unfairly penalize individuals and families who require these vehicles, and would limit the size and number of motor vehicles manufacturing operations in this country.

Such drastic measures in the name of fuel conservation would appear to be obviated by the fact that Chrysler and other manufac-

*See p. 189.

turers have already pledged to improve fuel economy of their fleets by 40 percent by the year 1980.

That represents a savings of more than 487 million barrels of crude oil a year by 1980. A comparable improvement by all other users of petroleum products would result in savings of additional hundreds of millions of barrels of crude oil annually.

In recognition of these facts, the President of the United States has recommended that Congress hold automotive emissions standards at their present very strict levels, since any additional tightening of those standards must inevitably impede our efforts for greater fuel economy.

Chrysler vehicles meeting today's California standards, for example, incur a 12 percent penalty compared with comparable vehicles meeting Federal standards. More stringent standards necessarily produce larger penalties. No law, no tax or civil penalty program, and no crash research development project can change that basic engineering fact of life.

Despite the technical problems posed by today's stringent emissions standards, we have improved the fuel economy of our 1975 fleet by 15 percent over 1974.

This industry does not need standards or taxes or any other artificial incentive to provide better gasoline mileage. We already have the strongest incentive a free economy produces—the demand of our customers. We do not need a law to echo what we hear in the marketplace.

At Chrysler we are now developing ways to meet today's stringent emissions standards while at the same time improving fuel economy through precise electronic control of the engine's operation.

As a result of technological improvements and the shift in mix to small cars we are confident we can reach the goal of a 40 percent improvement in fuel economy on a sales-weighted basis by 1980.

Our mutual objective—reduced fuel consumption—might better be met by revising existing laws, rather than writing new ones.

The automobile industry is inundated with contradictory, mutually exclusive standards that work against improved fuel economy. A multitude of safety standards that have practically no identifiable benefit add hundreds of pounds to a car's weight and seriously penalize gasoline mileage. Proposed emissions standards could lead to fuel-economy penalties of 30 percent. Proposed noise and damageability standards could cause additional penalties.

I think we all know from experience in both government and industry that you cannot legislate a technical breakthrough or solve a problem by simply throwing money at it.

Technological progress usually requires careful and painstaking work. There are rarely dramatic solutions to our problems. To help reach the President's 40 percent goal, we are taking a number of actions in addition to developing electronic controls for engine timing, fuel distribution, and other engine operations.

These modifications include reducing vehicle weight, improving aerodynamics, lowering axle ratios, improving transmissions, reducing brake drag, lowering idle speeds, and reducing rolling resistance. None of these sound very exciting by themselves, but taken together, they can produce significant improvements in gasoline mileage. We are also

planning new lines of smaller, lighter, more fuel efficient cars over the next few years. The first of these new cars will be available this fall, and will sell alongside our present line of compacts.

New laws in the form of fuel economy standards won't get us back the mileage we have already lost, and won't prevent additional losses if safety and emissions standards are needlessly tightened.

We urge this committee not only to reject additional and unnecessary fuel-economy standards, but also to recommend a 5-year freeze on present standards so that we can attain our promised 40 percent improvement by 1980.

As I have said, the industry is still doing what it always has done—responding to the demands of the marketplace, and the requirements of our national objectives.

And I believe that we can continue to advance toward the objectives of better fuel economy, environmental protection, and safe and economical transportation.

All we ask is that Government establish clearly ordered priorities on the basis of the engineering realities of technological feasibility and the economic realities of cost-benefit studies.

Thank you.

Senator TALMADGE. Thank you very much, sir.

Now, Mr. Estes, if you and Mr. Secrest will join Mr. Loofbourrow at the witness table, we will propound questions to any of you. And without objection, we will restrict the round of interrogations to 10 minutes per Senator. If any Senator desires more time than that, we will provide a second and if need be a third and fourth round, as many rounds as necessary. Is that agreeable to the committee? Without objection, it is so ordered.

Senator CURTIS. Mr. Chairman.

Senator TALMADGE. Senator Curtis.

Senator CURTIS. I would like unanimous consent to insert an opening statement in the record following the statement made by the Chairman.

Senator TALMADGE. Without objection, so ordered.¹

Gentlemen, as all of you know, we have a crisis in imported petroleum. Domestic reserves are decreasing and the OPEC nations have quadrupled the prices for imported petroleum. And last year we paid about \$25 billion for imported petroleum. There is just no way on Earth that we can earn the foreign exchange to do that.

Now, the President has suggested making fuel so expensive that the price will ration the product itself. And that seems to be the thrust of Mr. Estes paper that he submitted, as I saw it.

But I think Congress is unwilling to buy that. If you take for example, the community where I live, 25 miles south of Atlanta. Virtually all of my neighbors work in Atlanta. That means a 50-mile round trip daily for gainful employment. A lot of them work in the Ford plant, some in the General Motors assembly plant, Delta Air Lines, Eastern Airlines, things of that nature. They all are working people. And if they have to pay 75, 80 cents or a dollar a gallon for gasoline, it will place an intolerable burden on those people. They would probably have to move back to town, dispose of their homes, or something of that nature.

¹ See p. 1.

And you have some similar situations throughout the country. Ours is pretty much a mobile society today. And since you gentlemen are manufacturers of principle automotive products in this country, you know it better than I. Our people are addicted to automotive transportation.

So some action is going to be necessary to limit the imports of petroleum and to convert to coal and other resources that we have in this country in great abundance.

As I recall, about 17 million barrels of petroleum is used daily in America. Is that about right.

Mr. ESTES. Something like that.

Senator TALMADGE. How much of that goes into gasoline or automotive transportation?

Mr. ESTES. About 13 percent.

Senator TALMADGE. Only 13 percent of petroleum? Now, you stated 13 percent in the energy needs.

Mr. ESTES. Thirteen percent of total energy, about 30 percent of petroleum.

Senator TALMADGE. Thirty percent of petroleum goes into production of gasoline or automotive transportation.

Mr. ESTES. Right.

Senator TALMADGE. So we are talking roughly about what? Five million barrels of petroleum daily?

Mr. ESTES. Five or six.

Senator TALMADGE. Automotive propulsion on that order—

Mr. ESTES. Five to six, that is right.

Senator TALMADGE. Five to six million barrels daily.

Now, I think you make good arguments in your paper about trying to enforce technology by law. I doubt that that is possible.

How does your product compare with some of the best engineered German products. I guess a Cadillac and a Mercedes and what do they call it, Bavarian Motor Works over there in Germany, they are all about—

Mr. ESTES. BMW.

Senator TALMADGE. They are about equivalent aren't they?

Now I believe you got some good mileage on your new Cadillac Seville. What do you get per mile, per gallon on it?

Mr. ESTES. It is 17.2 on a weighted average between the two EPA runs, 55 percent city, 45 percent highway that the EPA has determined, 17.2. It happens to be the highest fuel economy of any foreign or domestic 4,500 pound car being sold in the United States today, according to EPA numbers.

Senator TALMADGE. What does Mercedes get?

Mr. ESTES. Mercedes on a comparable basis is about 13.

Senator TALMADGE. In other words, you are doing better than the Germans are in that regard.

Mr. ESTES. By a considerable amount. Now, Mercedes has a diesel engine. And to be fair to the committee, the diesel engine, I think on the same basis, gets about 24. But, their gasoline engines are considerably poorer in fuel economy than our Seville.

In fact, as I said in my statement, if you will examine the EPA in any weight class in which General Motors competes, and we do not compete below 2,750 pound weight class this year—we are going to

next year—in any weight class, we are getting the highest fuel economy in the General Motors cars of any cars in those weight classes, including the foreign vehicles.

SENATOR TALMADGE. What about the Bavarian Motor Works?

MR. ESTES. I cannot tell you specifically. We can check it. But we are leading in every single weight class.

SENATOR TALMADGE. Do you have your tables that give the Bavarian Motor Works. Someone told me they got excellent mileage.

MR. ESTES. We will have to check. BMW gets 19 in the city and 30 on the highway and one of their jobs, 14 and 21. But we need to get the composite number that we are talking about. But, in any given weight class, we will beat a BMW at the same weight.

SENATOR TALMADGE. I got the thrust from all of your testimony that without technological breakthroughs the principle way you could get better gasoline mileage would be to reduce the size and weight of your automobile. All of you agree on that.

MR. ESTES. Really. I think the committee should know that there are a number of ways of improving fuel economy. But when we talk about improved technology in engines and transmissions and axles, we are talking about tenths of a mile per gallon from our current levels with any known technology.

On the other hand, when we reduce the weight of a vehicle by 1,000 pounds, we save 20 percent in fuel economy. When we reduce the performance of a vehicle, and let us say that our average vehicle in the United States today has a performance level zero to 60 of 15 seconds, if we reduce that to 20 seconds—that happens to be the minimum—as far as fuel consumption is concerned, we only gain 6 percent.

So our program to reduce weight in all of our vehicles is the most efficient way to improve fuel economy and the fastest. I would like to take this opportunity, however, to tell the committee that maybe the most important thing, since our vehicles may be the most postponable product in the market today, that we have got to be sure that whatever that car is, each new model, it adequately and more effectively serves the transportation needs of our customer, or he will keep his current car. And that has been demonstrated in the last 2 years, I think very, very effectively.

SENATOR TALMADGE. You have touched on a point that I myself have had some experience in, Mr. Estes. When we had the Arab boycott I decided to get real patriotic, and I have been a faithful customer of General Motors there in Atlanta for many, many years. Specifically John Mitchell's Oldsmobile dealership.

MR. ESTES. We want to keep it that way, Mr. Chairman.

SENATOR TALMADGE. Thank you, sir. I had been driving an Olds 98 so I got the smallest Cutlass I could find. My 98 was 6 years old. It had relatively no trade in value.

I have to go home quite frequently. So I took my 98 home and had it fixed up to where it would run. And it does still perform magnificently, I may say. But I get 15 miles to the gallon on my 98 that is now 7½ years old and I get 12 miles to the gallon on my Cutlass that is 11½ years old. Now what caused that drastic reduction in mileage even for newer and much smaller and lighter weight automobiles.

Mr. ESTES. Unfortunately the technology that was available to our industry to improve emission levels and reduce the emission levels to statutory standards through the last years and specifically between 1969 and 1974, and I assume your Cutlass was a 1974, because if it had been a 1975 you would be beating that 1969 job. During that period, we lost, as an industry average, or at least in General Motors sales weighted about 16 percent in fuel economy with the technology we were using to meet the emission standards during that period.

In 1975, due to what we feel is the real accomplishment—that is the development of what I call garbage disposal for emissions: the catalytic converter—we were able to go back and retune the engines to improve and get back that 16, 17 percent that we lost, plus a little bit more fuel economy.

So, now, if you will just trade that Cutlass in for a 1975 Cutlass, you will beat the 1969 job. And you will get anxious to buy a 1975 Oldsmobile 98 at the same time.

Senator TALMADGE. Are you saying that Congress is responsible for that reduction in mileage now by emission standards that we imposed on you?

Mr. ESTES. Well, I guess, maybe you have to assume some of the responsibility. Maybe we have to assume some of the responsibility for not developing the catalytic converter earlier to prevent that decrease in fuel economy during that period.

But we have made a dramatic improvement. In the General Motors case, according to EPA numbers we are 28 percent better in 1975 than we were in 1974, sales weighted.

It is a dramatic improvement. Our concern, I guess, now, is that we do not want to lose that with some further tightening of the standards until some new technology comes along that is going to give us another improvement of that type.

Senator TALMADGE. Thank you. My time has expired. Mr. Estes. And following Senator Long's early bird rule, I believe Senator Haskell is the next to interrogate the witnesses.

Senator Haskell is recognized.

Senator HASKELL. Thank you, Mr. Chairman.

All of you gentlemen seem to concur with the President's 40 percent voluntary improvement. To what base does the 40 percent apply?

Mr. Estes?

Mr. ESTES. I am sorry.

Senator HASKELL. You apparently concurred with President Ford's voluntary 40 percent improvement. All of you testified that it was satisfactory. I am just curious as to what figure that 40 percent is applied.

Mr. ESTES. That figure is applied to the sales weighted 1974 industry number, that was developed on a basis—

Senator HASKELL. What is the industry number?

Mr. ESTES. The industry number was 14 and the industry 40 percent improvement is 19.6. Our General Motors number on the same basis was 12.2 in 1974. We go to 18.7, the General Motors portion of that improvement is 53 percent.

Senator HASKELL. You have testified, Mr. Estes, that your new Cadillac gets 17. You also testified you are bringing out a line of cars, six models I believe you said, that obtain 21 miles per gallon.

Mr. ESTES. They are already on the street, Mr. Senator.

Senator HASKELL. You folks can do it. And yet, at the same time, Mr. Estes, you said that it would be a dreadful thing to force you by statute to arrive at a certain level because it would have an adverse impact on sales. Where would those sales disappear to? Would Ford get them? Would Chrysler get them? Would the Mercedes get them? What would happen to them?

Mr. ESTES. Senator, I think I stated a while ago and I think our history backs us up, that we are selling a postponable product. Our average buyer has a 2½-year-old car. The life of the car is 10 years.

So, he has no incentive rather than a better product or better serving his need to buy a new car this year, he can wait till next year, he can wait 2 years, he can wait 3 years, he can wait 4 years. And the poor person that gets hurt in this is the very person we do not want to be hurt. And that is the person that is buying a used car.

Last year there were 34 million cars sold in the United States. The last 2 years of the life of the car, that is great transportation sold for between \$400 and \$800 currently. And the poor individual that we are worrying about most, the low-income buyer, is the person that is going to get hurt in this. Not the buyer of the new car, he can drive it 4 more years without any problem.

Senator HASKELL. If this is the case, if it would postpone the purchase of new cars from General Motors when they begin making only lightweight, better mileage cars, how do you account for the dramatic increase in sales of imported cars?

Mr. ESTES. First, I would like to say that our program contemplates a big improvement in fuel economy and what we think is a maximum reduction in weight and size of our vehicles and still keep the buyer interested, because there is not any question that energy is going to be more expensive in the future. It has to be, and we have to conserve. We think our program—

Senator HASKELL. What troubles me, Mr. Estes, is you say that coming up to these standards is going to hurt your sales. Yet, at the same time, over the past 5 years the foreign cars have made a tremendous impact and have cornered 20 percent of the U.S. market.

Mr. ESTES. Let me respond to that in a moment. In actual numbers, the foreign car sales have not increased that much. I think this year foreign cars are being sold at an annual rate about 1.4, 1.5 million, and that is not abnormal.

The problem is that our buyers have been postponing the purchase of our cars and the domestic market has gone down so that the percentage has gone up. But, in actual numbers, their volume is not a great deal higher than it was in the past.

Senator HASKELL. But, their volume is holding up and yours is not.

Mr. ESTES. That is right, it is holding even, that is true: 56 percent of the foreign cars being sold today we do not compete with. They are lighter, they are 2,000 pounds curb weight or lighter. That is the reason we are responding in 1976 with a car that hits them right square where they hurt the most and that is right in the fuel economy area.

Senator HASKELL. I guess, Mr. Estes, my question is, why did you not you do this earlier? I cannot quite get it through by head why making a lighter, more fuel-efficient car is going to ruin sales. It may postpone, I guess, a few sales.

I cannot see your logic. I feel the way the chairman does. You cannot ration by price and be fair to people in this country. So, we must do something.

General Motors has gone a long way, I gather, perhaps a little further than Ford and Chrysler. But I cannot see the reason for delaying what you can already do technologically. You can bring it up to 21 miles a gallon. You have shown that.

Mr. ESTES. No question about it and we can bring it to 28 miles to the gallon, and we are going to do that next year. It is going to be a four-passenger vehicle with limited luggage space. It weights 2,000 pounds. We can do that. This is all a matter of degree. We are going to reduce the size and the weight of every single one of our vehicles but we are going to maintain the transportation characteristics of that car as far as six passengers, a load of luggage, a dog and cat, to go on a vacation.

So this poor fellow that can only afford one car and does not want to take two cars to the airport to get his family, we are still going to maintain that vehicle but we are going to take up to 1,000 pounds out of that vehicle to improve his fuel economy and get our 18.7 average. We are still going to satisfy the customer. We are going to have a car that meets the 28 miles to the gallon next year. But we are guessing, and we may be wrong, that we can sell 225,000 of those vehicles next year against the imports.

The total market—

Senator HASKELL. I think that is just great.

Mr. ESTES. The total market of a 28-mile-per-gallon vehicle, I think Mr. Secrest mentioned, there are 16 models today. There are really only about three that have any volume. The total volume today is about 600,000 to 700,000 of the 28-mile-per-gallon vehicle. We are going after that market—with 225,000 vehicles.

But to try to sell 4 million of those we think would be an impossibility in 1976. If the market will support that, I will assure you we will move as fast as we can to do it, but it is going to take a tremendous expenditure.

Actually, right now, we have more capacity for small cars than we can sell and we are doing everything possible to sell them. If anybody on the committee has any ideas how we can sell more fuel-efficient cars today, I assure you we will build them. We will build them in a helluva hurry.

Senator HASKELL. I think that is just great, Mr. Estes, but I still cannot understand why you folks object to these levels. I may have some questions next time around, Mr. Chairman.

Mr. ESTES. Did I not answer your question adequately?

Senator HASKELL. You sure did, you sure did, yes, sir, you did. But you have proved to me that you folks can get these levels.

Mr. ESTES. We can build them but we cannot sell them. Now, you tell us how to sell them.

Senator HASKELL. How do the foreigners sell them?

Mr. ESTES. They only sell 700,000, we are trying to sell 4 million vehicles to keep our people working. We can build those small cars in two plants. We have 26 plants we are trying to keep running—26—and all we say is we think we have got to move as far as we can in the

area of fuel efficiency and still be able to satisfy the needs of that customer or he will keep that car another 5 years.

And if he does, we are going to have massive unemployment, even twice as bad as we have had in the past year due to postponing of buying. I think this is the point we are really trying to explain; that it is a characteristic of our business, right or wrong, good or bad.

Senator HASKELL. You really feel that somebody could postpone buying a car 5 years?

Mr. ESTES. During the war they postponed 5 years, everyone got where they wanted to go. We were talking about it this morning, I guess the scrappage rate was negative.

You know, they pulled cars out of the junk heap, put wheels on them, and used them for transportation.

But in a reasonable sense, our vehicles, the average life of our vehicle is 10, 11 years and the poor fellow that gets hurt is the fellow trying to buy transportation for \$800. And we do not know how to furnish him transportation any other way except through our current process that has been developed over the years of the new buyer giving him a better product so that he in turn buys it.

There is an average of three and a half sales per vehicle during its life.

Senator HASKELL. Mr. Secrest, do you have something to add to that?

Mr. SECREST. I wanted to see if it would help Senator Haskell to make this observation. I think we share your view. I do; that the market forces are operating in such a way as to make it probable that people who offer fuel-efficient cars will sell well and people who fail to do so will not sell well.

Our internal target at Ford calls for, by 1980, a production weighted or sales weighted, fleet average fuel economy that is substantially better than that of today—in the range of 45 to 50 percent, reasonably consistent with levels suggested in this bill.

My concern is that the bill takes a voluntary commitment by an industry and says, well, if you say you can do it and if we all agree it is a good thing, we will write a law and if you miss by, say, 8 percent, we will fine you \$225 million. It is that that concerns me. I think that a potential contingent liability of anywhere near that magnitude would seriously hamper the ability of Ford, at least, to carry out the kind of program we are planning because I think that with that sort of punitive fine hanging over your head for a shortfall that could be due to any one of four or five factors that would not have to be very great, it would be difficult to sustain the capital investment program to carry out our plan.

And that is what I see as a penalty. That is embodied in an insistence to do by law what the market ought to be forcing us to do.

Senator HASKELL. My time is up, Mr. Chairman.

Senator TALMADGE. Senator Packwood?

Senator PACKWOOD. In a normal year, how many new cars are sold in Europe?

Mr. ESTES. About 8 million.

Senator PACKWOOD. And I assume most of those are smaller cars by our definition?

Mr. ESTES. Yes.

Senator PACKWOOD. I am curious, in each of your statements you have referred to the needs or what the average citizen requires in this country. How do you needs differ from what the average European needs?

Mr. ESTES. Well, the major difference, I think, is distance. Distances in Europe are considerably shorter, roads are smaller, it is much more difficult with regard to back roads and so on. And then, of course, the other thing you have to remember is that the price of fuel in Europe for years has been in the direction of improved fuel economy; whereas in the United States, I guess you would have to say that we have had artificially lower fuel costs which obviously is not an incentive to buy a smaller, more efficient car.

Senator PACKWOOD. But for the moment, I do not want to get on to wants, because maybe if Europeans had 25 cents a gallon gasoline and big roads, they would want big cars.

Is there any reason an American needs a big car? Isn't a 28-mile per gallon station wagon sufficient for me and my wife and my dog and kids to get around?

Mr. ESTES. A 28-mile-per-gallon station wagon? It would be mighty tight—you and your wife and a dog. We have 23 percent of our families in the United States, maybe 30 percent, I am talking about mainly automotive customers, that have five people or more in their family.

Senator PACKWOOD. But how big a car do they need?

Mr. ESTES. They need a car that will carry five, maybe six people, grandmother wants to go, six people and some luggage to go on a vacation.

Senator PACKWOOD. And there are no 28-mile per gallon sedans that would do that?

Mr. ESTES. No, sir, foreign or domestic—diesel, yes.

Senator PACKWOOD. I understand, I meant gasoline.

Mr. ESTES. I think here in our context, we have to exclude the diesel. The Mercedes diesel on the basis that we are talking about is between 26 and 27 miles per gallon, and it is a 3,500-pound car. That is the car you are talking about, 3,700 pounds. But that same car with a gasoline engine is in the 17 to 18 area, and our cars are in the 22 area on the same basis.

Senator PACKWOOD. Last week when my family went home to Oregon, I went with them during the recess. Here we drive two fairly large cars. There we were living in my wife's brother's house. He left us a Volkswagen which is a two-door car which we got around in adequately. I find that I had not forgotten how to shift, and I could indeed make the car go forward and backward.

Mr. ESTES. You did not need air-conditioning?

Senator PACKWOOD. It did not have air-conditioning.

Mr. ESTES. You did not need it?

Senator PACKWOOD. I did not need it, I got along.

Mr. ESTES. Did you bring it back?

Senator PACKWOOD. I left it there so my wife would have something to drive. And I am curious, if you were translating needs into wants. I like air-conditioning, I like an automatic shift, but I do not need it. And if we are really serious about fuel savings, maybe we are over-estimating our needs.

Mr. ESTES. I do not think there is any question that in an evolutionary way we can move families such as yours into smaller, more fuel-efficient cars. But I think we have got to be very, very careful today about putting a Volkswagen-sized car in, let us say, a Buick dealership and have the Buick owner come in with his air-conditioned car that is a reasonable size and comfortable and hope to sell him that car this year.

Now, I think we have got to do this in an evolutionary way, Mr. Senator. We are doing our best to move just as far as we can. You know there may be a judgment factor here on how far and how fast we can move.

Senator PACKWOOD. But 10 years is a fair evolutionary period. If we say to you by 1985 you must produce cars that will get on a weighted sales average basis, 28 miles to the gallon, my hunch is you will produce them and the imports will have to match you because the big cars are not there.

I agree with Senator Haskell, I do not think suddenly all the people are going to keep all of their big old cars forever. You may have a drop in sales for a year or two, but when the Buick owner finally—

Mr. ESTES. That could be very, very serious. We have had a serious problem this year as far as unemployment is concerned. So we want to avoid even a year or two if we can help it, you know.

Senator PACKWOOD. We are going to give you a 10-year lead, and when the Buick owner finally comes in and he only has a choice of buying cars that will get 28 miles to the gallon, my hunch is he will buy one.

Mr. ESTES. Either that or he will talk to you when you come home about it.

Senator PACKWOOD. He talks to me all the time when I go home. But I think you are unduly pessimistic, one, about the sales potential.

Mr. ESTES. That is possible.

Senator PACKWOOD. Two. I think you are translating wants into needs that are not needs.

Mr. DUNCOMBE. Of course, it is wants that are going to motivate people to buy a car. You and I might have quite similar concepts about what the basic car is that would serve fundamental transportation needs, and you and I might agree on this perfectly.

But John Doe comes in to buy a car may say, well, whatever you and I think, I want this car over here. That is the thing that inspires him to buy. It is not your judgment or my judgment, and I think this is one reason why the automobile industry has such a variety of cars out there. What you think is important and what I think is important may be quite different serving all of those varieties of wants.

Senator PACKWOOD. That is exactly what you are saying, those wants, not those needs.

Mr. DUNCOMBE. But, you know our society is based on that.

Senator PACKWOOD. That is correct.

Mr. DUNCOMBE. And if you and I begin to impose our judgments on what the American people should have, we are making a very fundamental change in the way we have operated in this economy of ours.

Senator PACKWOOD. That may be true, but if we are going to get substantial reductions in oil imports and conservation we are going to

have to start in a number of places. I thought all of your statements were excellent stating that the auto industry is not the only place to start.

But we are going to have to do a number of things if we are going to exercise the leadership that this Congress ought to. The people are not yet prepared to accept these measures, they do not want them. If we are going to cop out in Congress because they do not want them we are going to pass a bill similar to the House passed one which was inadequate.

Mr. DUNCOMBE. I would suggest in that connection that the proposals we have made—you know the greatest inconsistency we have today is controlling the price of 40 percent of our petroleum, and at the same time, exhorting people to conserve. The economic approach to this is to decontrol the price of oil and you will get people voluntarily making new judgments on how they want to spend their money; and that is basic to our thinking.

Mr. ESTES. And we will be happy to build that size car at that time. But we think there ought to be incentives for the customer to want to buy them rather than to force us into a possible——

Senator PACKWOOD. I want to come to the employment and the conversion part, also. Assuming that the sales will not drop dramatically, or if they do they will drop for a year or two and finally pick up, where is the problem on employment?

Isn't 10 years a long enough time to convert your facilities without dramatic economic dislocation?

Mr. ESTES. We are making a tremendous step in that regard in the next 3 years, as I have described.

Senator PACKWOOD. Where is the economic disruption if you know 10 years down the road what you have to achieve?

Mr. ESTES. The economic disruption is a fact that if during this period the customer does not get oriented to trading in the larger car with the air conditioning for that smaller car at that time. And let us say that in the interim we have moved instead of 30 percent of our cars being 3,500 pounds, which is a relatively small car in the standards of today, we have got 80 percent of them, and if by that time he is moving in that direction, that is fine. We will be able to do this gradually. But, we think it is unnecessary that you pass legislation so that come 1985, and let us say we are still selling even 30 percent of our cars at 3,500 pounds or 40 percent, and all of a sudden we have got to start building all 2,000 pound vehicles, it may be, it could be very disrupting at that time.

This is not all a matter of economics.

Senator PACKWOOD. Is this disruption that you are talking about from a loss of sales?

Mr. ESTES. That is true.

Senator PACKWOOD. All right, but assuming no loss of sales, there is no problem of converting your plant. You could convert apparently in 9 months during World War II to making tanks and trucks.

Mr. ESTES. We are building today about—we have a capacity to build—25,000 V-8's a day and there are no V-8's in that 2,800 pound vehicle. So we have got to convert facilities and we have got to do it. We cannot do it on an if-come basis, we cannot afford to.

Senator PACKWOOD. I understand that.

Mr. ESTES. So we have got to do it with the market each year. If we were sure we are going to move to four-cylinder engines each year, a certain percentage that can be done, no question. What we cannot stand is an immediate, overnight shift from V-8's or small V-8's even to 4's.

Senator PACKWOOD. Nobody is talking about an immediate, overnight shift, this is not a standard imposed in 1977 and you have to all turn out four cylinder, two-door cars without air conditioning next year. Where is the immediacy in what we are talking about?

Mr. ESTES. The immediacy is going to be when it gets to be mandatory rather than on the basis of the customer wanting it. That is our problem.

Senator PACKWOOD. My time is up.

Senator TALMADGE. Senator Roth?

Senator ROTH. All of you gentlemen discussed at some length that it is better to permit these changes to be brought about in the marketplace. And yet it seems to me that there is some desirability in target dates. All of us have a tendency, even big business, to procrastinate. I think even internally you set a certain target.

One of you indicated that perhaps the automobile industry in itself had not done as much as it should in the area of emission standards until 1973-1974. I think, Mr. Estes, you made that statement.

Mr. ESTES. I did not say that we should, I said that our technological advancements maybe were not as fast as we would like to have them. I guess they never are. We were doing everything we knew how to do.

And let me say this, we developed a catalytic converter in what we consider record time, even faster than the Government did.

Senator ROTH. But, was that not after the Government set certain targets?

Mr. ESTES. Emission standards, sure, emissions and safety, we are going to have some kind of regulations. We hope they are reasonable regulations but we have to have them because those two items unfortunately are not saleable to the customer.

Senator ROTH. The only point I am raising. I wonder if there is not some desirability in attempting to set certain targets, whether they should be penalties or not is another question. But, I am not certain that the industry itself has moved as fast as it can due to the pressure of the marketplace.

But be that as it may, what would be the position of industry if we took another tack, say instead of a penalty, we offered some kind of incentive. For example, we created certain targets and proposed that if a company met these targets that there might be some kind of tax incentive, either to the industry itself or possibly to the consumer.

What would be the attitude of the industry toward that approach?

Mr. ESTES. Well, obviously we do not want any handouts, we do not want any taxes, and we do not want any regulations. That is probably an overstatement and you all probably recognize we do not like that sort of thing.

On the other hand, we think it is important that the customer realize that the energy situation is difficult and it is going to be from now-on. We are not in just a phase here with regard to the energy shortage and the difficulties in this area. And consequently, I guess, we would say that anything you can do, and we think that deregula-

tion is one of the ways to convince the customer, our customers, that this is a problem.

Senator ROTH. This is not the question I am asking, though, Mr. Estes. I am saying that—

Mr. ESTES. I assume you are asking about giving an incentive? For instance, I guess there is something in the bill with regard to electric cars which supposedly would benefit the customer if he bought a more fuel efficient car.

Senator ROTH. Let me elaborate, if I may. Let us assume that we had a standard set, something along the House lines, maybe others, but the same approach, and we said to industry, to a company that if you reach these standards each year perhaps there would be a 1- or 2-percent tax advantage in your corporate tax. I am just thinking out loud.

Would this create any incentive without the handicaps of a penalty to the industry? I wonder if any of the other gentlemen from Chrysler or Ford care to comment?

Mr. SECREST. Well, Senator, I guess there would be no doubt that my concern about the impact of this legislation on ability to raise capital would be different if the proposal were such that success would bring a reward from the Government instead of failure bringing a fine.

I have looked at a number of alternative legislative possibilities which try to assist the market in doing what we think it will do. I do not believe that in this case an incentive of the kind you have described is necessary to get the job done.

I think in contrast to the emission control situation, there is such a force in the market encouraging purchase of fuel economy cars that I would think that the sort of incentive you discussed would be better applied to, for example, the development and production of new forms of energy from sources that apparently cannot or will not be developed under present economics.

However, if you offered me the choice between penalties and incentives I would opt for incentives.

Mr. LOOFBOURROW. I think I would agree with the Ford position in that matter. There is one aspect in this whole matter which I think has led to a pretty broad misunderstanding on the part of the public. And that is that 40-percent fuel economy to which the industry is committed to. I am sure there are many people who are driving a 1974 New Yorker that figures in 1980 they will have that same equivalent automobile, same size, same weight et cetera, that he is accustomed to but they will be 40 percent more fuel efficient. And this, of course, is just not the case.

I think we have lost sight of the fact that as Mr. Estes pointed out the most important item for improved fuel economy is weight reduction and to accomplish the necessary weight reduction you have to go to smaller vehicles. I do not believe that these relationships are firmly implanted in the minds of the people who are talking about fuel economy.

Senator ROTH. Could I ask a question there that is somewhat relevant?

We have a national speed limit of 55 miles an hour now on the highways. Why do cars have to be able to go a 100 miles an hour or faster? If you kept that lower would that make any difference?

Mr. LOOFBOURROW. Limiting top speed by reducing power really would not make much difference on fuel economy. If you carry it too far, you begin to lose in fuel economy; if you underpower the vehicle too much. The activity in the car is really related to a safety aspect of the vehicle and the environment in which it lives. And if you have the necessary activity for safe operation at low speeds, you automatically get the capability at the top end. The high-speed capability of cars in recent years has been coming down since the horsepower race of a few years ago. The first reason for it was the tightening of emission requirements, and then the fuel crunch which caused tradeoffs for fuel economy. High-speed capability is deminishing, but it is a byproduct, if you will, of a basically sound automobile which is safe to drive.

Mr. ESTES. May I add something to that?

Senator ROTH. Yes; please do.

Mr. ESTES. Part of the savings, the 20-percent savings we are talking about in the 1,000 pounds of weighted vehicle is in the smaller engine that is provided. The engine automatically gets smaller, even at the same performance level.

Now, as I stated a moment ago, we are also looking at what is the optimum fuel economy level for performance, as Mr. Loofbourrow mentioned. And to put it in context, as I said a while ago, our current cars are somewhat in the 0 to 60 15-second area; hotrods are 10 seconds; and the average automobile is about 15 seconds. We are finding that by dropping that performance level down to 20 seconds, we are gaining fuel economy—not a great deal, but it is 5 or 6 percent.

So what you are going to see in these new vehicles we are talking about, and to accomplish the 40 percent we are talking about, all of our engines are going to get smaller in displacement; there is no question about that.

Senator ROTH. One question that concerns me very much: Having two plants in Delaware—General Motors and Chrysler—is what would be the impact of the House standards on employment? We have had a lot of general statements, but has an actual study been made as to what would happen if these proposals became, in fact, law—on the employment picture?

Mr. DUNCOMBE. We have already taken some preliminary cuts. As you might guess, it is a very difficult question to quantify and it could be illusory. I will say this: Just on the basis of what we have been doing, we have already lowered our estimate of the sales volume for 1980, relative to what we had before, by about a million units. In other words, we are now thinking in terms of sales in 1980 of a million units less than we had projected earlier.

Senator ROTH. What had you projected earlier?

Mr. DUNCOMBE. We had projected a total volume of 17 million cars and trucks. We have lowered that to 16 millions cars and trucks. And it is about a million less on the passenger car level, and trucks are about the same.

My guess is, and this a rough guess, that we can expect a loss in sales of at least a million units a year. In other words, we would be down at another lower plateau. We are doing more work on this, and as we do more work on it, I would be glad to give you whatever we come up with. But it has got to be a very, very substantial factor if, even

on the basis of the voluntary program, we see a loss of a million units a year.

Mr. ESTES. I guess you are talking about the 20.5-mile-per-gallon level in 1980? 20.5 miles?

Senator ROTH. Yes.

Mr. DUNCOMBE. To get the 20.5 miles will mean a very important further shift down in the type of car that we can produce.

Mr. ESTES. And some postponements, which accounts for the million loss.

Senator ROTH. Mr. Chairman, I wonder, do we have a representative of UAW testifying on this matter before us at some time?

Senator TALMADGE. We will have, before the hearing is over; yes.

Senator ROTH. Thank you, Mr. Chairman.

Senator TALMADGE. Senator Ribicoff.

Senator RIBICOFF. Thank you, Mr. Chairman.

Mr. Estes, I am intrigued by your statement on page 5: "We try to put the kinds of cars on the market that the American people have indicated they want to buy."

And then you say that foreign imports have remained steady, but your sales have gone down. They represent about 21 percent, I understand, of the market today.

Now, you also mentioned the type of cars Americans want, that have five passengers and you can put a lot of luggage in and take the trip and maybe squeeze in grandma.

I am looking at your charts that you left with us, and I notice that a Mercedes 300-D gets about 27 miles per gallon. That is a diesel.

I have a friend who sells Mercedes in Hartford, Conn., who tells me that he has got a waiting list of at least 9 months for Mercedes. He could sell all he could get.

I am curious: why have none of you made a diesel? What is there about a diesel that gives that extra mileage? And diesel fuel is cheaper. Why is it that not a single one of you giants have made a diesel automobile?

Mr. ESTES. It is easy to answer.

Senator RIBICOFF. I would like that. I think the American people would like that.

Mr. ESTES. The very best that anyone knows how to make in the way of emissions—and I am talking about the NOx standards—it is one of the three constituents that is legislated currently at 0.41. The lowest anyone knows how to get a diesel, as far as NOx is concerned, is 1.5. We might be able to get to 1. So, until we have some assurance that we do not have to meet the legislated emissions standards in 1977 or 1978 or whenever—it would be ridiculous for us to spend a lot of money to tool a diesel.

Let me tell you this, Senator, we are looking seriously at the diesel now, on the premise that possibly the emissions standards in the future will be straightened out to permit this.

Senator RIBICOFF. I am puzzled. Under the laws of this country, do the imports not have to comply with our emissions standards? Does the diesel—the 300-D—not have to live up to the standards set by EPA as well as your automobiles?

Mr. ESTES. Mr. Senator, I am sure that Mercedes would have never toolled that diesel on the basis of the American market.

Senator RIBICOFF. But they have been in the—

Mr. ESTES. They only tooled it on the basis of the European market, and they are bringing it in here. They will have to stop bringing in the diesel the day the standards go below, let us say, 1.15.

Senator RIBICOFF. They are living up to the standards now, are they not?

Mr. ESTES. Sure; the standards are well above that at the current level. The current standard is 3.1, for instance; so the diesel fits into that fine. In the future, we are going down to 0.41, unless Congress does something about relaxing that.

Senator RIBICOFF. I bet dollars to donuts, as the standards go up, Mercedes-Benz will come up with those standards and still sell the automobiles. Now, this is what puzzles me, that there is not the genius and the technology within the three of you, your companies, to make a diesel. I think this is a grave question on the minds of every American. Why can you not make a diesel automobile?

Mr. ESTES. We are building lots of diesel engines right now, and as I say, they just do not meet the standard that Congress says we have got to meet, as of today, in 1977. And Mercedes—you can ask Mercedes when they come in—I am sure they do not know how to get 0.41 NOx at the current time.

Senator RIBICOFF. In other words, are you saying that the Mercedes today is not meeting the standards required by law?

Mr. ESTES. Senator Ribicoff, you do not understand. Today's standards in this constituent are 3.1.

Senator RIBICOFF. All right.

Mr. ESTES. It is very easy to make a diesel meet 3.1. But in 1977 or 1978, when we get to the legislated statutory levels, that 3.1 goes to 0.4, and there is no way to do it. Now, we cannot afford to tool a diesel engine for a passenger car, without considerable risk, on the basis of 2 or 3 years' production. And this, as I said in my statement, and I think we all agree, that the low level of NOx in the statutory emission standards is one of the reasons that is inhibiting alternate technology, as far as alternate engines are concerned right today.

Senator RIBICOFF. Let us take the emissions standards—this is presently, Mercedes has been making diesels for years. You never have been. None of you have ever made a diesel.

Mr. ESTES. We are making diesels in Europe right now. We are selling them every day.

Senator RIBICOFF. Well, why are you not making them in the United States?

Mr. ESTES. The reason we are not making them in the United States, Mr. Ribicoff, is the fact that we are not going to invest millions of dollars on an engine that may be outlawed in a couple of years. It does not make sense.

Senator RIBICOFF. But Mercedes has got a waiting list of 9 months today, and you are making them in Europe. Why are you not importing your diesels from Europe into the United States? They comply with the law now.

Mr. ESTES. We have considered that, and if you look at the total volume of Mercedes—I do not know if you realize what you are talking about—but it is very, very low, relatively. You know, they will sell 40,000 total vehicles in the United States, and the diesel is running, what, 20 percent of that; so they are talking about very, very few vehicles in the United States.

Senator RIBICOFF. But when you say we try to put the kinds of cars on the market the American people have indicated they want to buy, and if each and every one of you is making a diesel automobile and you could advertise it, you could sell those cars in the United States of America, but you have never chosen to do so.

Mr. ESTES. Why do you not say we have not chosen to bring in our diesel, our Opel, into the United States because, you have to agree, it is not reasonable to put a great investment in an engine that is going to be outlawed in 2 years.

Senator RIBICOFF. I do not think it will be outlawed in 2 years. I am just curious, if there is somebody from Mercedes here to say that they are not going to sell the Mercedes in this country 10 years from now.

Mr. ESTES. As soon as Congress settles on the future emissions standards, that will get serious consideration.

Senator RIBICOFF. Well, to me it is a lack of all of you to be up to date of what the American people want. The heavier the car, the more money you make, and you have been interested in selling heavy cars with low mileage because you make a lot of money on it—a lot more than the small ones.

Mr. ESTES. I would like to remind you of a little history, if you would not mind.

In 1961, we took 200 pounds out of our regular sized cars. We introduced a brand new small aluminum V-8, a small V-6, a Buick, an Oldsmobile, a brand new four-cylinder engine in a Pontiac, and we increased the volume of 4's and 6's in Chevrolet; and 1965, in order to get adequate capacity of big V-8's to satisfy the market, because we could not sell the little ones, we sold the equipment on the V-8 to Rover; we sold the V-6 to Willy; we moved the four cylinder to Mexico—and incidentally, we just brought it back again the other day because it is doing a great job for us today. But we did not do all of that because of any other reason except that the customer had decided in 1965 he wanted V-8's.

Senator RIBICOFF. You are a leading executive of a large company, but this shows exactly what is wrong with it, because you lost the market; so you got out of the market of small cars and the Europeans came in and grabbed the market and you were indifferent to it and now you wake up with egg on your face.

Mr. ESTES. No, no, no; no, no.

Senator RIBICOFF. And now you are going back to the small ones after having turned the market over to the European countries because of your indifference.

Mr. ESTES. We have not turned any market over to the foreigners.

Senator RIBICOFF. You sure did, because they came in while you were making the big ones; they came under the barriers with the small ones. And now they have 20 percent of the market.

Mr. ESTES. Senator, they were here at that time.

Senator RIBICOFF. But they were not going full guns as they are now.

Mr. ESTES. They have not increased at all.

Senator RIBICOFF. As Senator Nelson points out to me, 400,000 cars imported in 1963 and 2.5 million cars today. That is a pretty good market that I think you lost.

Mr. ESTES. 2.5? That will be a great year when they bring in 2.5 million.

Mr. DUNCOMBE. It is nowhere near 2.5 million, Senator.

Mr. ESTES. It is 1.4 million.

Senator RIBICOFF. Before my time is up, one more question.

If the President succeeds in decontrolling oil, I understand that will raise the price of gasoline about 8.5 cents per gallon. What will that do to the sale of your automobiles, if gasoline goes up by September 1, 8.5 cents above what it is now?

Mr. DUNCOMBE. I think the primary impact on that would be in a further shift of the mix. Currently, about 50 percent of the sales of cars are small cars. By that, I mean cars comparable to our Nova or smaller—including the imports. And our feeling is that if the price of old oil were decontrolled and you got this, let us say, 8.5 cents—I have heard figures, incidentally, from about 5 to 8 cents—what you would do primarily is provide an incentive to buyers to go toward smaller, more fuel-efficient cars. And we believe that this is the right way to go about this problem, not only because of its impact on the new car sales, but I think the thing you must remember, Senator, is that there are 100 million cars on the road, and if the price of gasoline were permitted to reach—were decontrolled—it would have an impact on the way all of us use our cars. I think it would encourage car pooling; I think it would encourage the discontinuance of what might be considered frivolous driving; it might discourage the sort of driving that the teenager does on a Saturday around town. And I think that in your thinking about this entire energy problem, it is important to keep in mind that these proposals such as you have here relate to only the fringe of the total car market; that is, the new car market. And our goal ought to be to encourage conservation in the use of our transportation facilities—and that is 100 million cars that are currently on the road.

It would have an impact. It would shift the mix down. And I think that to that extent, it would contribute to our long-range energy goals. But even more important than that, it would contribute immediately to the conservation effort which, in our company, we believe is important today.

Senator RIBICOFF. Thank you, Mr. Chairman.

Senator TALMADGE. Senator Hansen.

Senator HANSEN. Was Senator Brock not here first, Mr. Chairman?

Senator TALMADGE. I do not have it so recorded.

Senator HANSEN. All right, fine.

There have been a lot of questions asked of you gentlemen about legislation and whether we should face up to our responsibilities. They are very interesting.

I am going to ask some of my questions to you, Mr. Secrest, because between the panel and Ralph Nader, I think GM has gotten more attention than it really deserves at this moment, and I say that because I am a driver of a Buick and a Chevy.

Is it not a fact if we wanted to do something about safety, Ralph Nader and the Congress of the United States, had we said we were going to pass a tough drivers law that would revoke permanently the driver's license of anyone who was caught driving under the influence of alcohol, we would have taken a very dramatic step that

would have reduced more than any other single thing that could have been done legislatively?

I ask that of you, Mr. Secrest.

Mr. SECREST. Well, I think there is no doubt that all of the students and analysts of the vehicle safety issue agree that if we could find some way, through legislation or something, to reduce the use of alcohol by individuals operating motor vehicles, it would have the effect you suggest; no doubt about it.

Senator HANSEN. One way to reduce it is to pass a law that says if a guy is caught driving while he is drunk, he loses his license, he cannot ever get it back. Now, if we want to face up to some tough decisions, I suggest there is a good place to start.

I used to be chairman of the National Governors Conference on Highway Safety, and at that time, it is my recollection that more than half of the fatalities on American highways were the result of someone driving while he was drunk.

Mr. SECREST. I think there are some very useful statistics bearing on that, from the experience of some of the overseas countries, particularly Sweden. I believe some of the other Scandinavian nations also have what appears to be an absolutely iron-clad proposition involving jail terms if you are driving with alcohol in your blood beyond a certain point on the measuring device. And I think it has been very effective.

Senator HANSEN. My purpose in asking the question is to say that I think we are overreacting in our response to a very serious energy situation. I think it is serious, but I think it has to be approached in two ways. One is to take all such steps as seem indicated that will bring about conservation of energy, on the one hand. And the other is to take simultaneous steps that will do something about increasing supply. And I gather from the testimony that I have heard here this morning, that opinion is shared by you panelists. I am not certain. Did you address that point, too, Mr. Loofbourrow?

Mr. LOOFBOURROW. It was not in my prepared statements, but I certainly concur with that approach.

Senator HANSEN. It is a matter of fact that without any legislation in Europe they have gone to using smaller cars, probably for two reasons: One, the shorter distances that they drive and secondly, the high cost of gasoline.

Is that opinion shared by you, gentlemen?

Mr. SECREST. Yes. I think there is no doubt of that.

Senator HANSEN. Has there been any legislation by any of the European countries as to the size and weight of vehicles that you know of?

Mr. SECREST. No, no country.

Mr. ESTES. France and Italy.

Mr. SECREST. There have been some tax provisions in various countries that relate the amount of tax that a car owner pays, either each year or when he buys a car, which apply to the engine size, or something like that. Most of the economic impetus to the development of the characteristics of cars overseas, has been related to the cost of fuel. This is particularly pertinent in relation to the real incomes of the people. In most countries, real incomes are lower than in the United States, but fuel prices have always been higher. And this has created incentives.

Senator Ribicoff is no longer here to pursue the diesel analogy, but the Mercedes diesel is priced in the United States at \$16,000. It is a wonderful car, but it is not cheap.

Senator HANSEN. That was my next question. You said the cost of a Mercedes diesel is \$16,000?

Mr. SECREST. Yes, it is a fine car. But it was not in great demand until the price of gasoline in the United States moved off the plateau of around 35 cents, where it stayed for several years, and began to spiral at the time of the oil embargo. Gasoline is now at 57 cents or more, and surely going higher regardless of which set of options is chosen by the Congress. A diesel car is a heavy, expensive and costly unit and which therefore had no market in the United States as long as gasoline was cheap. Now however, there is a market for such a car. Even at a high price.

Senator HANSEN. When we speak about steps that might be taken legislatively to induce greater conservation of energy, I am impressed, as I know the chairman is. You do not have to drive very far to observe the number of automobiles around schools—not colleges exclusively, but high schools as well, and even grade schools.

What would happen in your opinion if the Congress were to put the minimum age of drivers, excepting those employed in industry, up to, say, 18 years?

Senator HASKELL. If the Senator would yield, I think you might have a mother's revolution.

Senator CURTIS. You would save more gas if you would make it 28 years.

Senator HANSEN. Well, the fact is—it seems to me to be a fact—that I notice that the insurance companies recognize a male under 21 or 24 as being the most hazardous of all persons to insure.

Mr. ESTES. Unmarried, too.

Senator HANSEN. I should think if we want to get at the root cause of the problem and not take the car away from the working man, and he may be only 18 years, but to keep it out of the hands of youngsters who do not need to drive—we could save a lot of energy. I am not recommending this, I have five grandkids and some of them are driving, but the point is that it is awfully easy to attack the industry and to criticize it. And I am not one who thinks it is without blame, by any means. But, I think sometimes, as it seems to me we did in safety devices and appliances, we went completely overboard. We added to the cost of cars. We added to the weight of cars; we increased the consumption of energy by cars to strike at one thing: Fatalities on highways.

And if we had really wanted to look at the big problem here, I still say: Do something about drunk drivers. But, you know, every 2 years, or every 6 years, we start thinking about getting reelected. And I think that is why we do not take Senator Haskell's approach: That we move the driver's age up.

I gather from what you say that you do not think that the steps that have been indicated here to do the things that you believe are going to come about as a consequence of the operation of the economy are in the public interest. You do not think we should legislate these standards that have been proposed and are before us now.

Would you respond to that, Mr. Loofbourrow?

Mr. LOOFBOURROW. We concur with that viewpoint completely, because, as has been mentioned before, fuel economy with the increasing

price of fuel is becoming an extremely marketable characteristic in automobiles. But there will remain a requirement for automobiles of all sizes, because of the needs of people who buy them.

And, as has been pointed out, it is not necessarily the new car buyer who is going to be the one who bears the burden of the elimination of large cars. The fellow who is below average income—a medium-class laborer with a family of six—he is waiting for that 4-year-old station wagon which he can buy on the used car lot.

If the regulations make it impossible to put that new station wagon in the market 4 years before, that car is never going to get to him. So he is going to be the one that gets hurt.

Senator HANSEN. What about SO_2 ? I am told that when we started legislating on these emission standards, we apparently did not discern the significance of SO_2 in the air. Now there seems to be great concern, particularly in a city like Washington, that people who have respiratory problems could be seriously afflicted by that.

Would someone respond to that?

Mr. LOOFBOURROW. SO_2 is really not a meaningful item in automobile exhausts. However, SO_2 is one of the measured pollutants in the air. In cities where they have an air quality measurement, which is recorded daily, they measure one or two pollutants.

One of them is particulates which is always part, if not all, of such measurements. Many cities also measure SO_2 . But the SO_2 primarily comes from fixed sources. And of course, the particulates are not part of the automobile's emissions. So the things that are used to measure the quality of the air are non-automotive associated.

Mr. ESTES. I would just like to add that automobiles, as far as sulfur emissions are concerned, only are responsible for about 1 percent of the total in urban areas.

The concern that has been expressed, is that the catalytic convertor, in doing its job on the regular emissions, also converts SO_2 into sulphates that might be harmful.

There are only about five labs in the country that can measure it, it is so low at the current level. There is some concern about 10 years hence when all cars have catalytic converters that someone standing near a crowded highway, with, I think, the parameter or the software that was used in determining this was a 10-lane highway for automobiles traveling at 60 miles an hour and a pedestrian standing about 10 feet away might be exposed to a severe problem.

We do not question that this might happen. And, in view of that—we have coming this fall what we call a big experiment.

We are going to fill our proving ground full of cars with catalytic converters. We are going to measure the sulphate emissions at the roadside under all kinds of atmospheric conditions.

Incidentally, the EPA, and I think some of our competitors, have agreed to observe these tests, in order to get some facts in this case. And that is all we need. And if it is a problem, I can assure you we will step up to it.

Right now at least, it is no problem. And it may not even be a problem in the future, but there is a conversion in the catalytic converter from the SO_2 .

Now, this all comes, of course from sulfur in the fuel. But there is a conversion from, let us say, less harmful sulfur compounds into

possibly more harmful sulfur compounds, in going through the catalytic converter. That is what started it.

Senator HANSEN. My time is up, Mr. Chairman.

Senator TALMADGE. Senator Dole.

Senator DOLE. I think it is interesting that there is basic agreement among all three or four witnesses at the table. Is that correct, insofar as the House-passed bill is concerned?

Mr. SECREST. There appears to be; yes.

Senator DOLE. Are there any disagreements?

Mr. ESTES. With our position?

Senator DOLE. Right.

Mr. ESTES. I stated our position—

Mr. SECREST. As far as I can see, Senator Dole, I believe we are in general agreement. I have not had a chance to read through the details of the longer statements of my associates. And they have probably not read ours, but certainly, in general, we are in agreement.

Mr. ESTES. It seems to me from our verbal statements, we are in agreement.

Senator DOLE. I think in your statement, Mr. Estes you indicated there was more energy consumed for residential purposes. But no one has recommended we be limited to five-room homes.

Mr. ESTES. Or two-room homes, maybe.

If we are going to be comparable to the 28 miles to the gallon, maybe it is even smaller than a 5-room home.

Senator DOLE. I think you make a good point: if we are really going to look at the problem, we have to know the problem and we have to single out the—

Mr. ESTES. Yes; we just ask that whatever incentives we have for conservation, let us be sure that they apply to all uses of energy, rather than just gasoline.

Senator DOLE. Do you have other examples, besides the residential use of energy?

Mr. ESTES. Well, industrial uses. I do not think there is any question that in our industry and in all industries, we are using gas today, natural gas today, where we should be using oil. I think that ought to be looked at by all of us.

And you say, well, why would you do a thing like that, when we have such a shortage of natural gas today. And the reason we did it is from an economic point of view, and our industry is highly competitive, from an economic point of view from an emissions point of view, natural gas was the right way to go except for the fact that probably it was artificially priced too low and we are looking at the wrong economics when we use natural gas for certain operations.

I am talking about electrical generation, for instance, in heating and generation of steam in our plants. And on the other hand there are certain operations, where, with current technology, we do not know how to use any other type of energy. We say it should be conserved now for the operations where we know no other way. But let us look at everything. That is all we are saying.

We are trying in our industry, in General Motors, at least to do everything possible we can to conserve all kinds of energy and to move as fast as possible, within economic constraints, to coal. And of course, we encourage the use of nuclear, because in both of these cases,

we conserve two real critical situations we have: that is petroleum and natural gas.

Senator DOLE. A general question that might be propounded to all three witnesses would be the state of the employment now in the auto industry, and what do your forecasts say in the next 6 months? Is there a reason for optimism?

I might just start with you, Mr. Estes, then go to Ford and Chrysler.

Mr. ESTES. Of course, as you know, I think, we publicly expressed optimism in the future. We have said all along that we thought that our industry, at least General Motors, had bottomed out in January or February.

Senator DOLE. How many are out of work now?

Mr. ESTES. At the peak we had 225,000 on a temporary basis, including indefinite as well as temporary layoffs. Currently we have about 80,000 still on indefinite layoff. We hope that in August that will be down to 70 to 72,000, somewhere in that area. And hopefully by the end of the year, we will have those back to work.

Right now our plans are to be at about a 70 to 75,000 level of indefinite layoffs by the start of the model year 1976.

Senator DOLE. So there has been a rather dramatic shift?

Mr. ESTES. We are improving the situation day by day.

Senator DOLE. What about Ford?

Mr. SECREST. Well, our situation, Senator Dole, is somewhat similar. Our peak months for layoffs were January and February. Counting indefinite layoffs and temporary layoffs, that is people off for a week or more but still on the rolls, we had around 65,000 of our hourly workers on layoffs. This was in the range of 35 or 40 percent out of work in those months. In addition perhaps 8 percent of our salaried workers were unemployed.

Now that 65,000 number is down to around 23,000 or around 13 percent. I think that through the remainder of this year, unemployment rates in our company will still be in the range of 10 percent to 15 percent. I do not see business recovering to the point where the problem is going to go completely away.

We are forecasting a relatively slow recovery and not a dramatic turnaround.

Senator DOLE. The same with Chrysler?

Mr. LOOFBOURROW. We believe we are seeing the turn occur. We are presently at 30,000 layoffs. And the max figure was about twice that at the first of the year. So this is the lowest we have reached since the first of the year. We have added a second shift in two of our operating plants. So we believe that things are now headed upward, as has been said, it is not a dramatic change, but it certainly is in the right direction.

Senator DOLE. I think Senator Packwood, Senator Haskell earlier, touched on another point. But if we assume by 1985 that laws are passed and we have to reach 28 miles per gallon, it would cause quite a change in your operation. Maybe it is too early to have any figures on what it might do to employment.

I think you talked about units. But could you translate that into jobs. What would it mean, job-wise, if we mandate something that is going to mean smaller cars?

Mr. DUNCOMBE. Well that million car drop translates into about 250,000 jobs.

Mr. ESTES. It is about one for four.

Mr. DUNCOMBE. That is the direct employment effect of a million automobiles.

Senator DOLE. Is that shared by Ford and Chrysler? It may be too early to pinpoint it.

Mr. SECREST. I think the relationship between jobs lost to units of sales lost is about the same. We have not really done a projection of how much smaller, if any, the market would be under the presumed 1985 conditions. We seem to be considering here the assumption that all cars would be the size of a Volkswagen Beetle or smaller. I am not sure I can give you a valid estimate as to how serious a change that would be.

I think it is important to keep in mind that the option we are suggesting is that we do not choose between forcing people to drive cars the size of today's cars with the fuel economy of today's cars versus Volkswagen Beetles. We think that it should be possible to save very, very substantial amounts of fuel and improve the fuel efficiency of today's so-called big cars by 50 percent or more, and still have vehicles that will be 1,000 pounds or more lighter than today's vehicles. They will do for the public what today's big cars do. I do not think that we have to go all the way to Volkswagens in order to reach an acceptable energy goal.

Now, 28 miles per gallon fleet average is another thing. And if we do go that far, I think we ought to make clear what choice people are being asked to make and how much difference in petroleum consumption would come from the two possible options. We cannot compare 28 miles per gallon with today's conditions because fuel economy in 1985 will be far better.

Senator DOLE. I wanted to ask one more question before my time expired—do you have generally the same view?

Mr. LOOFBOURROW. I think it is imperative that the public be advised as to what will be the consequences of these kinds of bills. I am sure that 90 percent of them out there are saying, great for you, Congress; you are going to get us better fuel economy. But they do not realize the rest of the things that go with it.

Senator DOLE. I think you are right. I think what the House tried to do is to give the public at least the appearance that we were going to have energy independence at no cost. No one had to sacrifice, no one had to suffer. But we are not going to have energy independence by simply imposing quotas.

Finally, do you all favor decontrol of natural gas and oil?

Mr. ESTES. Natural gas is very serious.

Senator DOLE. I think many of us feel that way in Congress, but I am not certain that over half of us feel that way in the Congress.

I would like permission to make my statement part of the record following the statement of Senator Curtis.

Senator TALMADGE. Without objection, so ordered.¹

At the hour of 11:30, this meeting will officially adjourn. Informally and unofficially, we will continue to seek the advice of the witnesses.

Senator Nelson?

¹ See p. 2.

Senator NELSON. Gentlemen, I have a copy here of a magazine that I wonder if you happen to be familiar with. This issue is entitled, "A Lighter Car," published by Pittsburgh Plate Glass Industries, a recent number, and it includes an article on auto-emission standards.

Have any of you seen that article?

Mr. ESTES. We are familiar, I think, with everything Pittsburgh is doing but I have not seen that particular publication.

Senator NELSON. They do a lot of work with the auto industry?

Mr. ESTES. Absolutely; we work very closely with them, particularly in the area of plastics and lighter materials.

Senator NELSON. It is a very brief article and it shows some Pittsburgh Plate Glass findings on their newly developed exhaust trap.

But, let me read just a few sentences from it:

Tests of a new auto-emissions control system, an alternative to the catalytic converter, give promise that tough 1978 Federal emission limits can be met.

In December, the California Air Resources Board reported on six series of tests on a modified 1974 Ford Pinto station wagon owned by Pittsburgh Plate Glass Industries. In every test, as reported in the chart on the opposite page, the Pinto met the stringent 1978 limits with no reduction in fuel economy.

Elsewhere in the article they state that they think that it will last for 50,000 miles. It says that Pittsburgh Plate Glass has spent 5 years developing and testing the particulate trap which replaces the standard muffler. Then they go on to say that this filter unit adds about \$12 to the manufacturing costs. Life expectancy for the trap is 50,000 miles.

Only the future holds answers to some questions, will Congress postpone the 1978 emission control limits, will auto companies adopt an emission control system or a new type of engine that permits use of high compression ratios, leaded gasoline, and particulate trap?

But, one question already is answered—the technology exists in experimental systems to meet the 1978 limits with good fuel economy and with promise for controlling sulfate emissions.

Then they show the six tests that were done with the 1974 Ford Pinto. Now, as you all know, the current standard is 15 grams per mile for carbon monoxide. The tough 1978 standard is 3.4 grams. The Ford Pinto on six tests was not just at 3.4 grams per mile but at 2.99 in one test and at 2.24, 2.48, 2.26, 2.03 and 2.65 grams in the others.

So, on all these tests, the Ford Pinto with this equipment was well below the tough 1978 standards for carbon monoxide.

Now, for hydrocarbons the current standard is 1.5 grams per mile while the 1978 standard is 0.41. The Ford Pinto with this new equipment tested out at 0.17, 0.11, 0.11, 0.10, 0.11, and 0.13 grams per mile of hydrocarbons, well below 50 percent of the tough 1978 standard, and at less than one-fourth of the standard in one of the tests.

On nitrogen oxide, the standard for 1978 is 0.4. In the tests, the Ford Pinto did 0.26, 0.23, 0.27, 0.22, 0.23, 0.26. I am wondering, I thought you might be familiar with the equipment that Pittsburgh Plate Glass has been dealing with.

Is anybody familiar with it?

Mr. SECREST. I believe that the system referred to there, and I am relying on one of my engineering colleagues who handed me a note on it, is the system developed by Questor, another company that supplies components to the auto industry and I presume is working with Pittsburgh on this.

Senator NELSON. That is correct.

Mr. SECREST. Ford is doing a lot of work with Questor and we have submitted for the record in the EPA suspension hearings, a great deal of information evaluating not only that device but dozens of others.

The law, of course, requires us to meet certain standards by 1978, but that report you read uses the words, "on an experimental basis;" did I hear that read in there?

Senator NELSON. Yes.

Mr. SECREST. With each of the experimental devices to date the facts are, as we see them, they are not ready for production. That despite the fact that we would be delighted to find some way to resolve this problem, and it is of no benefit for us to continue this long struggle to try to design systems that will meet the law unless such systems are production fundable.

We are spending millions and millions of dollars on an attempt to work out every conceivable alternative that might yield a technical solution.

At the present time, as shown in our sworn testimony on the EPA suspension hearings, we have been unable to find a device that is proven in any sort of production basis to deliver the results necessary to meet the standards. In the particular case of the Questor device, we are concerned that the tests that have been run to date show very serious fuel economy penalties.

Senator NELSON. In here they say not.

Mr. SECREST. I think it would be appropriate for us to submit for the record the information we have given the EPA on that particular one.

I notice that in the press conference held a couple of weeks ago at which Mr. Zarb and others talked about the recommendation of the President for an extension of the current standards. Mr. Zarb was asked about new technology for the future which could get improved fuel economy while meeting more stringent emission standards. He replied:

I can just play the ball from where it is at the moment. No one has produced those technology improvements, no one has shown them to us and if they are hidden in the basement of somebody and they come out at some later date then we ought to take a whole new look.

This is our view, we are sometimes painted as wishing that anyone who has an idea would stay away so we could not make any contribution to solving the problem. The law requires us to solve it, the law requires a good faith effort on our part to solve it and if we do not make a good faith effort to deal with anyone.

Questor is one such company, Gould is another. At the last hearing, a leading executive of the Gould Co., another supplier firm, appeared before one of the Senate Committees and said in effect that the auto companies were not testing his product seriously enough. They just were not giving him the kind of cooperation that he ought to have and that led to a very, very extensive interchange of every telephone call and every visit and every possible contact that had ever been made between this supplier and the Ford Company—I suppose the others as well.

And I think the record will show, certainly we are willing to stand on it, that we are doing everything we possibly can to investigate

every idea both from our own shops and from outside suppliers to see if we can resolve the problem.

Mr. ESTES. Senator Nelson, I did not recognize Questor as PPG. Senator NELSON. This is not, they are working with them.

Mr. ESTES. Is there a fuel economy number in that?

Senator NELSON. No; what they say on fuel economy, the sentence I read earlier, the last sentence was, "the technology exists in experimental systems to meet the 1978 limits with good fuel economy and with promise for controlling sulfate emissions." And I do not know what they mean by, "good fuel economy."

Mr. ESTES. That may be the problem because our Pontiac division for 5 years worked very closely with Questor and prior to the importance of fuel economy, it looked like that might have a chance of doing the job. And the principle on which it works is a considerably richer carburetor in which it keeps the fire burning in the reactor to get rid of the emissions and it is kind of a dual setup. There was another reason for dropping it in our case and that was that the durability, we were never able to get the durability beyond about 20,000 miles and we did not think that was adequate.

But the basic reason, as Mr. Secrest has said, is that it may be what they consider to be adequate fuel economy. It is not what we consider in the concept of today, adequate fuel economy.

Senator NELSON. They do not give the dates of the test, it is a recent publication, but it is a California test.

Mr. ESTES. I can assure that we will doublecheck and make sure we are up to date. They may be comparing it with their 1974 Pinto you know; and that is not very good.

Mr. SECREST. Oh, I would not say that.

[General laughter.]

Mr. LOFFBOURROW. Senator Nelson, I would like to say that Chrysler is also familiar with the Questor system and our results and experiences have been almost identical to what Mr. Estes has reported.

The CHAIRMAN [presiding]. Senator Brock?

Senator BROCK. Gentlemen, I have been most interested in your testimony. I am not familiar with the device mentioned by the gentleman from Wisconsin, but I think you may be facing the dilemma between environmental and conservation objectives.

I think the point was made about mandating a 28-mile-per-gallon fleet average is something that could be met, if we were willing to compromise in other areas, size, weight, environmental standards, and the like. The point is, we cannot by statute mandate technology in all areas. I think that is the essence of your testimony.

We are discussing today not just automobiles, we are discussing the whole energy problem and hopefully the Senate will do a competent job. The House has not. And I think we have to establish responsibility in this area.

I would like to point out, I think it was the statement of Mr. Estes, that you were using natural gas because it was a cheap energy source and it was cheap because we had mandated a low price. Now the same is true of gasoline. We are holding the price below the market by law and as long as that happens, market forces cannot be brought to bear to correct the problem. And this is the most fundamental thing we need to do: To restore the market to its functioning plane by the

deregulation of gas so that at least the market forces will be supportive of Government policy.

Mr. ESTES. It will support us, too.

Senator BROCK. And of course the industry as well.

I might say I am a little bit weary of the discrimination against those of us who constitute the 28 percent of the families who have more than two children. I have four children, a beagle, and a half-beagle, and we have no idea what the other half is.

We do have a problem when we want to travel. We have a 1970 Buick station wagon, Mr. Estes. It cost me a considerable amount of money yesterday to get back into operating condition, the transmission went out. But I cannot afford to drive a Nova or a Pinto because that would require me to buy two cars and my wife would drive one with two children and the beagle and I would drive the other two children and the half-beagle.

We would use more gasoline than we are using now and I would use more energy and have less of a family in the process. That is what bothers me about us saying that you cannot accommodate the needs, the disparate needs of the American people, get that is what we are beginning to reach toward when we say you have got to have a 28-mile-per-gallon average, because, I tell you something, in 1985 I still will want a car that will carry six people because that is the size of my family and I like to travel with them.

If you cannot put them in a Vega wagon or a Pinto wagon, I am not going to be happy and I am not going to buy your product and I will keep this doggone Buick floating as long as I can; just because that is a personal requirement of mine, it is not a matter of needs or wants. It is a matter of physical necessity for me to keep my family together.

I think that is why I raised some question about the mandation of these standards that are not in the real world. The Senator from Oregon is blessed with two children, and they are beautiful. He was smart. I am not as good at family planning as he is.

I have got a different problem. I am just doggone weary of the Congress asserting its ultimate wisdom on some of these questions. General Motors and Ford and Chrysler have to face the market every day, every week, every year and you are getting the consumer's judgment. The Congress faces it every 6 years and we are getting ours. Frankly you are doing better than we are.

I question whether we should try—would it not be better to take the tack that Mr. Roth proposed, gentlemen? Let me ask you a different kind of a question. He proposed incentives as opposed to penalties. May I suggest a different approach entirely from that. Would it not be more feasible to penalize pollution on the basis of its real cost to the American people? Would we not be better to have a tax on the percentage of excess emissions, noxious emissions, than it would be to have some set standard that may not be within technical feasibility?

Would you like to comment on that?

Mr. ESTES. Certainly, Senator Brock, you have the perspective that we tried to put across; and, as I said, there is not any question that emission controls on vehicles and safety in some areas is not salable and, consequently, we need some Government regulation.

We have said many times, and I will just say it again, that all we ask in those areas is that we are sure that whatever regulations there are, are health effective, safety effective, and now, energy effective. And if we examine all of the regulations in that context we have no argument at all. We just say let us be sure of the facts, let us investigate our current vehicles in the field and see if everything we have done in the past several years which has increased the weight of our vehicles and our fuel economy, let us make sure that all of those regulations are health effective, cost effective, and energy effective.

And if you look at the emission problem, as you have suggested, we would have no objection to that. I think it would be a good idea.

Senator Brock. One of the problems I have with testimony from people such as yourselves is that, generally speaking, we get a statement that this is or is not technically feasible. But too rarely are we able to pin down the true cost of various policy alternatives. We do not have the mechanism in this Government for evaluation of our programs. You do but we do not.

Is it not possible for you to quantify your testimony in terms of jobs, in terms of price per car, in terms of price to the ultimate consumer on the various alternatives that we are facing you with so we can have some tangible things that we can see, and sense, and touch?

Mr. ESTES. In some areas we can and in other areas it is very difficult. But that is the reason I brought Dr. Duncombe along.

Senator Brock. To the extent that you can, I would very much appreciate your responding to some of the questions that have been asked, as I say, to the degree you can in a quantified fashion. What does it mean, what do these various alternatives, in terms of the consumer, cost?

I think Mr. Secrest mentioned that an 8-percent shortfall in this mileage figure would cost him a fine of \$225 million. What does that translate into the consumer cost in terms of cars, what does it translate into in terms of consumer costs in reduced technology, the ability to invest in new and better techniques? Can we quantify that a little bit?

Mr. DUNCOMBE. In this whole area of emissions and safety we have stated publicly a number of times essentially two factors. Now, one is that the consumer is currently paying about \$600 per car for the safety and emission equipment that has been put on since those programs—

The CHAIRMAN. Would you mind speaking into the microphone? I cannot hear the answer.

Mr. DUNCOMBE. I was saying that on the basis of General Motors' costs, the buyer of a new car today has a cost, an added cost of about \$600 per vehicle for the safety and emission equipment that is on it—of that, \$385 is safety.

And as we look ahead to meeting the standards that are now on the books, on the basis of our current cost estimates, it will be approximately another \$600 of cost. In other words, this is over and above the current \$600 of cost. So that if we were to go ahead with these standards as they are now on the books, we are talking in the area of \$1,000 per vehicle when all of those standards are met.

Those costs do not take account of some of the other penalties, that is, the fuel penalties that may be associated with meeting the

weight or the emission standards on the cars in the future. And there may be other costs.

Now those figures, I think, we have made public but, I think, there are other costs involved in this and I agree with you. One of the things I would like to see is a much fuller accounting.

Senator BROCK. My time has expired, Mr. Chairman, but if I might ask for the record so you could supply it at your convenience, would you give me a breakdown, by company, each of you, a listing of the mandated costs current and already enacted but not being applied yet and those which are proposed by type?

How much does the 5-mile-per-hour bumper cost, not just in terms of the consumer, gentlemen, if you could give me a little clearer estimate of what it costs in increased repair bills because my son is not smart enough to wreck at less than 5 miles an hour and that is a genetic defect he has to live with. We have that problem too.

I would like to be able to spell out the exact cost by item, not individual, part by part, but by the major system item. If you could give me that I would be very thankful.

Mr. ESTES. The other thing, Mr. Senator, we have tried to do in this, and it is a little more difficult, and that is to rate the cost benefit in each of these. But that is really what you are talking about—is the 5-mile-per-hour bumper worth it? We have testified many times that the 2½ is but the 5 is not. But that is the kind of information we will try to get for you.

Senator BROCK. Thank you very much.*

The CHAIRMAN. Mr. Curtis?

Senator CURTIS. Thank you, Mr. Chairman.

Personally, I happen to believe that our present trend in our legislation here, what has been proposed are a blueprint for a continuation of unemployment and recession. Now, we can eliminate some drivers whether we raise the age limit or not. We can do some other things, we can close some filling stations, we can go to the very, very small car. But I am concerned about what that means in the way of jobs and I do not think we have to do those things.

I would like to ask, how many man-hours are involved in making your smallest car? I will ask Chrysler first, or is it a trade secret?

Mr. LOEBBOURROW. I do not have that specific information at my fingertips at the moment, and this would have to go clear back to the raw materials as they lie in the ground, if you want to really get the total man-hours involved.

Senator CURTIS. I will come to that, but I think we ought to know if it is a trade secret exactly how many man-hours—I would like to know something between the difference over the man-hours that goes into one of these smaller cars and one of these full-size cars.

Mr. LOEBBOURROW. Within our plant, there is a substantial difference.

Senator CURTIS. How much?

Mr. LOEBBOURROW. I will get that information.

Senator CURTIS. Do you not have a guess?

Does it take twice as many people to make a full-sized car than one of these little bitty ones? Because, if that is the answer, we can all go to motorcycles or these three-wheel things or rickshaw carts.

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

How about the Ford situation?

Mr. SECREST. In answer to your specific question, Senator Curtis, I would estimate—and I do not have detailed information on the subject with me—that the man-hour content of a Pinto, in the Ford system, is about 15 percent less than the manpower content of one of our larger cars.

You might think it is a great deal wider difference than that, but the fact is that the Pinto will perform many of the functions that a large car will perform, and we cannot find smaller people to build the smaller cars.

Senator CURTIS. You can put some of those small people into politics, though.

About 15 percent?

Mr. SECREST. Yes.

Senator CURTIS. What is your comment on that?

Mr. ESTES. Well, I do not have the numbers here, but it is not 50 percent, I will say that. I do not think Mr. Secrest is far off—it really depends on where you start. If you start at the assembly plant, that is one thing; you go on to the engines, the axles, and so on, back to the raw materials, you can go all the way through.

Senator CURTIS. I mean the whole business.

Mr. ESTES. I think 15, 20 percent is probably a good figure.

Senator CURTIS. Now, if you went clear back to the raw materials, all the raw materials that go into a car, how much employment do we lose by going to these tiny cars, as compared to what most of us think of as a full-sized car?

Mr. SECREST. I think one way to get at that would be to consider some of the optional equipment features that are now available in most cases on either small or large cars. Some of them, like air conditioning, are alleged to have—you know, there is a whole industry that could be disemployed. I assume it would involve not only automotive air conditioning, but air conditioning for buildings and Senate hearing chambers and everything else. And if we have to do that someday, I assume we will do it.

Senator CURTIS. I do not think my question is difficult. Does it take more people to build a full-sized car or a small one, and if so, how much more?

Mr. ESTES. It is a good question. I think we should consider it and try to get some kind of an answer on a percentage basis. I do not think we have—I know we do not have the information here to give you the kind of answer you want. I think the thrust of our testimony, however, though, Mr. Senator, was that in addition to the factor you are talking about, there is a possibility of postponement for an indefinite period, maybe up to 5 years, of buying intentions on the part of the public, which is going to be tremendously severe in the way of unemployment in the interim.

Senator CURTIS. That is exactly what I am getting at. What will the effect on the industry be on employment if we force you to go to a 28-mile-per-gallon average?

Mr. ESTES. We are talking about 2,000-pound cars.

Senator CURTIS. What is it going to do to employment?

Mr. ESTES. It is going to have a drastic effect, as Mr. Duncombe said.

We say that even in 1980—and that is not the 28 miles per gallon, that is the 20.5—we are looking at probably a million less vehicles in the industry, sales, in 1980, because of the 20.5 number.

Mr. DUNCOMBE. And that is about 250—

Senator CURTIS. That is the sales of cars.

Mr. DUNCOMBE. That is 250,000 people.

Senator CURTIS. That is 250,000 people, but how much is going to the smaller cars?

Senator BROCK. Excuse me, that is 250,000 direct; and what would be the indirect?

Mr. DUNCOMBE. The indirect in various—

Mr. ESTES. That is 1 to 4, and it gets up to the point where it is almost 1.5 to 1; so you almost can double 250,000 if you are talking about supplier industry and the whole thing. The 250,000 is just General Motors.

Senator CURTIS. What I would like to know is, in the whole ball of wax, I think the Congress ought to know, how many man-hours it takes—or if it is a trade secret, put it in some other way—to make a small car and how much to make a full-sized car, clear from scratch. I think we ought to know that.

I think we also ought to know whether or not you could pull a boat or a trailer with these little cars, and who is buying the boats and the trailers. I do not think the wealthy people. I am serious; I think this movement has got the seeds of making our recession and unemployment permanent. I do not think there is any question that we have got to turn our attention to the production of more petroleum and natural gas in this country, and our conservation should be turned to a question of those industries where there is a substitute.

Now, if they did all the things they have talked about under these schedules here, would it save as much petroleum as we would save by using coal instead of petroleum to produce our electricity in the country? It is my understanding we use about—that 40 percent of the electricity is made by burning petroleum. It is not necessary at all; coal is cheaper. Now, what would be the comparison if we did all of these things that they want to do, which I am convinced means continued recession and unemployment, because our industry, our whole industry is built around the motor vehicle.

There is another thing we have not touched here and that is trucks and the like. If you make them smaller, you cannot haul very much.

Would we save as much petroleum if we eliminated petroleum as a means of manufacturing electricity? Does anybody have an answer on that?

Mr. ESTES. We have looked at this. I do not have the numbers at my fingertips.

Senator CURTIS. I would be glad to have it supplied for the record. I do not mean any harsh criticism of not having these ready answers, but I believe you have been too defensive. You have been stepping backwards as we in the Congress have imposed this managed economy—and that is what it amounts to. Congress business should be to see that we produce more petroleum and also a full utilization of substitute fuels.

Mr. DUNCOMBE. I was just going to suggest in connection with this that the motorcar is taking about 30 percent of the petroleum. Now, a proposal such as we have been discussing today would affect only new cars. And let us say for a moment that it did not affect the sales volume. We have 100 million cars on the road, so that what this legislation would be doing would be affecting, let us say, 10 percent; that is, the first year's production would be 10 percent of the total. So that, of the 30 percent of fuel, we would be affecting 3 percent. Now, of that 3 percent, we might be making a 5-percent improvement, so that we are talking now about a first-year improvement in conservation of 5 percent of 3 percent of the total petroleum used in the United States.

What we are talking about here is a proposal which will have a major effect on the automobile industry and a minimal effect on our national effort to conserve energy. That is one way of looking at it.

Senator CURTIS. Well, now, we use 30 percent of our petroleum to drive motor vehicles. And how much do we use, or what percent of our petroleum do we use for electricity?

Mr. ESTES. Nine percent.

Senator CURTIS. How much?

Mr. ESTES. Nine percent.

Senator CURTIS. Nine percent.

Mr. ESTES. If you eliminated all of that, it would be a 30-percent improvement.

Senator CURTIS. If you eliminated all of that you would conserve 9 percent of your petroleum.

Mr. ESTES. About one-third of what we are currently using for automobiles.

Senator CURTIS. And if we put you through the mill on this thing and change our whole economy, because I do not think it takes an expert to figure out that these little cars cannot pull boats. If you cannot pull them, they are not going to buy them. There is an industry. The same thing is true with trailers. I think it is our middle class people that are using those things. The boat industry has been one of the most rapid growing ones. But by producing electricity with coal, we could save 9 percent of our total petroleum usage. And by all of these things in the automobile industry we would save 3 percent.

Mr. DUNCOMBE. Less than 3 percent.

Senator CURTIS. Less than 3 percent.

Do you think that if 5 or 10 years from now there is a massive move to very small cars, if it is accomplished by then, that you will be employing as many people as you would be if you were still selling full-sized cars?

Mr. ESTES. No; no question about that.

Senator CURTIS. I am sure that every where you follow along, that the insurance industry is cut down proportionately, the financing of cars is cut down proportionately, and all of the component parts, as well as its effect upon these other things. And I just believe we are facing too grave a situation in reference to our energy supplies to waste time talking about these things, that when it is all said and done, we do not change the picture very much. And this energy crisis has been with us now for almost 2 years and the Congress has not done anything to increase the production of petroleum by a single

point. As a matter of fact, they have gone the other way. The production of oil has gone entirely down.

I will not take any more time. I do have some questions here that I would like to submit for the record along this line that I have been asking, and that will give you a little more time, relating to the employment situation. I would like to have that supplied to each one of the witnesses.

Thank you, Mr. Chairman.

The CHAIRMAN. Without objection, that is agreed.

[The response of General Motors follows. The responses of the other two witnesses had not been received at presstime. In order to expedite the printing of the hearings the information requested will appear in appendix B of these hearings.]

QUESTIONS ASKED BY SENATOR CURTIS TO GENERAL MOTORS

Question. If the House bill becomes law, what effect would it have on employment in the auto industry?

Answer. Establishing mandatory fuel economy standards, even as high as 20.5 mpg which H.R. 6860 mandates for 1980, could have substantial adverse effects on auto sales and employment in the auto industry and throughout the economy. This would happen because, even at the 20 mpg level the kinds of cars automobile manufacturers would be able to build in response to consumer demand would be restricted.

H.R. 6860 would require standards as high as 28 mpg in 1985. It is difficult at this time to speculate over what kind of cars could be produced in 1985 to get a 28 mpg average. No car presently being built in the U.S. achieves 28 mpg on the composite EPA cycle. It is certain that there would have to be very many small, very light-weight cars sold. If half a manufacturer's fleet consisted of cars averaging 24 mpg (the best mileage for a low performance 1975, 3,000 lb. car) the other half of the fleet would have to average about 34 mpg. It is important to recognize that *no* car, domestic or foreign, (even the lowest performance manual transmission cars) presently being sold in the U.S. achieves fuel economy as high as 34 mpg on the composite cycle.

While cars that can attain fuel economies in the range of 28 mpg can be designed and built, there is no assurance that they can be sold in sufficient numbers to avoid substantial disruption and unemployment in the automobile industry.

At this time it is not realistic to speculate on the magnitude of the unemployment that would be generated by any particular standard a decade in the future. One thing, however, is certain. If the American people demand 28 mpg cars, it is in the best interest of the automobile companies to meet that demand. If they do not demand cars of the kind but the auto companies are forced to limit their production to such cars, the effect on the economy could be catastrophic.

Question. What impact will current emission standards have on your ability to meet the fuel economy standards in the House bill?

Answer. GM has indicated that we can achieve a 53% improvement in auto fuel economy between 1974 and 1980, provided there are no additional fuel economy penalties imposed by emission standards and safety standards more stringent than those applicable to the 1975 model year vehicles. Any more stringent emission standards would make that goal extremely difficult, if not impossible to reach.

GM has informed EPA and California officials that we will attempt to meet that state's standards in 1977 and "we intend to market 1977 models in California in as many size and weight categories as we can under the regulations, recognizing that some current engine/transmission combinations now being offered in California may have to be dropped."

GM has added further that we expect fuel economy penalties of approximately 20 to 25% to result from meeting California's 1977 emission standards.

Present levels of emission standards currently required by law for the 1978 model year nationwide are more stringent than the 1977 California standards.

Neither GM nor, to our knowledge, any other manufacturer has the technology in hand to meet these 1978 emission standards. Until the technology is developed, we can not reasonably estimate the fuel economy penalties.

Question. If there are fuel economy standards, should they be applied to an entire car fleet, or should penalties be applied only to the low mileage cars?

Answer. Proposals have been advanced before the Senate Finance Committee to apply penalties only to low mileage cars rather than to a manufacturer's entire fleet. One approach would be to tax cars at a rate based on the fuel economy they achieve in relationship to the industry-wide sales-weighted average for that model year as determined by the Environmental Protection Agency in its certification tests.

While a tax on low fuel economy cars is unnecessary because of the voluntary efforts being made by the auto manufacturers to improve the fuel economy of their cars, this system would be much more fair than the penalties under H.R. 6860.

Question. Is it "too early" to tell what fuel economy standard can be met in 1985 and whether any standard will in fact be needed?

Answer. We believe it is a serious mistake for Congress to set standards by legislation. It is particularly inadvisable for standards to be set as far as 10 years in the future when conditions, economic forces and the state of the technology can not be foreseen. It is apparent that the post-1980 standards in H.R. 6860 are arbitrary and unsupported by analysis of the way in which they will affect energy consumption or the American consumer.

As a result of fuel economy improvements now being made in response to consumer demands brought about by higher gasoline prices, total gasoline consumption for all cars on the road will decline between now and 1980. There is no other energy consuming sector of our economy that is approaching this "negative energy growth." If there were, our country would be well on its way to solving its energy problems.

Certainly there is no justification for these entirely arbitrary standards presently written in H.R. 6860.

The CHAIRMAN. I apologize for my absence. I had to leave this meeting briefly to attend the Democratic caucus which is meeting on various and sundry matters.

Senator CURTIS. Did they cut down our supply of oil any this time?

The CHAIRMAN. My purpose for attending was to try to protect the right of this committee to recommend a bill in line with whatever the evidence and the good judgment of its members would dictate.

Senator Gravel has made available to us a recent summary of the Harris Poll which indicates that a 46-to-31 percent plurality of the American people now favor "deregulation of the prices of all oil and natural gas produced here." And that was a reversal of a previous poll taken July of last year, when 42 to 28 percent opposed deregulation.

Over the last 10 years, has the price of oil gone up much more relative to the price of the automobile?

Mr. ESTES. These increases have been sporadic, so I do not know if I know the answer.

Mr. DUNCOMBE. The real price of oil went down, as you know, pretty regularly up until the time of the embargo. The big change in the oil prices comes since then. I think that gasoline and oil products in the United States, without a doubt, up until the time of the embargo, were one of the Nation's biggest bargains. We had them underpriced.

The CHAIRMAN. I think that the evidence before this committee is going to show that you cannot replace the existing oil and gas at the price that the producers are being made to sell it for. In other words, the producer who is selling his oil for \$5.25, in due course will be

made to buy energy from a source, be it oil or coal or whatever, and he will be paying at least twice that when he buys for his own needs in the future, because the replacement cost of energy just greatly exceeds the regulated prices.

Now, it looks like the American public now understands something that a lot of our fellows have not quite realized. The public knows it is not within our power to deliver them cheap energy indefinitely without taxing their eyeballs off of them to pay for it with tax subsidies. An overwhelming majority is now tired of being misled by politicians who believe they can buy energy cheap indefinitely. There is some cheap energy now, energy which was found when it was much cheaper to produce it. But from here on, you are going to have to pay what it costs to produce the energy. And when you pay what it costs to produce it, you will find a lot of people who are ready to go produce it, providing that they can make the profit that they would expect that they would if they invested their money in something else.

Now, few people are greatly upset that they have to pay a great deal more to buy an automobile than he had to pay 10 years ago.

But I do think in the long run the public would like to decide for itself whether it wants to buy a big automobile, a small automobile, an air-conditioned automobile, or one that is not air-conditioned, as the case may be. And they would sort of like to decide for themselves whether to drive the automobile 65 or 70 miles an hour on interstate highways or whether to be held down to 50 miles an hour or 55.

And I take it, basically what you gentlemen are testifying for is that you ought to let the free enterprise system work.

Mr. SECREST. Precisely.

Mr. ESTES. Right, and it will do it, too.

The CHAIRMAN. And in the last analysis, no matter what we politicians promise the public, we are not going to be able to provide the public with energy much cheaper than it costs to produce it, are we?

Mr. ESTES. That is right.

The CHAIRMAN. I have no further questions. I may want to submit some, and I would appreciate it if you would respond to them.

Any further questions, gentlemen?

Senator HASKELL. I have just one, Mr. Chairman.

Mr. Secrest, you mentioned that it took about 15 percent more manpower to manufacture a big car as opposed to a Pinto. Can you give a rule of thumb relating to the material costs?

Mr. SECREST. Well, I think in materials, Senator Haskell, kind of thinking off the top of my head, you will find—

I guess I would have to say if a 5,000-pound car were reduced to 2,500 pounds, either due to the pressure of the market or to the law—

Senator HASKELL. No, I meant your present line. In other words, your Pinto. What is the material cost of your Pinto as opposed to the material cost of your Ford suburban station wagon?

Mr. SECREST. I think the material cost is going to be very, very proportional to the weight of the car. A Ford car today will probably weigh 4,000 pounds or more—4,000 to 4,500 pounds. It will weigh much less than that in the future. A 2,500- or 3,000-pound car will have a basic material cost that I think will be roughly proportional to the difference in weight.

Senator HASKELL. So, your Pinto is what? 2,500 pounds now?

Mr. SECREST. Well, today's Pinto is closer to 3,000 pounds.

Senator HASKELL. 3,000 pounds.

And just to take the top of the line, your Lincoln Continental is what?

Mr. SECREST. It is 5,000.

Senator HASKELL. So it is a ratio problem.

Mr. SECREST. Sixty percent of the weight and probably 60 percent of the underlying basic material cost—so there would be a very significant difference in material, labor.

Senator HASKELL. So, if you had a 5,000-pound car versus 2,500, the material cost would be twice as great? Is that roughly a rule of thumb?

Mr. SECREST. I think that is right.

Mr. LOOFBOURROW. It is probably slightly biased upward for the larger car.

Senator HASKELL. Roughly in relationship, if you have twice as heavy a car, your material cost is twice as much?

Mr. SECREST. I think to take the weight out, you have to take out material. I think you would come out close to that, not necessarily exactly.

Senator HASKELL. That is all.

The CHAIRMAN. Are there further questions?

Gentlemen—

Senator TALMADGE. I would like to ask one or two, if I may, Mr. Chairman.

Senator Ribicoff, as you recall, asked you some questions about diesel automobiles. I believe the efficiency of the diesel engine is almost twice as good as the gasoline engine, is it not?

Mr. ESTES. No. On the basis of Btu value, Senator Talmadge, the difference gets down to about 10 percent, because the Btu or the energy value of diesel fuel is higher than that of gasoline. So, if you look at it on a Btu basis, energy unit basis, the diesel is only about 12- or 13-percent better. On a miles-per-gallon basis, it is about 20- to 25-percent better. I am talking about everything else being comparable.

Senator TALMADGE. Is it possible to produce a diesel automobile within the purchasing power of the average American?

Mr. ESTES. So far, there is a penalty—if we look at the market place, there is a penalty for the diesel engine over the gasoline engine somewhere in the area of \$100 to \$200, \$250, depending on the size.

Senator TALMADGE. In other words, if you put all diesels in your General Motors cars, it would cost you about \$150 to \$200 more per automobile?

Mr. ESTES. Per car; right.

Senator TALMADGE. Suppose Congress passed a law and said, give you enough leadtime to do it and gear up for it, that all automobiles had to be powered by diesel engines. How much petroleum could be saved?

Mr. ESTES. I guess we would need to do a little figuring. You are replacing about a 10th of the vehicles each year, so that has to be put into the formula. I think we really ought to take a look at answering, Senator Talmadge.

Mr. LOOFBOURROW. The yield of fuel oil from crude is such that if you have all of the automobiles as diesels, there simply is not enough crude oil to supply them with diesel fuel, and you would have gasoline as a leftover byproduct that you would not know what to do with.

Senator TALMADGE. In other words, you would have to have gasoline made in order to make the diesel fuel?

Mr. LOOFBOURROW. That is right.

Mr. ESTES. We asked all of the oil companies individually, recently, how do we get the most transportation, the highest number of miles out of a barrel of crude. I think that is what we are talking about.

Senator TALMADGE. That is correct.

Mr. ESTES. And we have had various answers, and I think there are various answers depending on the refining capability and the refining capacity of the industry, spread between the various suppliers. We have had answers all the way from the fact that our current mix is about the optimum, up to the point where it would be better to have, let us say, a multifuel engine. Now, that is kind of a simplistic and easy answer to the question. If you have a multifuel engine which will burn any kind of fuel, obviously as the mix changes in the various refineries, we get a little more. But in an optimum basis, I think we have a possibility, maybe, of picking up 10 percent in this area by gearing our engines to the current capacity and the current heat value of the crude oil.

Senator TALMADGE. Do any of you gentlemen have any idea how much petroleum and gasoline we could save if we vigorously enforced the 55-mile-an-hour speed limit?

Mr. ESTES. I think we said, when the 55-mile-an-hour limit came in, if it were enforced, as compared to a 70-mile-an-hour limit, I guess, that was general at that time, we were talking about a 15- to 20-percent fuel savings.

Senator TALMADGE. That is about what I get on my own automobile.

So if we save 15 to 20 percent of 5 to 6 million barrels a day, that would be a considerable savings, would it not?

Mr. ESTES. I think maybe—Mr. Duncombe reminds me—that that is while driving at 70 or 55, and when we look at the overall picture, since a lot of the miles are driven in city operation and maybe only 15 or 20 percent out on the highway, that that figure probably comes down in the area of 2 to 5, maybe. I think that would be a better figure.

There is a savings on the highway when you are driving 70 versus 55 of maybe 20 percent.

Senator TALMADGE. Would you give us the best guess that you could, and supply it for the record, if we vigorously enforced the 55-mile-an-hour speed limit, how much we would save?

Mr. ESTES. I would like to give you that later. I would rather do it a little more accurately than just to take it off the top of my head.*

Senator TALMADGE. All right.

And let me give you another thought. It seems to me if we canceled courtesy cards, there would be an enormous savings on gasoline. What is your feeling on that?

Mr. ESTES. I guess I have to have a definition of a courtesy card.

Senator TALMADGE. Credit cards.

Mr. ESTES. I do not know. That is an economic question.

Mr. DUNCOMBE. That is a petroleum economic question.

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

Senator TALMADGE. I know if you go on the high school campuses and the college campuses you find acres and acres and acres of automobiles. Young man or woman usually has a credit card that the parent pays for on a monthly basis. I believe if they had to pay for it out of their allowances, we would find those automobiles operating less. Would you agree with that?

Mr. DUNCOMBE. I can confirm that by personal experiment.

Senator TALMADGE. I have had lots of interesting experiences along the same line, I may say.

Then how much could we save if we closed the filling stations on Sundays or weekends?

Mr. SECREST. We got some evidence on that, I think, during the embargo, and also in some of the European countries, where they in the past followed Sunday closings and so on. It is a feasible method, although in my judgment it is a method more suited to dealing with temporary supply emergencies than as a long term.

Senator TALMADGE. Would you supply that for the record?

Mr. SECREST. Yes, sir.*

Senator TALMADGE. It seems to me we must mandate some vigorous conservation methods, and it seems to me that the easiest and simplest would be to enforce the 55-mile speed limit, close filling stations on Sundays, cancel credit cards; and I believe that would have less effect on unemployment than most any program we could adopt, I believe it would work because it is simple, it is practical. The people would understand it. And if you closed filling stations on weekends, it would make the people realize that we are in an emergency, and I think they would react in other conservation methods accordingly. As long as they can drive up to a gas tank and buy all of the gas they want, as long as the money holds out, there is no sense of emergency or crisis whatever, as I see it.

Mr. SECREST. Of course, there is another advantage to moves of that kind. They can be instituted almost immediately with very little lead time, and if they do not work, they can be eliminated without any enormous capital waste; whereas some of the other remedies that we are grappling with, if they turn out not to work, if we have converted the whole industry to build, let us say, the Questor car or one of these other propositions and it does not work, we cannot go back, because we have used all of our money to try the first alternative.

Senator TALMADGE. That is correct.

I have no further questions, Mr. Chairman.

The CHAIRMAN. Senator Packwood.

Senator BROCK. Gentlemen, I ask the Senator to yield because I have to leave for a few minutes, and I will try to get back.

I want to say how much I appreciate your testimony. I would like to ask you one question that you might speculate on for me for the record, and that goes back to another personal problem with my kids and dogs. Driving this full sized wagon back and forth to Tennessee or whenever we want to go on a trip, if I am required to cut that vehicle back to a 2,500-pound car, what is it going to do with my safety problem?

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

Mr. ESTES. Well, I guess there is nothing we can do about the physics book, and the physics book says you are going to have more difficulty with the 2,500-pound car against a 5,000-pound car.

Senator BROCK. Can you meet our emissions standards and our gasoline consumption requirements for 1985 with a 2,500-pound car that will seat six adults and give them safety?

Mr. ESTES. I think we have said that with current technology it is next to impossible to do the first part of that, to carry six people comfortably.

Senator NELSON. I might say that I have looked at the EPA standards, and here you have got the Volkswagen bus which will hold Senator Brock, his two dogs, his wife, his two kids and Senator Packwood's family, too. And that one gets 18 miles per gallon in the city and 25 miles on the road.

Senator BROCK. But it does not do 28 miles, Senator.

Senator NELSON. No, but that is much bigger than you need. You do not have to take Packwood's family with you every time you are traveling.

Now you have got the Dasher wagon, which does 23 in the city and 35 on the road. Now I drove the Dasher wagon last weekend—

Senator BROCK. It does not seat six, Senator.

Senator NELSON. Yes. It would take your children, your dogs, everything else. I drove it last week. Now if you take out the bucket seats and had a straight seat across, it sits six easily. As a matter of fact, all this talk about the space inside, the space inside a Fiat is about the size of a Seville. Just take the leg stays—

Senator BROCK. I do not have a Seville and I have got growing children. They still eat.

Senator NELSON. What is all this nonsense that none of this can be done without having a huge monster on the road? It is just plain nonsense and I think we are dealing with band-aids on a very important problem.

Senator PACKWOOD. Mr. Chairman, I have some more questions of these witnesses and I have read the other statements. What is your plan? Are you going to go right straight through? Or are you going to come back?

The CHAIRMAN. We have other witnesses to be heard and I would hope that all Senators would ask the questions that they feel must be answered, here at this time, and then that those that could be submitted, that they would be willing to submit that.

Senator PACKWOOD. Is it your plan to take the other witnesses straight on through? Are you going to break?

The CHAIRMAN. I am planning to hear every witness we have scheduled to hear today.

Senator PACKWOOD. Now?

The CHAIRMAN. Not right now, but before the day is out.

Senator PACKWOOD. That is what I am trying to get at. Are we going to break for lunch or anything? Are you going to go to 1:30? Or 2?

The CHAIRMAN. I think we ought to conclude the questions we are going to ask these witnesses in their testimony here today, and then if you want to go ahead proceed with others go right on ahead.

Senator PACKWOOD. I sensed, when you were responding to Senator Curtis' question about employment and his effort to say how many people would be unemployed if we make smaller cars, that is not really a significant factor in your thinking? I judged that from your answers.

In 1985, if you are mandated to have a 28-mile-per-gallon standard, then you are making nothing but 2,500-pound cars. You will not have significantly fewer people than we have now employed, assuming sales hold up? Is that correct?

Mr. DUNCOMBE. If we accepted that 15 percent, rough ballpark figure, 15 percent unemployment rate would be almost unprecedented. We are concerned today about unemployment rates that run in the area of 6 to 7 to 8 percent, and here if we are talking about unemploying 15 percent of this given segment, I think you and I would both agree that this is a significant number.

Senator PACKWOOD. I just want to know if that is what you are saying, that in 1985 if you have 28-mile standards and a 2,500-pound car, and sales are running fine, you will employ about 15 percent fewer people?

Mr. DUNCOMBE. That was a horseback figure, I believe, was it not, Mr. Secrest?

Mr. SECREST. Yes. I do not want to say that 15 percent is the answer to that question, Senator Packwood.

Senator PACKWOOD. What I am getting at is that it does not seem to be a factor so large in your thinking that it is of a major concern?

Mr. DUNCOMBE. It is dwarfed by the other considerations of the volume impacts.

Senator PACKWOOD. OK, because in all of the answers about the effect, you have always premised this—you have brought your estimates down from 17 to 16 million. It is always premised on the fact that people are going to postpone or they are not going to buy. It is a sales answer that you relate to employment, not a production answer?

Mr. DUNCOMBE. That is true.

Mr. ESTES. That is true.

Mr. DUNCOMBE. They are both in there. As I say, the market aspects of this problem in our minds have dwarfed the other aspects of the problem.

Senator PACKWOOD. In response to Senator Long's comment a while ago, he said we ought to let the market take care of this. Mr. Estes, you responded, "that's right, and it will".

And yet in your answer just a few moments ago, or about an hour ago now, you said, "as far as safety and emissions were concerned, the market would not take care of themselves." They were not "salable items". If they were not mandated, you would not put them on.

Mr. ESTES. The word "mandated" is kind of strong, but we think we need regulation in the areas—we have taken this position continuously, that if the regulations in the area of safety and emissions are health-effective, cost-effective, and energy-effective now, sure, that is the way it should be done.

We have proven this in the past—

Senator PACKWOOD. As I understand, you tried seatbelts at one time—it was not you, it was Ford—in the 1950's and they would not sell, and you took them off?

Mr. ESTES. That is right. It was a long time ago.

Senator PACKWOOD. But, I mean it did not work.

Mr. ESTES. We are offering the air bags today, passive restraints.

Senator PACKWOOD. And very few people buy it.

Mr. ESTES. We have only been able to sell in a year and a half about 6,000.

Senator PACKWOOD. I agree with you and I understand you have to mandate it, and you just mentioned energy now. This is what I am curious about.

Mr. ESTES. To be sure they are "energy-effective," I said. Whatever these regulations are, we have always said "health-effective" and we have always said "cost-effective." And now we think more important than ever before, "energy-effective" should also be included. And that gets into the weight of the vehicle and the energy consumed by the emissions system and so on. All of these things have to be balanced. It is a difficult balance we are trying to reach and I guess all we are asking Congress to do is to take a good look at it in this respect, to try some of these things on a trial basis to make sure that we do not go way overboard and to do everything possible to get all of the field and engineering information we can on these things. Do they work? Is it accomplishing what you want to accomplish?

We are all trying to get to the same place, with regard to all three of these factors. We are all trying to get there. It is a method of how we get there.

Senator PACKWOOD. Assuming, as a matter of policy, we wanted to get to a 28-mile-per-gallon car. Would we get there with market forces alone?

Mr. ESTES. Well, it would have to be—we think it would have to be evolutionary, if that is the word that is required. We think market forces can move us in that direction, but it is going to take some time. We are going to have to take a good look, technically, at how we accomplish the transportation needs of Senator Brock and others in that category, as well as you, Senator Packwood.

You have a different requirement than Senator Brock. We have got thousands and millions of customers out there, all with a different requirement, and we are going to try to meet it.

Senator PACKWOOD. I come down on Senator Nelson's side on this. I do not think I am counting myself, and I do not mean to count the public. I realize there is a tradeoff. I am not going to get in a Dasher what I get in a Buick, and I am going to pay less money for it and I will get better mileage and it is not as comfortable. Maybe it does not have air-conditioning.

But, as a matter of policy, if this Congress thinks that that is the way this country must move, will we get there in 10 years, by market forces? Or must it be mandated in order to get us there?

Mr. ESTES. We say the market forces are going to get us there. What you are talking about, really, are your constituents and what they want and what they need and how well they recognize the problem and how do we convince them.

Senator PACKWOOD. We never convinced them to have seatbelts until we finally mandated it.

Mr. ESTES. Well, seatbelts and fuel economy are two completely different animals here. There is not any question but that the economic

forces are telling us and the customer is telling us that fuel economy is a salable item. I said that in the beginning. It is almost the exact opposite, with safety and emissions standards, as far as our average customer is concerned.

Senator PACKWOOD. But your answer to the question is, if we want this 28 mile fleet average as a policy to be achieved by 1985, you say that it will be achieved by market forces and you will make it and that is what the market will demand in 1985?

Mr. ESTES. Well, if it is really required, and the constituency and the country and everybody agrees and our energy situation is such that it has to be, we will get there in a normal way, yes, sir.

Senator PACKWOOD. I have no other questions.

Mr. LOOFBOURROW. Senator Packwood, may I address myself to that thought for just a moment? I think the important thing, basically, is the matter of the conviction of the public and what they believe to be necessary for this country.

If they believe that the 28-miles-per-gallon is absolutely necessary for this country, then the free market will see that we get there.

Senator PACKWOOD. If they do not believe that it is necessary, then what?

Mr. LOOFBOURROW. If they do not believe it, and the industry tools up for 28-miles-per-gallon automobiles, you have a disaster on your hands.

Senator PACKWOOD. Right, but if the public does not believe it, we are not going to get there by market forces.

Mr. LOOFBOURROW. If they do not believe it, you are not going to get there by regulation either.

Senator PACKWOOD. Why?

Mr. LOOFBOURROW. Because they will not buy the product and you end up with a chaotic condition in the industry.

Senator PACKWOOD. That is where we disagree. You are saying that if we mandate it and they do not like it, when 1985 comes they are not going to buy any cars or they are not going to buy very many cars.

Mr. LOOFBOURROW. That is right.

Mr. ESTES. We will have another interlock.

Senator PACKWOOD. And they will stop buying cars for years?

Mr. LOOFBOURROW. Is the Congress of this country going to force these people to buy these automobiles?

Senator PACKWOOD. We forced them to buy them with seat belts.

Mr. LOOFBOURROW. You did not force them to use them. You force them to buy them. It is a relatively small purchase price; but you do not force them to use them.

Senator PACKWOOD. We are forcing them to use the emission devices.

Mr. LOOFBOURROW. That is right. They have no choice in the emission devices and they cannot avoid the fuel economy they cannot get because of the controls. When they buy fuel economy, they are buying something that they cannot avoid using and they will buy something they think fits their particular requirements.

If you can convince the public that this whole country has to be riding around in 28-miles-per-gallon automobiles, and really convince them, they will buy them. But Congress had better make sure that they have got them convinced

Mr. ESTES. Senator, I do not want to be facetious, but the interlock is a typical example of what we are talking about.

Senator NELSON [presiding.] The what?

Mr. ESTES. The "interlock." Congress went home for recess, and bang it was gone. It cost us \$200 million in the industry, at least in General Motors, to find out that the customer would not accept it. It was a great safety device. The customer had to buckle his seat belt before he started the car.

Senator NELSON. Do not blame Congress for all of that. That was the executive branch. We did not write in the statute that you had to have an interlock, and there was not a single word of debate in either House of the Congress suggesting it was so.

Mr. ESTES. I have not heard a word about it since.

Senator NELSON. No, no. Congress did not like what the bureaucracy did. If you read the statute, and the debate on the floor of the Senate, you won't find a single Member of Congress who ever thought that the regulatory agency was going to say you have to have an interlock. So we passed the statutory requirement that you could not have it.

Mr. DUNCOMBE. We just want the Congress to avoid making the same mistake the administration made.

Senator NELSON. I must say, I realize that, of course, it is not the auto industry's primary function, or any other business' primary function, to make social policy. But what interests me is that all of the conversation I hear, and all of the debate on this that I hear, both talking individually and listening to testimony at hearings, is that the public and industry and business and all the editorial writers all over this country, the New York Times, the Washington Post, the Washington Star, my Milwaukee Journal, all over the country they are saying you have got to do something about the energy crisis.

And every single industry that comes before Congress says, "fine, but don't mandate anything for us." And then all of our constituents say, "do something and do it fast, you stupid jerks, or go home; but, don't inconvenience us, and don't increase the price of anything."

So, we have got a situation where everybody says, "do something to meet this terrible crisis, you fellows down there, but don't do anything to inconvenience us." Now I understand your position, but the fact of the matter is, and this is what dismays me, that this is not a crisis, it is a disaster. And what dismays me more and that what amazes me even more, is one of the Senators here referring to this "recent crisis." This crisis has been here right along with cars. Twenty-five years ago, men like Harrison Brown and Julian Huxley, were predicting it. Industry paid no attention. Government paid no attention. No President ever gave a speech on it. A handful of people talked about it; and now it is here.

It is not a crisis that you are going to solve in 5 or 10 years. It is a matter of at least 20 years. And the automobile is a significant part. I think it is perfectly clear that you can build a car as big as Senator Brock wants and you can still get the mileage. In fact, you could double the average mileage of all of our automobiles.

But you are not going to do it without mandating it. Now the idea that the public would not buy it is nonsense; if that is all there is, that is what people will buy. And, if somebody happened to be a buyer of

big cars all his life and now he has got to have a new car, and all there is is the high-mileage, lighter car, that is what he will buy.

Now in none of these areas is the public, the Congress, or anybody else, it seems to me, addressing himself to it in any significant and dramatic way. Our automobiles are just part of the problem, but if all the automobiles in this country got twice the average mileage we now get; if the whole mix of cars got twice the average we now get, that would be a saving of almost 40 billion gallons a year. We are using about 78½ to 79, so it would amount to almost 40 billion gallons a year. That would be equivalent to 1½ Alaska pipelines forever.

Now that is dramatic. That is significant. You are not going to get it by this play in the marketplace stuff. That is all there is to it. So I think you are going to have to bite the bullet and be tough about it.

And that does not only apply to automobiles, it applies across the board to activities in the conservation, the utilization of energy. Now this is a very important problem. It may be one that we cannot resolve.

And yet it is not as tough as what is coming right next, on its heels, and that is shortage in metals, fibers, and proteins, and we are doing nothing about them either.

So all I hear is testimony from people who want us to use some Band-Aids and not disturb their way of life, or the way they act. All I say is, it ain't going to work. It just ain't going to work.

Now you in the auto industry may prevail, as I suspect you will this time, because I think that is what most of the public thinks and what most of the leadership of the country thinks, but it just ain't going to work. We are going to be in one hell of a mess, worse than this, 10 years from now, and that is all there is to it.

We will adjourn until 2 o'clock, unless you want to comment.
[General laughter.]

Mr. ESTES. That is the last thing we need to comment on.

Mr. LOOFBOURROW. I would like to make one comment. One thing that has never been mentioned in any of these bills, that involves fuel economy. The name of the game is conservation, right? And there is nothing in these bills that would cause the foreign manufacturer making that small car to make any improvements in his vehicle. And this is a very important factor.

Senator NELSON. You mean improvements in his mileage?

Mr. LOOFBOURROW. In the efficiency of his automobile.

Senator NELSON. Well, if he meets the standards set by statute—

Mr. LOOFBOURROW. The assumption that the foreign builder is more technically astute than we are is a fiction. If we can make technical improvements in our cars, and we are planning to do this, the bill should be such that it requires the foreign manufacturer to do the same thing. They should produce their share of the improvements.

Senator NELSON. I would agree with that.

Mr. LOOFBOURROW. None of the bills do that.

[The prepared statements of Messrs. Estes, Secrest, and Loofbourrow with attachments follow. Oral testimony continues on p. 203.]

STATEMENT OF GENERAL MOTORS CORPORATION, PRESENTED BY ELLIOTT M. ESTES,
PRESIDENT

Good morning, Mr. Chairman. I am Elliott M. Estes, president, of General Motors Corporation. With me today is Dr. Henry L. Duncombe, Jr., vice president and chief economist of GM. We are pleased to have the opportunity to testify on

H.R. 6860, and particularly on Title II, part I, that promises to have a profoundly adverse effect on the automobile buyers and the national economy.

The American consumer is just now beginning to see more signs of hope of economy recovery, and consumer confidence, as measured by national surveys, is beginning to increase. Yet the public remains cautious in two major respects—home-buying and auto purchases. As a consequence of continued consumer reluctance to make “big-ticket” purchase decisions, economic and unemployment recovery is being delayed.

One contributing factor—though certainly not the only one—to the continued reluctance of the American public to purchase homes and new cars is the confusion about energy availability, energy prices and national energy policy, which, in turn, leads to lack of consumer confidence.

For example, there have been conflicting news stories about whether or not people are going to be able to buy gasoline this summer. Also, there has been a wide range of figures quoted for future prices of gasoline. Obviously, people are not going to buy new cars if they are not sure they will be able to drive them. Likewise, their purchase decisions can be influenced by whether gasoline prices are expected to be 70¢ a gallon—or go to \$1 a gallon, or drop to some other price.

Both the home building and automobile industries play important roles in national economic recovery and both industries are heavily influenced by consumer uncertainty. An additional reason for comparing them is that H.R. 6860 applies two quite different energy policy philosophies for these two industries. That is, while consumers use about 22% of the national energy in their residential structures, H.R. 6860 provides tax incentives for home insulation and storm windows. It does not impose an arbitrary or punitive limit on the size or fuel consumption of new homes—nor should it. In contrast, while consumers use about 13% of national energy for automotive transportation, H.R. 6860 establishes fuel economy standards that will, by 1981, result in substantial arbitrary restrictions on the types of cars that can be made available to the public.

Unfortunately, neither of these provisions in H.R. 6860 is supported by a thoughtful analysis of the ways in which they will affect the American consumer—nor the way in which they will affect energy consumption!

While we are not opposed to the home insulation tax provisions of H.R. 6860, we do think that this provision—along with the fuel economy standards—is based on an erroneous assumption about the economic wisdom of the American public. That is, these provisions assume that the car buyer does not respond to the fact of higher energy costs and will not adjust to market realities by conserving energy. If the experience of the past two years teaches us nothing else, it is that the consumer does respond.

The turmoil in the energy situation is bringing about drastic changes in the importance that people attach to fuel economy in automobiles—changes to which GM must respond if we are to be successful in business. In order to meet the fuel economy demands of the public, GM has embarked on the most ambitious and costly new-design program in our industry's peace-time history. In all, General Motors plans to spend billions of dollars to provide the highest practicable fuel economy in cars of all sizes in the next few years.

The first stages in this new design program are already in evidence. Since the oil embargo ended some 14 months ago we have introduced six new smaller models, which, taken together, average better than 21 mpg, sales weighted, on the EPA urban/highway test. We also restyled our 1975 compact models, and we are offering new smaller V-6 and V-8 engines.

The 1975 model program is only the first stage in our efforts to meet the fuel economy demands of our customers. In the 1976 model year, we will introduce America's smallest, most fuel efficient car. Still to come are programs to reduce the exterior size of our larger cars while maintaining present levels of roominess and of comfort.

We are developing new, more efficient transmissions. We are working to improve the efficiency, and therefore, the power requirements of air conditioners and other accessories. And for the same reason, we are improving the aerodynamic design of our cars.

One result of our programs to provide consumers with improved fuel efficiency will be a major change in the weight classes of cars we will be offering in 1976 and later model years. Only about 20% of our current products are in inertia weight classes of 3,500 pounds and under; by 1980, we expect these classes to account for more than 70% of our sales.

Looking at our full-size cars, about 1/3 of our total production in 1975 is in inertia weight classes of 5,000 pounds and up. By 1980 we expect cars of this weight class to represent a negligible percentage of our sales. We are taking weight out of virtually every car we build—at least 700 pounds from our full-size cars.

This drastic shift in the weight class of the cars we are building, along with changes in engines, drivetrains and axles, improved aerodynamics and other fuel economy measures will—because of market demands—enable us to keep our commitment to the federal government to meet or exceed 53% improvement in the fuel economy of our cars between 1974 and 1980—from a sales weighted 12.2 miles per gallon in 1974 to a sales weighted 18.7 mpg in 1980.

An important factor in our improvements in fuel economy is that we are planning new entries in the 2,250 and 2,500 pound weight classes that we do not have in 1975. Our goal is to provide cars—of all sizes—that are suited to the new and changed needs and demands of the American people, in terms of passenger and luggage carrying capacity, and other attributes to meet family needs. These cars, however, will be substantially lighter, and therefore more fuel efficient, than our current models.

It should be understood that achieving the 18.7 mpg goal in 1980 assumes that the public will buy the cars we will be offering and that the 1975 emission standards will be carried over through 1980. A requirement to meet any more stringent emission standards would result in a loss of fuel economy, and the goal of achieving a 53% improvement in fuel economy would be much more difficult, if not out of reach. More stringent standards would make cars more costly to consumers, as well.

The reason for this brief description of GM's product plans is to stress that we are working as hard as we can to improve the fuel economy of our cars, and we plan to continue that effort—and to invest the billions of dollars this entails—because it is the only way in which we can sell enough cars to earn a profit.

As a result of these fuel economy improvements—made in response to consumer demands brought about by higher gasoline prices—total gasoline consumption for all cars on the road will decline between now and 1980. That is, the gasoline consumed by all cars on the road in 1980 will be below the amount used in 1973! The projected savings in oil—as estimated by the Federal Energy Administration—is 587,000 barrels per day by 1980. There is no other energy consuming sector of our economy that is approaching this "negative energy growth." If there were, our country would be well on its way to solving its energy problems.

Why then, do some people feel it is necessary to establish fuel economy standards for automobiles—a product that presently uses only 13% of total energy and is showing *declining* rates of consumption? Because of several misconceptions about the automobile market and automotive technology.

One of these misconceptions is that there is some "magic" new technology that we could use—if only we would—to achieve fuel economy improvements of 50% or more in a given car. I assure you, this is not the case, and such a misconception is not supported by engineering studies. The changes I mentioned earlier, such as lowering performance and improving aerodynamics, can, in some cases, give us improvements in fuel economy. For the most part, however, these technological changes yield results measured in fractions of miles per gallon.

Another aspect of the misconception about technological solutions is that European and Japanese manufacturers rely on superior technology to achieve fuel economy that is generally better than the fuel economy of the American cars. This is simply not true.

The high mpg figures associated with many of the foreign cars result from the simple fact that they are smaller and lighter than most American cars. One needs only to examine the 1975 EPA fuel economy ratings and make a comparison between GM models and comparable imports to see that our technology is as good as any in the world. Note that in Charts A, B and C, which make up the last pages of this statement, in every weight class in which we compete, a domestic GM car ranks either at the top or near the top for fuel economy. These charts—which summarize the EPA fuel economy results on the combined urban/highway cycle for cars with automatic transmissions—illustrate that fuel economy gains come mainly from smaller sizes and lighter weight. This is the reason our product programs are emphasizing weight reduction of our existing compact, intermediate, and full-size cars, and we are planning to bring out new cars that are much smaller.

As we have indicated, meeting the fuel economy objectives of the voluntary program—18.7 miles per gallon by 1980—will require major changes in the kinds of products we offer, and especially in the size and weight of the cars we will put on the market. H.R. 6860 calls for 20.5 mpg—almost 2 mpg more than the voluntary program of 18.7 mpg on a sales-weighted average basis.

Establishing mandatory fuel economy standards, even as high as 20.5 mpg, is likely to have substantial adverse effects on auto sales and employment in the auto industry and throughout the economy, because consumers will not be able to buy the kinds of cars they want. Evolution in car design dictated by consumer demand, not legislative fiat, will, overall, give us the desired results without market disruption.

Our analyses of this legislation has indicated that it could cause a substantial loss of sales and jobs as early as the 1980 model year. Much more drastic consequences could be expected in post-1980 model years as the standards jump an average of 1.5 mpg per year to reach 28 mpg in 1985. Equally important, sales losses of this magnitude would result in retention of older, less fuel efficient cars. Gasoline consumption could increase above the levels that would be achieved without this legislation.

Consumers today are demanding more fuel efficient cars, and we predict that the trend toward lighter, higher mpg cars will continue in the future. That is why we are committing billions of dollars to new model programs to build more fuel efficient cars. I want to assure members of this Committee that we are putting the full efforts of the Corporation behind making our new smaller cars a success in the marketplace.

The idea that GM can build the kinds of cars it wants to build, then use its advertising power to somehow make the American public want to buy those cars is a myth. This point was amply proven by the experience in car sales in the 1974 and 1975 model years. On the contrary, we try to put the kinds of cars on the market that the American people have indicated they want to buy. If we are required to meet standards that force us to build cars that do not conform with what the American people want to buy, they will not be sold and the entire economy will suffer.

If, as we have indicated, the 20.5 mpg standard in 1980 could result in adverse effects on the domestic automobile industry, the standards required for 1981 to 1985 could have consequences that are beyond anything even imagined so far by Congress. 20.5 mpg, which H.R. 6860 mandates for 1980, represents a 68% improvement over General Motors' 1974 level of fuel economy. 28 mpg mandated for 1985 represents an improvement in fuel economy of 130% for GM. There is no evidence that such stringent fuel economy standards as called for in this legislation for the 1981-1985 model years can be achieved without serious disruptions of the national economy and intolerable unemployment consequences. Consumer demand for cars has never changed as rapidly in the past as this legislation would require it to change in the future to avoid a negative impact on sales.

The standards called for in the bill, insofar as we can determine, were established on an arbitrary basis without considering energy consequences or the negative impact on the car buying public. No other segment of consumer energy consumption has been singled out for such a drastic action as the automobile, which accounts for only 13% of total energy use but is an important part of the work, family, business and recreational life of America.

The 1985, 28 mpg standard cannot be achieved through technological developments—it can be achieved only by restrictions on the size of cars that can be offered. It is important that Congress have a very clear understanding of what these product restrictions are likely to mean for the car-buying public. Beginning this fall GM will offer a small, light, relatively low powered vehicle that is smaller than the smallest subcompact car now being produced in the United States. We hope that we can certify this car with the Environmental Protection Agency to meet current emission standards and with fuel economy in the area of 28 mpg, at the top of all cars sold in this country.

Note, however, that if we were required to meet a 28 mpg standard for our entire production, the vast majority of our cars would have to be the size of the Vega and our new mini car or *smaller*. This 28 mpg standard would require the production of extremely small two or four-passenger vehicles that do not have adequate interior or trunk space to meet the needs of large numbers of American families. If the American public cannot purchase vehicles that will be suited to

their needs, many owners of full-size cars are likely to keep them rather than trading them in on new, more fuel efficient cars. Thus, rather than conserving fuel, standards in the area of 28 mpg would have the effect of perpetuating the use of less fuel efficient cars, and this would result in increased gasoline consumption, contrary to the purpose of the bill.

Comments on H.R. 6860

Mr. Chairman, I would like to turn now to comments directed specifically to the legislation before this Committee, H.R. 6860. The Senate Commerce Committee also has reported out a bill, S. 1883, that would mandate stringent fuel economy standards. Although the Commerce Committee bill differs in its approach, the effect it would have on the consumer and the economy is similar. Most of our comments, therefore, apply to that bill as well.

Section 212 of H.R. 6860 would establish minimum production weighted fuel economy standards of 18.5 mpg in 1978, 19.5 mpg in 1979 and 20.5 mpg in 1980. The Secretary of Transportation would be required to establish the standards for the years 1981 through 1984 at the "maximum feasible" level and 28 miles per gallon would be required in 1985.

We believe it is a serious mistake for Congress to set standards by legislation, and the problems encountered with the Clean Air Act bear this out. There is widespread agreement that the automotive standard for NO_x in the Act was established in error, is not necessary to achieve air quality goals and blocks the introduction of alternate power plants. Yet Congress has not yet changed that requirement, despite the urging to do so by the Environmental Protection Agency nearly two years ago. Several other government, academic and scientific organizations have made similar recommendations.

Section 212(c)(1) of the bill, as passed by the House, gives the Secretary authority to determine if an "emission standards penalty" exists for any model year compared to the fuel economy that would have resulted if the cars were required only to meet 1975 emission standards. In the event a penalty is determined, the fuel economy standards for that model year would be adjusted by the amount of the penalty.

This Section correctly recognizes that there are likely to be fuel economy penalties associated with meeting future emission standards that are more stringent than current standards. This Section fails to recognize, however, that emissions requirements on auto manufacturers are made more stringent not only by lowering the numerical standards but also by changes in test procedures and other regulations promulgated by the Administrative agency. Changes in test procedure or enforcement regulations, such as the proposed Selective Enforcement Audit procedure, have the same result as a drastic reduction in the numerical standards, insofar as the manufacturer is concerned. These more stringent regulations require the manufacturer to lower his production line emission targets to be sure of meeting all the requirements. Thus, unless Section 212(c) provides for adjustment in the fuel economy standards for changes in emission regulations and procedures that adversely affect fuel economy as well as for changes in the emission standards, it will not be fully effective.

Furthermore, EPA, as the agency responsible for promulgating and enforcing the emission standards and regulations, would be inclined to minimize any estimates of fuel economy penalties associated with the emission standards and regulations. If this legislation is passed there is likely to be conflict between EPA and the auto manufacturers over determining the magnitude of the fuel economy penalty. Since the punitive penalty for a manufacturer of four million cars would be \$20 million for each 1/10 mile per gallon below the standards, an accurate determination of the emission standards penalty could be of vital concern.

I have gone into considerable detail in discussing the emission penalty section because it is extremely important that this Committee understand the relationship between legislation mandating fuel economy standards and legislation being considered by other committees of Congress that will establish the emission standards that the automobile companies will be required to meet in future model years. We have urged the Congress not to proceed with fuel economy standards until such time as Congressional decisions on emission standards have been made.

Aside from the merit of any argument against or in favor of fuel economy standards, it seems clear that any proposal to mandate such standards before future emission requirements are established would be premature.

There are a number of other specific provisions in the automotive standards section of H.R. 6860 on which General Motors would like to comment. In the interest of conserving time, however, I will not cover these in my oral testimony today. Attached as Appendix A are GM's detailed comments on Title II, part I.

In conclusion, General Motors currently is working as hard as it can to improve the fuel economy of its cars, and we plan to continue that effort on which we are spending billions of dollars. As a result of the fuel economy improvements that we are making in response to the demand of the car purchasers, total gasoline consumption by all GM cars on the road is going down, and will continue to go down as our new fuel efficient cars make up a larger share of the total car population.

A 53% improvement in the fuel economy of our cars in five model years, which we have committed to achieve under the voluntary program, represents a dramatic and unprecedented contribution to achieving the energy goals of the nation. Automobiles account for only 13% of total energy use, and if similar improvements were made in other energy consuming areas that account for 87% of energy use, the energy "crisis" would soon end.

We recognize, of course, that it is not reasonable to expect as much conservation in other energy consuming sectors as will be achieved in the automotive sector. That is why our nation's energy policy must include measures to increase production of energy as well as steps to conserve energy. The Motor Vehicle Manufacturers Association, including General Motors, urges that the following steps be taken in addition to the voluntary passenger car fuel economy improvement program:

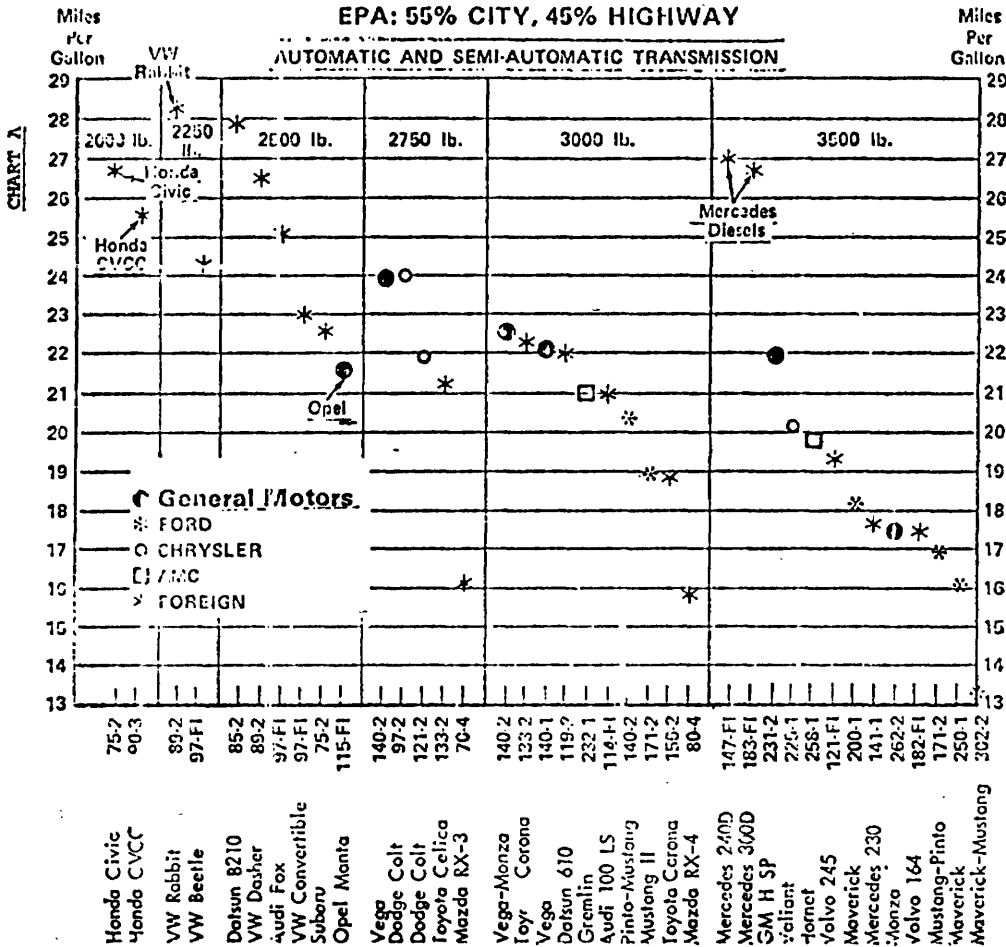
1. Decontrol energy prices to encourage production and reduce consumption.
2. If free market actions are insufficient, impose a tariff on imported oil for the limited time needed to effect greater conservation.
3. Impose a tax on gasoline and other motor fuels if price decontrol and import tariff are not adequate.
4. Legislatively enact a program to monitor the automobile industry's progress toward meeting the 1980 fuel economy improvement goal and require periodic reports to Congress.
5. Continue the present 49-state vehicle emission standards through the 1981 model year to provide the maximum potential for achieving the goal of the passenger car fuel economy improvement program, while avoiding unneeded additional costs to consumers.

We believe these measures represent a sound, well-balanced program that would make a significant contribution to achievement of the nation's energy goals. We urge Congress to direct its attention to these areas rather than to fuel economy standards that could have a drastic negative effect on the well-being of Americans.

1975 Mile Per Fuel Economy

EPA: 55% CITY, 45% HIGHWAY

AUTOMATIC AND SEMI-AUTOMATIC TRANSMISSION



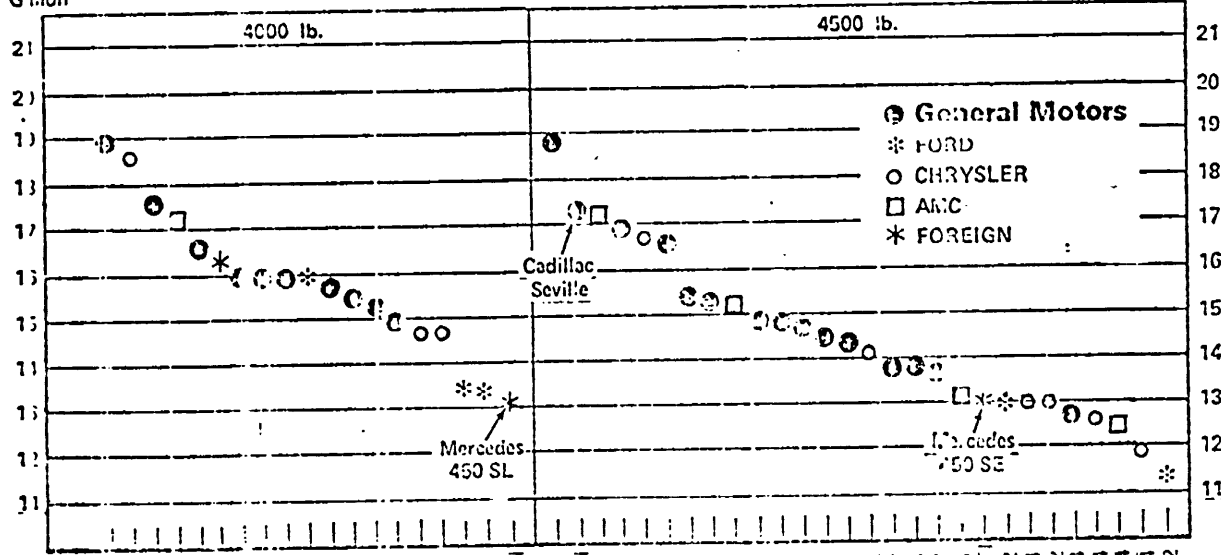
1975 Model Fuel Economy

EPA: 55% CITY, 45% HIGHWAY
AUTOMATIC TRANSMISSION

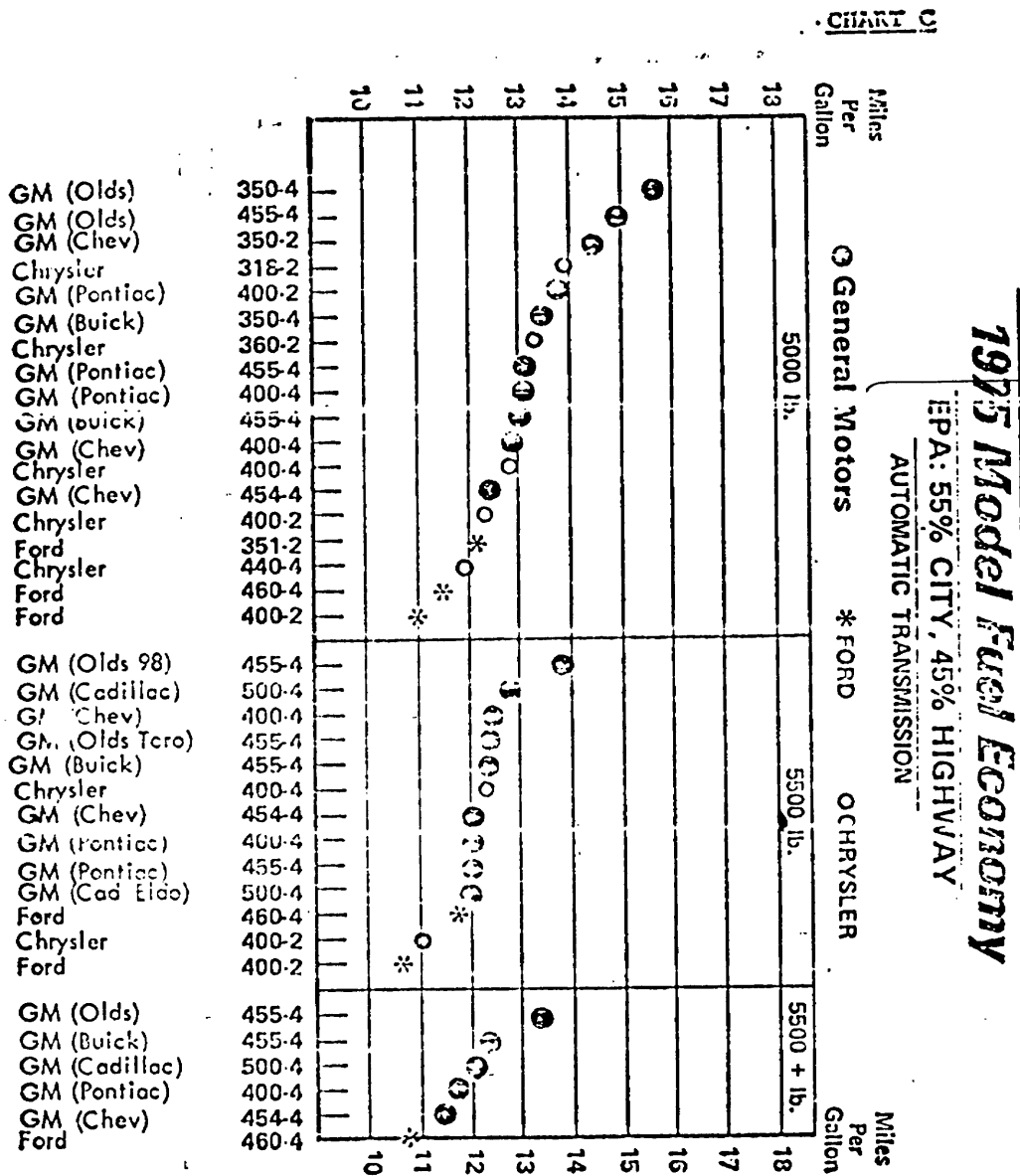
CHART B

Miles Per Gallon

Miles Per Gallon



Model	Weight	MPG (Approx.)
GM (Buick) V6	4000 lb.	18.5
Chrysler L6	4000 lb.	18.0
GM (All Divs.) L6	4000 lb.	17.5
AMC L6	4000 lb.	17.0
GM (Olds) V8	4000 lb.	16.5
Mercedes 260	4000 lb.	16.0
GM (Chevy) V8	4000 lb.	15.5
GM (Pontiac) V8	4000 lb.	15.0
GM (Buick) V8	4000 lb.	14.5
Ford L6	4000 lb.	14.0
GM (Chevy) V8	4000 lb.	13.5
GM (Buick) V8	4000 lb.	13.0
GM (Pontiac) V8	4000 lb.	12.5
Chrysler V8	4000 lb.	12.0
Ford V8	4000 lb.	11.5
Mercedes 450 SL	4000 lb.	11.0
GM (Buick) V6	4500 lb.	17.0
GM (Seville) V8	4500 lb.	16.5
AMC L6	4500 lb.	16.0
GM (Olds) V8	4500 lb.	15.5
Chrysler L6	4500 lb.	15.0
GM (Olds) V8	4500 lb.	14.5
GM (Buick) V8	4500 lb.	14.0
GM (Olds) V8	4500 lb.	13.5
AMC V8	4500 lb.	13.0
GM (Chevy) V8	4500 lb.	12.5
GM (Pontiac) V8	4500 lb.	12.0
GM (Chevy) V6	4500 lb.	11.5
GM (Pontiac) V8	4500 lb.	11.0
Chrysler V8	4500 lb.	10.5
GM (Pontiac) V8	4500 lb.	10.0
GM (Pontiac) V8	4500 lb.	9.5
AMC V6	4500 lb.	9.0
Mercedes 450 SE	4500 lb.	8.5
Ford V8	4500 lb.	8.0
Chrysler V8	4500 lb.	7.5
Chrysler V8	4500 lb.	7.0
GM (Chevy) V8	4500 lb.	6.5
Chrysler V8	4500 lb.	6.0
AMC V8	4500 lb.	5.5
Chrysler V8	4500 lb.	5.0
Ford V8	4500 lb.	4.5



ANALYSIS OF AND COMMENTS ON MAJOR SECTIONS OF TITLE II, PART I OF H.R. 6860

APPENDIX TO GENERAL MOTORS STATEMENT—JULY 10, 1975

(These comments are offered to assist the Committee in identifying defects in the bill. As indicated in our statement to the Senate Finance Committee, General Motors believes passage of legislation mandating automobile fuel economy standards is neither necessary nor in the public interest and adoption of these suggestions would not eliminate GM's opposition to H.R. 6860.)

Section 211 provides that in calculating "average fuel economy," the total number of automobiles produced by a manufacturer in a given model year (excluding those exported in the model year) shall be defined by a "sum of terms, each term of which is a fraction created by dividing (i) the number of passenger automobiles of a given model type manufactured in such model year by (ii) the fuel economy measured for such model type rounded to the nearest mile per gallon as determined by the EPA Administrator."

Amendment of Section 211 (a) (5) (ii) to read as follows would provide for greater accuracy in fuel economy calculations: (inserting underlined portion):
 "(ii) the fuel economy measured for such model type rounded to the nearest 1/10 mile per gallon as determined by the EPA Administrator."

EPA fuel economy measurements are calculated to the nearest 1/10 mpg, and when a number of different measurements are to be added together, the fractional calculation should be used. This procedure will result in a more accurate calculation than the procedure of rounding each number off to the nearest mile per gallon.

Section 211(b) 1 & 2 requires that the fuel economy for "domestically produced" cars be calculated separately from imported cars in determining compliance.

A car is considered to be "domestically produced" if 75% of the cost to manufacture is attributable to value added in the United States or Canada. If manufacture is completed in Canada, however, the car must be imported into the U.S. prior to 30 days after the end of the model year to qualify as "domestically produced."

Cars produced in the U.S. but exported are excluded from the fuel economy calculations.

The separation of domestic and foreign-produced cars would tend to benefit foreign producers, at least temporarily, if the demand for less fuel efficient cars exceeds the quantity the domestic manufacturers will be permitted to produce under the standards. Certainly, they are in a relatively better position to import some larger cars, whereas the domestic manufacturers would not be permitted to use small-size imports to balance the larger, less fuel efficient domestic cars.

Domestic manufacturers would have to make the management decision whether to cut back production of full-size cars toward the end of the model year to adjust the fuel economy average to meet the standard or to pay the fines. Production adjustments could result in a shortage of larger cars at the end of the model year and a quasi black market in this product segment.

SECTION 212—MINIMUM FUEL ECONOMY PERFORMANCE STANDARDS

The proposed bill would set into law specific fuel economy standards for passenger automobiles for model years 1978, 1979, 1980 and 1985 and allow the Secretary to set standards by rule for 1981-1984. Then, under Section 302(b) (3) (B), the 1985 level can be raised or lowered to the maximum feasible average fuel economy by the Secretary if either House of Congress does not object. To avoid the experience of standards set by statute in the Clean Air Act, any fuel economy legislation should leave the specific standards to administrative agency rulemaking.

The passenger automobile standards the Secretary sets for 1981-1984 must be at the maximum feasible level and must provide for steady progress toward the 1985 statutory standard of 28 mpg.

Beginning on January 1, 1978, and continuing each calendar year thereafter, the Secretary shall review the standards and may make amendments to those he has set by rule if at least 18 months lead time is given to the manufacturers.

Section 212(b) relates to establishment of average fuel economy standards for 1981-1984, amendment of 1981-1984 standards and modification of the 1985 passenger automobile standard. Section 212(b)(4) requires the Secretary to consider "technological feasibility, economic practicability, relationship to other federal standards and the purposes of this bill." This language also should be included in Section 212(a)(4) relating to establishment of light duty truck and multipurpose passenger vehicle standards.

It is salutary that the Committee chose to require the Secretary to consider "technological feasibility, economic practicability, relationship to other federal standards and the purposes of this bill" in setting standards. However, this requirement may have little practical effect in providing relief to the industry, for the following reasons:

1. "Technological feasibility" of standards as high as 28 mpg has been demonstrated since there are some cars now being sold in the U.S. which achieve fuel economies in this range.

2. Our experience with the Congress to date indicates it is probable that "economic practicability" cannot be convincingly refuted until the damage has been done to consumers and the economy by reducing sales and increasing unemployment.

3. As stated elsewhere in this paper, EPA is committed to minimizing the fuel economy penalties associated with emission standards. "Relationship to other standards" does not provide any clear language on what is meant and would not provide much relief.

4. "Purposes of this Act" (H.R. 6860) are to conserve oil. There is little relief promised by this provision other than the argument that stringent standards may cause potential new car buyers to retain their full-size cars that are more nearly suited to their needs. This probably cannot be convincingly argued until the sales fail to materialize.

Section 212(b)(3)(B) states that a modification to the 1985 fuel economy level by the Secretary can be disapproved by either House of Congress within 60 days of transmittal to Congress or after 15 days of continuous session of Congress, whichever is the longer period. This is an improvement over the Dingell bill which just had the 60 day period whether Congress was in session or not.

The Secretary is given authority in Section 212(e)(1) to determine if an "emission standard penalty" exists for any model year and to adjust the fuel economy standard for that model year by "subtracting a number of miles per gallon . . . equal to the amount of such penalty." This penalty is the difference between the average fuel economy of all automobiles sold in the model year, assuming the 1975 federal emission standards applied in that year, compared to the average fuel economy the automobiles are likely to achieve under the emission standards that are actually applicable to automobiles in that later model year. A manufacturer may file a petition with DOT for a determination that an "emissions standard penalty" exists and the DOT must decide the issue within 60 days.

This emissions standards penalty provision does not go far enough. It should allow consideration of the effect of regulations like Selective Enforcement Audit, changes in test procedures and high altitude requirements to be considered by DOT, not just the absolute 1975 emission numbers themselves. Moreover, this section mixes apples and oranges since it uses the defined word "automobiles" (covering both cars and trucks up to 10,000 GVW), but references just the light duty (under 6,000 lbs. GVW) emission standards. There should be separate means of computing the emission standard penalty to accord with the grouping of vehicles under the Clean Air Act. To accomplish this, 212(c)(2)(B) should be expanded to include other rules and regulations that affect emissions and 212(c)(4) should be deleted.

Section 212(c)(3) regarding petitions by manufacturers to have the Secretary determine an emissions standard penalty imposes an unrealistic time period for filing such a petition. This type of petition can only be filed ". . . within the 18-month period preceding the beginning of the model year to which it relates." That restricted period was not part of the Dingell bill. This is obviously more of the feet-to-the-fire syndrome that will cause useless waste of resources, time and money within the automobile industry. A more reasonable time period should be specified, or there should be none at all.

The concept of a "emissions standard penalty" is certainly desirable. Inclusion of such a provision in the bill recognizes that there is a relationship between more stringent emission standards and reduced fuel economy. However, it will be very difficult to implement, and as a practical matter, may not provide any relief at all to the auto manufacturers from the fuel economy consequences of more stringent emission standards. There are a number of reasons why this provision would be impracticable to implement:

1. The only way to obtain an accurate measurement of the fuel economy penalty of emission standards in a given year compared to what the fuel economy would be if cars in that model year were required only to meet 1975 standards would be to run two certification fleets, one calibrated to the 1975 standards and the other fleet meeting those applicable to the year in question. Even this very costly and impracticable process would be open to criticism since the baseline cars tested would not be produced, and, therefore, would never be subject to end-of-line tests and field surveillance. Thus, in the mock certification processes they could be set closer to the standards and would obtain better fuel economy than they would if they were actually going to be produced.

2. EPA has consistently argued that there is no inherent relationship between tighter emissions and lower fuel economy. In an attempt to justify their regulations, EPA has consistently minimized any fuel economy penalties. It appears that the emission standard penalty provision will ensure that there will be additional conflict between EPA and the auto manufacturers. Since the punitive penalty for a manufacturer of four million cars would be \$20 million per 0.1 mpg below the amount of the standards, "emissions standards penalty" will be of great—if not vital—concern to the automobile manufacturers.

3. The concept of an "average penalty" is inherently inequitable to some manufacturers since the actual penalty will be different for different model cars and all manufacturers have different model mixes.

Section 212(d) (2) provides that compliance with the fuel economy standard is achieved for each year by coming within .50 miles per gallon of the standard. The manufacturer is allowed to carry back or carry forward any amount of fuel economy performance greater than .50 mpg above the applicable standard. The amount carried back or carried forward reduces any civil penalty which the manufacturer may be otherwise subject to for the preceding or subsequent model year. This is a desirable provision which recognizes, to some extent, that manufacturers do not "control" customer demand. It does not go far enough in providing flexibility.

This Section 212 is a classic example of establishing moving targets for the automobile industry. The difficulty of meeting such moving targets is compounded by the fact that the test procedures to establish manufacturer compliance are not definite and are subject to constant revision by the Administrator of EPA. While it is clear that this bill would require a fuel economy test such as conducted by EPA in connection with emissions testing and the driving cycles of 55% urban and 45% highway used for 1975 certification, the EPA can use instead "procedures which yield comparable results." It seems abundantly clear that it is arbitrary and unreasonable to establish minimum fuel economy standards without a corresponding definite test procedure since the outcome of meeting such standards is so dependent upon the test procedure used. Compliance with minimum fuel economy standards is to be determined by EPA.

As noted above, the Secretary of DOT has the authority to establish the standards. It seems obvious that the automobile industry under this proposed legislation would be caught in an administrative agency cross-fire since one agency (DOT) has the authority to create unreasonable standards, while another agency (EPA) is given broad enforcement powers.

The reporting provisions of Section 212(f) are onerous. Under these provisions, the DOT could get almost any information a manufacturer had relating to its product plans. Moreover, most of this information would be proprietary, and if it must be furnished, should clearly be required to be held in confidence by the DOT and EPA. Hence, Section 213(c) (1) should delete the last four lines and, in that event, Section 213(c) (2) is unnecessary.

Section 212(f) also requires manufacturers to submit "plans" describing the steps they intend to take to comply with standards. While this section does not specifically give the government the authority to involve itself in individual company pricing and marketing plans, it is a step in that direction.

This section should be deleted. Auto companies are required to comply or face enormous consequences. Nothing can be gained by requiring needless paperwork.

While this proposed legislation gives any person the right to obtain judicial review of any "rule" promulgated under the Act, the vehicle manufacturer is not afforded any rights to request an administrative hearing to protest or otherwise question such rules. This seems to be in clear violation of the Administrative Procedures Act and other due process requirements. The vehicle manufacturer should be given the right to request a hearing, and the administrative agency should be required to support its rules with appropriate findings based upon substantial evidence. Failure to provide these fundamental rights to a vehicle manufacturer in the Act certainly ignores established legal precedent in administrative law cases. Such omission could cause technical disagreements, which could be resolved at the administrative level, to wind up in court cases.

SECTION 213—DUTIES AND POWERS OF THE SECRETARY AND ADMINISTRATOR

The agencies have the broad powers to hold hearings, subpoena witnesses, require information, reports, documents and materials from manufacturers and to inspect vehicles. There is authority for agencies to obtain a subpoena for any information covered by Section 213(a) (1) that the manufacturer refuses to furnish as well as to obtain a court order to facilitate authorized inspections. Nowhere is there any indication that the vehicle manufacturer has any right to request a hearing if he believes that he is being prejudiced by unreasonable administrative agency action.

In addition, giving both EPA and DOT authority to exercise these broad powers could easily result in administrative chaos that could bog down the

regulatory functions of these administrative agencies. Also, see the last portion of the comments regarding Section 212 for deficiencies of the confidentiality portion of Section 213.

SECTION 214—LABELING AND ADVERTISING

This section requires a fuel economy label to be placed on each new automobile beginning 90 days after the Act is passed. This requirement could be effective long before the 1978 model year fuel economy standards.

The information required on the label is: (a) the fuel economy for that car "which a prospective purchaser (could) expect; (b) representative average annual fuel costs associated with the operation of such automobile; (c) the range of fuel economy performance of automobiles of similar size and weight; (d) a statement that the fuel economy is less than applicable standard, if that is the case; and (e) a statement that fuel economy of other automobiles is available from the dealer. The form and context of the label, within the above constraints, are set by EPA after consultation with the Federal Trade Commission.

There are many serious problems with the labeling provision. Following are some specific problems associated with such requirements:

1. Neither the manufacturer nor anyone else can indicate the fuel economy "which a prospective purchaser can expect." The ways in which cars are operated vary so drastically as to make it virtually impossible for a manufacturer to present a single number representing "what a prospective purchaser can expect." Manufacturers can and do label their vehicles with fuel economy numbers obtained on specified driving cycles. Ideally, these indicated fuel economies are expressed in two numbers representing the extremes within which most drivers can expect their experience to fall. The EPA dynamometer tests representing urban and highway cycles, while not ideal, do serve this purpose.

2. The language, as written, appears to require specific fuel economy data for each car. The development of such information would be an impossible burden.

3. The language does not recognize the lead time problems at the beginning of the model year. It would be impossible to provide the labels at the beginning of the model year.

4. Average annual fuel cost information would be virtually meaningless. In addition to the variations in mpg that different drivers will experience, new cars will be driven varying numbers of miles by different drivers, and fuel costs vary in different geographical areas and seasons. The EPA omitted fuel cost information from its voluntary labeling program because the information was not useful to consumers.

5. Any fuel economy labeling requirement should provide that the information shown does not constitute a warranty. The bill as written does not have that important provision.

6. The requirement that the label contain information about the "range of fuel economy performance of automobiles of similar size and weight" is not realistic. The range in most cases would be so wide as to be virtually meaningless.

7. It is not realistic to require the manufacturer to state that fuel economy information on other makes of cars is available from the dealer. Since the dealer is not under the manufacturer's control, the manufacturer cannot require the dealer to make such information available.

This entire section should be simplified to give EPA authority to require fuel economy labeling by rule after consultation with the Federal Trade Commission and the Secretary. The Committee Report should instruct the EPA that the Committee intends that the mandatory program be fashioned on the current voluntary labeling program.

Section 214(b) requires that the fuel economy labeling information of Section 214(a) is to be included in the price sticker required by the 1958 Act. This is a direct conflict with the last sentence of 214(a) which says the EPA and FTC determine the form and content of the fuel economy sticker. The fuel economy sticker must be separate and distinct from the price sticker because considerable room is necessary to present the relevant explanations, qualifications and warranty disclaimers that are fundamental to a fuel economy label requirement. Moreover, the information that goes on the price label is financially oriented and may be developed at different times from other sources and on different data processing equipment than the technically oriented fuel information. The

fuel economy information often is not available until start of production, thus allowing no lead time to set up and print the required labels.

Like Section 212, this section also lacks a public hearing opportunity for manufacturers and adequate due process procedures. There has been no effort to comply with the minimum hearing requirements of the Administrative Procedures Act.

SECTION 215—PROHIBITIVE CONDUCT

This entire section is so vague that it is quite likely unenforceable. Substantial penalties of up to \$10,000 per violation, with each day a separate and continuing violation, could be assessed for failure to comply with "any provision of this part (other than Section 212(a)) or any standard, rule, regulation, or any order issued." In order to make such violations enforceable, it seems evident the language must be more specific. Other prohibitive acts in this section are also unreasonably broad.

SECTION 216—CIVIL PENALTY

The civil penalties set forth in this provision for violation of fuel economy standards are so enormous that they may well be considered punitive. The penalty for the automobiles of a manufacturer falling below the applicable average fuel economy standard during a model year would be \$50 times all the automobiles the manufacturer built that model year times each mile per gallon by which the average fuel economy standard is missed.

This section does not recognize added Section 212(d) which provides that compliance is achieved if the standard is missed by up to .50 mpg, nor does it recognize the carry back and carry forward features of 212(d) discussed above. Fractional miles per gallon deviations (in units of one-tenth per mile) are likewise punishable at \$5 per car per one-tenth a mile. In the event a manufacturer produced two million vehicles and exceeded the average minimum fuel economy standard by one mile per gallon, he would be penalized up to \$100 million, assuming no carry over is available. This is clearly punitive for violating a law, particularly since the manufacturer does not have complete control over the factors that determine whether or not the manufacturer can comply. If a penalty is imposed, it should be only on those cars that exceed the standard. Section 216 could result in penalties being imposed even on some of the most fuel efficient cars.

As indicated above, the marketplace will determine the types and sizes and fuel economies of vehicles produced during the model year. The rights of the vehicle manufacturer to fundamental due process would be abused if the penalties were imposed after the fact as proposed in this bill. Incredibly, the Secretary does not have discretion to compromise or modify the civil penalties unless necessary to prevent insolvency or bankruptcy of a manufacturer, or unless the "manufacturer shows that noncompliance resulted from an act of God, a strike, or a fire." This would enable the government to nearly confiscate industry member assets.

At the very least, this section should be broadened to give the Secretary additional discretion in compromising civil penalties. There may be many reasons why a manufacturer may fail to achieve an average fuel economy objective through no fault of his own. For example, a curtailment of natural gas at the Wilmington GMAD plant for an extended period (a very real possibility) could seriously reduce production of T cars needed to achieve a high production-weighted average. GM would not only be penalized by lost sales, but would be confronted with having to choose between shutting down additional plants to adjust the production-weighted average or paying enormous penalties.

While a manufacturer may appeal a civil penalty in a particular U.S. Court of Appeals, a full adjudicatory hearing on the record under the Administrative Procedures Act is vital due to the massive civil penalties. The presentations of data, views and arguments allowed the manufacturer in opposition to the penalty by Sections 216(a) (1) and 216(b) (2) falls far short of the due process hearing with full rights to cross-examination, of government personnel and to obtain documents from the government that are necessary to test whether the penalty is properly assessed. On review by a court, a full administrative hearing record is vital. Its absence is a clear violation of basic due process. By contrast, under the Safety Act, a presentation of views, etc., by the manufacturer to the Administrator is followed by a right to trial *de novo* on the issue of defect determination

and that trial, at which a full adversary record is developed, may then be reviewed by the appellate court.

SECTION 217—RELATIONSHIP TO STATE LAW

States are not preempted from establishing their own fuel economy standards, labeling requirements or fuel economy advertising laws. However, any such state law or regulation must be identical to a federal standard. Since this bill does not contain any operative provision regarding advertising, the states would be left free to regulate fuel economy advertising. It would be better to prohibit all regulation of fuel economy advertising by states and political subdivisions thereof. Note that states can have their own differing laws on any of these subjects until the subject is covered by a standard issued under this federal law that has become effective. This provision should be amended to provide for pre-emption on all areas covered by the Act whether standards have been issued or are effective. Even for a short period, the automobile industry cannot live with differing state standards requirements. Any individual state fuel economy standards, etc., would necessarily result in an unreasonable burden on commerce. The automobile industry is a mass production industry which simply cannot accommodate different state standards, notwithstanding the State of California's separate emission standards. Finally, identical state standards and rules serve no purpose other than to support duplicate bureaucracy and increase the costs of business to the detriment of everyone.

STATEMENT BY F. G. SECREST, EXECUTIVE VICE PRESIDENT—OPERATIONS STAFFS,
FORD MOTOR COMPANY

Mr. Chairman and members of the Senate Finance Committee. I am Fred G. Secrest, Executive Vice President—Operations Staffs, Ford Motor Company.

The bill before this committee, H.R. 6860, requires that motor vehicle manufacturers meet fuel economy standards beginning in model year 1978 at levels 32% higher than 1974 models. It provides severe fines for manufacturers whose average vehicle production does not meet these standards. It establishes even tighter standards for future years, culminating in a 28-mpg average by 1985.

It is Ford Motor Company's conviction that fuel economy improvement is one area where there is no need for regulation. With gasoline at 57¢ a gallon in June, increases last week of 3¢-5¢ a gallon and potentially much higher prices through decontrol and import fees, consumers don't need a law to force them to look for the best fuel economy in a vehicle that meets their transportation needs. Consumers have already responded by buying a larger proportion of small cars—compacts and subcompacts are currently running 57% of Ford's sales, compared with 41% in 1973. Fuel economy now tops the list of buyer concerns.

Nor does the manufacturer need a law to force him to provide what consumers are demanding. A few weeks ago, Ford introduced eight new "MPG" cars giving the customer a choice of several models that deliver 27 mpg in the EPA combined metro/highway test, or 34 mpg on the highway test alone. During the past five years, we have spent nearly \$2 billion to develop new small cars and to expand our small-car capacity. By 1980, we expect to spend an additional \$2 billion on more efficient car designs and better fuel economy, through engine and drive-train improvements and product downsizing. We expect Ford's 1976-model average fuel economy to be three miles per gallon, or more than 20%, better than in 1975. These changes are expensive, but we are making them because it is imperative that we respond to the demands of the marketplace.

The cost of mandating and deadlining these changes by Government regulations is likely to be very high, for several reasons.

First, conversion of facilities and re-design and engineering programs to meet the timetables indicated in this bill would be enormously expensive and disruptive. In the six months ending March 31, 1975, Ford had before-tax losses of over \$200 million. As a result, we have had to increase our borrowing substantially. While we anticipate a recovery from the present automotive depression, the losses will have a significant effect on our long-run investment capability. Present plans for fuel economy improvement—the \$2 billion I mentioned—represent the maximum we can afford—and some other manufacturers may well prove unable to do this much. Indeed, Congress may eventually need to look at whether

the fuel-economy improvements demanded by the market can be financed in full without some form of Government guarantee or incentive.

Even with no limit on the capital available for investment, there would be a serious risk that a manufacturer might fail to achieve some of the standards under the rigid timetable prescribed in H.R. 6860. The risks include: (1) variability of test results (fuel economy tests are far from exact, and in this bill millions of dollars will be riding on .1 mpg); (2) the mix of cars, which can vary widely in response to consumers' demand thus changing the average fuel economy of the manufacturer; (3) the ability of the manufacturers to put together, on the stated date, all of the individual technical improvements that may be required to achieve the overall target. Failure, even briefly or to a minor extent, to meet the targets for any of these reasons would mean massive financial penalties. Although the bill describes these as fines or penalties falling on the *manufacturer*, in practice the manufacturer would have to recover some or all of them in the prices of his products. In addition, the consumer would pay the extra costs inherent in rush programs aimed at meeting arbitrary deadlines.

Perhaps most importantly, the standards may discourage actions aimed at the real objective of the legislation—i.e., continuing improvements in fuel efficiency for the entire car fleet. Running changes—those made *during* a model year—might not count at all for the purpose of measuring the average results. The introduction of *high-risk advanced technology* would be slowed because the penalty for failure would be so much greater than in a free market—under a mandated standard, manufacturers would have to place their limited financial and technical resources almost entirely on “sure” things. Finally, the long-term standard of 28 mpg in H.R. 6860 could substantially rule out efforts to *improve* the fuel economy of *larger* cars, forcing those owners who believe they have a genuine *need* for family sedans or station wagons to retain, as long as possible, their less-efficient older models—because manufacturers couldn't afford to develop improved versions.

Consequently, we believe that mandatory fuel economy legislation is unnecessary, that it could prove costly to consumers and that it would impose an unnecessary and unreasonable burden on the domestic automobile industry.

If Congress nevertheless believes that mandating fuel economy by legislation is essential, we would hope that any bill would have three important objectives: (1) to accomplish the goal with the least possible interference in the marketplace and with minimum disruption to employment; (2) to set standards that are found, after thorough study, to be technologically and financially achievable; and (3) to assure the availability of vehicles adequate to meet the transportation needs of the people. Further, the automotive fuel conservation goals should be reasonably commensurate with whatever conservation actions may be mandated for other energy uses. Accordingly, if such legislation is deemed necessary, we strongly urge the following modifications to H.R. 6860.

1. Delete the 28 mpg standard in 1985

It seems probable that a 28 mpg average cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. market. Only 10 of the 320 passenger cars listed in the 1975 EPA Buyer's Guide for 49-state vehicles achieve a metro/highway average of 28 mpg or better. All ten of these are imports and all except the Peugeot diesel are in the 2500 pound weight class or lighter. A manufacturer could hardly make long-term investments in improved engines or substantial weight reductions for full-sized vehicles because of the risk that, even with improvements of 50% or more, the vehicle would not come close to the 1985 standard. The six-passenger family sedan and the station wagon would probably disappear from the new-car market. (These cars now make up about half of the vehicle population.)

Such a standard would require a total restructuring of the industry, including the writeoff of billions of dollars worth of facilities. Major unemployment would be unavoidable during the long transition period. Further, domestic vehicle prices would have to reflect the enormous cost of this facility conversion; while most foreign manufacturers, who are already building 2500-pound cars for their home markets, would have considerably less task and cost. We believe, therefore, that a standard at this level would turn over a further large piece of the market to the imports—with severe effects on U.S. jobs and the balance of payments.

The flexibility given to the Secretary of Transportation to modify the 28 mpg goal does not resolve this problem. Product and facility plans would have to be

based on the statutory standard until a determination of modification was made in 1979 or later. Any modifications would probably come only at the last minute, after hundreds of millions of dollars had been spent, and after opportunities to improve larger-car efficiencies by 50% or more had been passed up.

There is no doubt that continued improvement in automotive fuel economy is necessary and possible after 1980. We believe that this improvement will occur as a result of market forces, and that by 1980 it will become obvious that a costly regulating structure is not needed to achieve the goal. If Congress wishes to assume a continuing need for regulation, however, it should authorize the administering agency to set post-1980 fuel economy standards only after (1) careful assessment of technological and financial feasibility; (2) a thorough analysis of consumer needs; (3) analysis of the impact on safety; and (4) reassessment of the nation's energy requirements and supplies. Without such assessments, there is no more basis for mandating a 28 mpg fleet average today for a period ten years away than there is today for mandating improvements of 100% in the efficiency of aircraft, home furnaces, power plants or crop dryers.

2. Modify the Penalties

The level of financial penalties set forth in H.R. 6860 is exorbitant and could be considered confiscatory. If Ford should achieve an average fuel economy of 10 mpg in 1980, the shortfall of 1.5 mpg or only 8% from the statutory standard would result in a civil penalty of about \$225 million, equivalent to before-tax profits of \$450 million. (As a reference, the Company's annual dividends at the present rate total \$224 million.) Fines of this magnitude, of course, would deprive manufacturers of needed funds to make heavy investments in conversions and fuel economy technology--thwarting their ability to make the necessary changes. In fact, such huge contingent liabilities would, in our judgment, seriously jeopardize the Company's ability to raise the capital funds needed to attain major fuel economy improvements. Payment of the penalties could of course jeopardize dividends and interest payments on outstanding debt. In view of our concern about the effect of these provisions on how investors and lenders would evaluate the industry's securities, we suggest that the Committee seek testimony from Government and private experts on this point.

There are a number of ways in which the penalties could be moderated, such as (1) use production-weighted average but apply the penalty only to vehicles not meeting the standard; (2) reduce the dollar amount of the penalty; (3) provide that the maximum penalty not exceed some stated percentage (perhaps 10-25%) of a manufacturer's profits; and (4) make the penalty tax-deductible. Such changes could still result in potential penalties that would assure maximum effort to avoid them, without the shattering consequences of shortfall under the H.R. 6860 schedule. We strongly urge that the Committee consider such modifications.

3. Delete any requirement for truck fuel economy standards

Because the lowest possible operating cost is a prime objective for truck operators, fuel economy is already an especially important purchasing criterion for trucks. Further, as trucks are designed primarily to haul goods, a reduction in truck size which might be required to meet fuel economy standards would not necessarily result in an overall reduction in fuel consumption, if more trips would be needed to carry the same amount of goods.

Further, as yet there is no accepted method for measuring truck fuel economy. There are no EPA data indicating the average fuel economy of the nation's new truck fleet, because trucks rated more than 6000 gvwt have only engine (not vehicle) dynamometer testing. Such testing cannot be extrapolated into meaningful fuel economy figures. The wide variety of truck usage patterns, loading conditions and vehicle configuration have dictated this engine-only testing.

Additionally, trucks presently have unique emission standards, and the entire approach would have to be adjusted to this fact.

4. Permit inclusion of cars presently imported by the manufacturer in overall fuel economy average

As initially proposed by Representative Sharp, each manufacturer would have determined an "import base" equal to his imports in 1973 or 1974 as a percentage of the total vehicles sold by him in those years. This "import base" would be included in determining the manufacturer's average fuel economy in future years. The House, however, accepted a substitute provision requiring that *all* imports (except from Canada) be excluded in determining a manufacturer's basic fleet-average fuel economy.

The provision as originally proposed would clearly prohibit a manufacturer from initiating so-called "runaway-plant" actions in order to achieve the fuel economy standard. For measurement against the standard, he would be allowed to count no more than his percentage of imports in 1973 or 1974. This seems to be a reasonable safeguard. To exclude from the standards base the cars presently imported by a manufacturer is an undue burden. Present fuel economy averages include imports of the domestic manufacturers, and to rule them out would make Ford's task up to .3 mpg greater than originally assumed.

We are gratified that the House, in H.R. 6860, has recognized that there must be adjustments for the fact that, for any given vehicle and power-train, emission control technology that may be available in the foreseeable future will almost certainly exact fuel economy penalties if the standards are tightened beyond 1975 levels.

Finally, we want to emphasize that the single most helpful thing that Congress could do to improve automotive fuel economy, and also to help the automotive industry recover from the current recession, would be to defer any further tightening of emission standards and retain the present already-stringent standards for five additional years. The President has recently recommended such a deferral, based on an analysis by the Energy Resources Council that indicates substantial fuel economy degradation in moving to the 1978 statutory levels. I must stress that an absolute prerequisite for the degree of fuel economy improvement envisaged by this bill between now and 1980 is a freeze in emission standards at or near today's levels.

We request permission to submit for the record a number of specific suggestions for changes in H.R. 6860 that would, in our judgment (1) remedy the serious problems I have discussed today and (2) clarify and improve the bill with respect to a number of technical details.

FORD MOTOR COMPANY SUGGESTED AMENDMENTS TO H.R. 6860

Sec. 211(a) (1)

No change.

Sec. 211(a)

(2) The definition of "automobile" has been modified to include only passenger vehicles under 6,000 lbs. gv. This change excludes all trucks, busses and some multipurpose vehicles from the requirements of the Act.

(3)-(4) The definitions of "passenger automobile" and "light duty truck and multipurpose passenger vehicle" are no longer required and have been deleted.

(5) The definition of "average fuel economy" has been renumbered (3), deletions reflecting the exclusion of trucks and mpvs have been made where appropriate, and a provision for greater accuracy in fuel economy calculations has been added.

RATIONALE

Rationale for deleting truck fuel economy standards

Because lowest possible operating cost is prime objective for truck operators, fuel economy is already an important purchasing criterion for trucks.

Since trucks are designed primarily to haul goods, a reduction in truck size which might be required to meet fuel economy standards would not necessarily result in overall reduction in fuel consumption, if more trips would be needed to carry same amount of goods.

As yet there is no accepted method for measuring truck fuel economy. There are no EPA data indicating average fuel economy of nation's new truck fleet because trucks rated more than 6,000 gv are subject to only engine (not vehicle) dynamometer testing, which cannot be extrapolated into meaningful fuel economy figures.

Trucks presently have unique emission standards, and the entire approach would have to be adjusted to this fact.

Rationale for change in fuel economy calculations: EPA fuel economy measurements are presently calculated to the nearest 1/10th mpg and when a number of different measurements are to be added together, the fractional calculation results in a more accurate calculation which could be extremely important when penalties are computed for each 1/10th mpg.

(6)-(12) These subsections have been redesignated to reflect earlier deletions.

(13) Renumbered to reflect earlier deletions.

Sec. 211(b)

- (1) Modified to reflect exclusion of trucks and mpvs.
- (2) (new subsection) This is a new subsection incorporating the original provisions of the Sharp amendment. It would allow manufacturers to include a proportion of imported passenger cars equivalent to the presently imported passenger cars, for purposes of determining overall fuel economy average.

RATIONALE

This provision would limit the inclusion of imported vehicles in the manufacturer's fuel economy average to the percentage of vehicles currently imported.

Certainly this amendment is sufficient assurance that a manufacturer will not be able to import a larger percentage of vehicles in any given year to meet a fuel economy standard.

EPA fuel economy averages presently include imports; to exclude them would make Ford's task up to .8 mpg tougher.

- (2) Renumbered to reflect the addition of new subsection (2).

Sec. 212(a)

- (1) This subsection has been amended as follows:

- (a) A specific reference to the emission standards penalty provision of § 212(c) has been added to avoid any question regarding its applicability to all years and all fuel economy standards established under the Act.

- (b) Modified to reflect the exclusion of trucks and mpvs.

- (c) All specific standards after the 1980 model year are to be established by the Secretary under § 212(b) of the Act.

RATIONALE

Rationale for administratively setting post-1980 standards

A 28 mpg standard in 1985 cannot be achieved by 1985 across the range of vehicles presently demanded and needed by a large segment of the U.S. public. If the American public cannot purchase vehicles suited to their needs, many owners of full-sized vehicles are likely to keep them rather than trading them in on new more fuel efficient cars (and cleaner ones). This would have an adverse effect on auto sales, create enormous economic disruption and be contrary to the purpose of the bill. Such a standard would require total restructuring of the industry and major unemployment would be unavoidable during the long transition period. Domestic vehicles prices would have to reflect the enormous cost of conversion while foreign manufacturers, who are already building 2500 pound cars for their home markets could have little or no task or cost—this could turn over a further large piece of market to imports with severe effects on U.S. jobs and balance of payments.

The nation would be better served by Congress authorizing DOT to administratively set post-1980 standards only after (1) careful assessment of technological and financial feasibility; (2) a thorough analysis of consumer needs; (3) analysis of impact on safety; and (4) reassessment of the nation's energy requirements and supplies.

- (2) No change.

- (3) Line 21—Modified to reflect elimination of the specific 1985 requirement.

- (4) Deleted to reflect exclusion of trucks from the requirements of this Act.

Sec. 212(b)

- (1) Amended to reflect the expanded authority of the Secretary to establish post-1980 standards and to more directly instruct the Secretary to establish standards based upon a real, demonstrable national need.

- (2) No change.

- (3) (A) Amended to direct the Secretary to consider national energy needs in amending any standards established pursuant to the Act.

RATIONALE

Rationale for adding consideration of national energy needs to standards criterion

The automotive fuel economy goals must be considered and established in a manner consistent with the nation's energy conservation program. Ford believes the goals set forth in H.R. 6860 seem to have been established without considering the total context of the energy problem. Certainly, no other segment of consumer consumption has been singled out for such drastic action. Consistency

with other energy use policies and goals must be part of the criterion for establishing long-range standards.

(3) (B) The authority of the Secretary to modify the 1985 standard would not be required in light of earlier changes and has, therefore, been deleted.

(3) (C) Deleted for the reasons noted in connection with the deletion of § 212 (b) (3) (B) on page 28.

(4) Amended to reflect earlier changes and to specifically direct the Secretary to consider national energy conservation needs when establishing fuel economy performance standards.

Sec. 212(e)

(1) No change in view of the recognition that in the short term, tighter emission standards will probably exact fuel economy penalties.

(2) (A) and (B)

(a) Amended in view of the exclusion of trucks and mpvs.

(b) Modified to reflect the fact that changes in certification and other test procedures beyond those applicable to 1975 vehicles such as requirements for high altitude testing and testing of vehicles on assembly lines may also create an emission standards penalty.

(2) (c) No change.

RATIONALE

Rationale for expanding emissions standards penalty to include test procedures

Ford has estimated, for example, that even if emission standards remain at the 1975 levels, application of EPA's proposed Selective Enforcement Auditing Procedure (SEA) [39 Fed Reg 45360 et. seq.], would significantly tighten the emission control requirements and create fuel economy penalties up to 8%. (See Section III, page 4 of Ford's Response to EPA's Proposed SEA procedures April 17, 1975.)

(3) No change.

(4) Amended to reflect the addition of test procedures in § 212(c) (2) (A) and (B).

Sec. 212(d)

(1) Amended to reflect the exclusion of trucks and mpvs. Specific reference should be made to section 206(a) of the Clean Air Act which contains the authority for prototype certification testing conducted by EPA.

(2) No change.

RATIONALE

Section 206 refers to other EPA emission testing but in order to be feasible and practicable, the development of fuel economy figures for labeling and other purposes must be associated with emission testing prior to the time that vehicles are produced and offered for sale to the public.

Sec. 212(e)

(1) Amended to include administrative determinations in judicial review process.

RATIONALE

Modified to make it clear that important administrative determinations such as those involved in establishing an emission standards penalty are appealable along with other rulemaking actions to the appropriate United States Court of Appeals. Such determinations would, of course, be appealable to a United States District Court, under the general provisions of the Administrative Procedures Act. However, there appears to be no reason to create such a diversity of review procedures. In the interest of judicial efficiency it would seem desirable to have appeals from all questions under the Act treated in the same fashion.

(2) No change.

(3) No change.

(4) No change.

Sec. 212(f)

(1) and (2) The monitoring provisions appear to be superfluous in light of the penalties for failure to meet standards stated in objective, performance terms, and, therefore, Section 212(f) has been deleted.

RATIONALE

Rationale for deleting monitoring

We believe this section is a carryover from a previous draft of the bill which set up a fuel economy monitoring procedure with no penalties.

Since the bill provides after-the-fact assessment of average fuel economy over a model year subject to substantial penalties in the event of noncompliance, monitoring during a model year would be unnecessary.

The bill would require a lengthy process of reporting with possible attendant disclosure of confidential future plans.

Sec. 213(a)

- (1) No change.
- (2) No change.
- (3) No change.

Sec. 213(b)

- (1) No change.
- (2) No change.

Sec. 213(c)

- (1) No change.
- (2) No change.

Sec. 214(a)

(1) Amended to reflect the fact that EPA fuel economy numbers will not necessarily reflect what can be expected from each individual vehicle but rather the performance of test vehicles selected to represent a range of vehicles including the one that carries a particular label.

Amended to limit the information on the label to a presentation of the fuel economy performance attributable to the vehicle carrying the label.

- (2) No change.

Sec. 214(b)

No change

RATIONALE

Rationale for change in labelling provision

An overly-detailed and complex label will be confusing to the consumer and therefore less effective.

Average annual fuel costs are almost meaningless given the variability in miles driven, price of gasoline and driver habits (city or highway driving, etc.).

Sec. 215

- (1) No change.
- (2) Amended to delete the double jeopardy aspect of penalties under this Act and the Automobile Information Disclosure Act for labelling failures.
- (3) No change.
- (4) No change.
- (5) Deleted. See comments under (2) above.

Sec. 216(a)

- (1) No change.

RATIONALE

Rationale for deleting double jeopardy aspects of labelling penalties

Currently, H.R. 6860 amends the Automobile Information Disclosure Act to require fuel economy labelling information on the retail price sticker and to subject fuel economy labelling failures by manufacturers and dealers to penalties under the Disclosure Act. In addition, however, present sections 215 and 216 of H.R. 6860 would also subject such failures to civil penalties of up to \$10,000 per occurrence. Thus, a manufacturer or dealer could be subject to being fined twice for the same action. This is unfair and Ford believes that H.R. 6860 should, therefore, be modified to delete the double jeopardy aspect of penalties under this Act and the Automobile Information Disclosure Act for labelling failures.

- (2) No change.

Sec. 216(b)

(1) (A) Amended as follows:

(a) The civil penalty has been modified to provide for a penalty equal to \$5.00 for each $\frac{1}{8}$ mpg shortfall. Other means of minimizing the import of the massive potential penalties applicable to average fuel economy shortfalls, might include:

(i) A new section 216(b)(1)(C) providing for tax deductability of the fines; or

(ii) A new section 216(b)(1)(C) placing a "cap" on the total fine that could be levied against a single manufacturer.

(b) A reference to the "deemed to meet" provisions of § 212(d)(2) has been added to clarify that the fine is to be applied only to the extent of the shortfall from the adjusted level.

RATIONALE

Rationale for limiting penalty

The penalties in the bill are exorbitant. A manufacturer of four million cars would pay \$200 million for missing the standard by only one mpg—a shortfall that could easily occur by an unforeseen change in consumer preference or a less than adequate adjustment for tightened emission levels.

Penalties of this magnitude, if incurred, would deprive manufacturers of needed funds to make heavy investment in plant conversions and fuel economy technology—thwarting their ability to make the necessary changes. Further, just the contingent liability of that magnitude of penalty would jeopardize a company's ability to raise capital funds needed for conversions and technology.

(1) (B) No change.

(2) No change.

(3) Amended to authorize the Secretary to take action with respect to a civil penalty that would otherwise be due where the manufacturer can show that his failure to meet the requirements resulted in unanticipated consumer demand which existed despite his efforts to influence the marketplace.

RATIONALE

S. 1883, as approved by the Senate Commerce Committee contains a provision similar to this amendment proposed by Ford. Under H.R. 6860, a sudden mix shift in the middle of the model year or in the event consumers simply do not purchase the percentage of small cars planned for production, a manufacturer would be faced with either producing vehicles he could not sell or the potential of massive penalties.

Sec. 216(b)(3)(C)

See preceding comments.

Sec. 217

Amended to provide preempt all state fuel economy standards and enforcement procedures.

RATIONALE

Rationale for preemption change

Energy is a national problem and there is no need for identical state standards. On the contrary, adoption of identical standards by a state would create costs and administrative burdens associated with attempting to calculate fuel economy averages by state. If purchases within a state constituted a different sales mix than the national mix, a manufacturer could conceivably face fines, even though the national average met the standard.

STATEMENT BY ALAN G. LOOFBOURROW, VICE PRESIDENT—ENGINEERING
CHRYSLER CORPORATION

I am Alan Loofbourrow, Vice President of Engineering for Chrysler Corporation. I appreciate the opportunity to elaborate on my remarks before the Finance Committee regarding proposed automotive fuel economy legislation.

As you may know, we testified before the Senate Commerce Committee last December on the bill to mandate a 50 percent improvement in fuel economy by 1980. At that time, I discussed Chrysler's long standing commitment to better fuel economy, described the engineering considerations involved in improving gasoline mileage, and outlined drawbacks to legislative solutions to the problem. I would

like to submit for the record a copy of that statement. I think it will be helpful as you consider whether fuel economy standards are necessary and in the best interest of the country.

Since December, there has been one significant development affecting automotive fuel economy that I would like to discuss. Just last March, the Administrator of the Environmental Protection Agency granted us an extension to present standards for hydrocarbons and carbon monoxide, and urged Congress to continue these standards through 1979. Since that time the President has recommended freezing hydrocarbon, carbon monoxide, and oxides of nitrogen standards at today's levels—1.5 grams-per-mile hydrocarbon, 15 grams-per-mile carbon monoxide, and 3.1 grams-per-mile oxides of nitrogen. If Congress will act on this recommendation, freeze the hydrocarbon and carbon monoxide standards at their present levels, and also hold fast to the present oxides of nitrogen standard of 3.1 grams-per-mile, we can significantly improve gasoline mileage over the next few years while continuing our progress toward cleaner air.

Failure to carry over all these standards—especially the oxides of nitrogen standard—will seriously handicap our efforts to improve fuel economy. No law, no tax or incentive program, and no crash research and development project can change that basic engineering fact of life.

Let me explain that briefly. The air is composed primarily of two basic gaseous elements: oxygen and nitrogen, which at about 3000° F., combine to make nitrogen oxides. Because an engine is more efficient and gets better gasoline mileage when it is run at higher combustion temperatures, we seek out ways to raise that temperature. However, to control oxides of nitrogen, we lower temperatures—and that means lower gasoline mileage. Like it or not, we can't repeal the laws of thermodynamics. That is why the oxides of nitrogen standard of 3.1 grams per mile is so essential to improved fuel economy.

At Chrysler we are developing ways to meet today's stringent standard while improving fuel economy by precise electronic control of the engine's operation. As a result of our engineering achievements, we have told the Administration that with a 3.1 NOx standard, we believe we can reach the goal of a 40 percent improvement in fuel economy on a sales-weighted basis by 1980. In making that commitment we assumed that we could successfully develop sophisticated electronic controls for spark timing, fuel distribution, and other engine operations.

As you know, Chrysler pioneered the first major application of electronic technology when it made the electronic ignition system standard on all engines in the 1973 model year. We believe the next major development will come in the 1976 model year. We hope to introduce on several models an electronic spark timing control which will make possible a new non-catalyst emission control system.

The electronic control adjusts spark timing very precisely for a number of variables including engine temperature, throttle position, and engine speed. The precision of this control permits us to modify our engines to burn a mixture of 18 to 20 pounds of air to one of fuel, rather than the present ratio of 16 to 1.

At ratios of about 18:1 and above the nitrogen oxides drop off significantly. While there is some fuel economy loss when an engine is run on a mixture this lean, it is not as great as the loss from other methods used to control oxides of nitrogen. If the development of this electronic spark timing control and several other engine modifications are successful, we believe we can meet present emission standards without most of the emission control devices on cars today, including the catalytic converter and the air pump. By using this system we are confident we can get better fuel economy and driveability than on today's 1975 automobiles.

Because the engine runs on a lean mixture of fuel to air we have been referring to this approach as a lean burn system. Since the lean burn system would eliminate the catalytic converter, we could use leaded gas with its higher octane ratings, design our engines for higher compression ratios, and regain some additional economy.

It is especially essential that Congress act to carry over the oxides of nitrogen standard. The recommendation by the administrator of the Environmental Protection Agency to allow the oxides of nitrogen standard to drop to 2.0 grams per mile in 1977 seriously jeopardizes our commitment to improved fuel economy.

As you know, the administrator's decision implicitly requires us to develop non-catalyst emission control technology as quickly as possible. If the standards remain at 1.5 grams per mile hydrocarbons, 15 grams per mile carbon monoxide,

and 3.1 grams per mile oxides of nitrogen, we believe we can remove catalysts from most—if not all—of our engines by the 1977 model year. And we can improve fuel economy by introducing lower axle ratios, lock-up torque converters, and smaller engines in more models.

However, these fuel-saving changes reduce the car's performance. If the oxides of nitrogen standard is 2.0 grams per mile in 1977, we may not be able to make these changes at all because lowering the NOx standard will result in a significant loss in driveability that could jeopardize the driver's safety. Even if we can implement these changes, they would be less effective than we originally planned because of the stringent NOx requirement.

Any reduction of oxides of nitrogen emissions results in a fuel economy penalty—regardless of the control system. We estimate that with our present control systems, the administrator's recommendation of 1.5 grams hydrocarbons, 15 grams carbon monoxide, and 2.0 grams oxides of nitrogen would produce a fuel economy penalty of about seven percent from today's levels. Given time, we might be able to reduce that penalty—but we can never overcome it entirely through engineering changes alone. Accordingly, we urge Congress to hold to the 3.1 grams level for NOx through 1979 at least so that we can achieve our fuel economy objectives by the end of this decade.

That standard is stringent enough to protect public health. Studies by the National Academy of Sciences and others show that even at that level, the rapid trend to clean air will continue.

The industry is already working without benefit of any legislation to improve fuel economy. As a result of technical improvements and the shift in mix to small cars, we estimate that 1975 Chrysler models average 15 percent better fuel economy than 1974 models.

Not only are fuel economy standards unnecessary, they may be unworkable as well. They ignore all the other considerations that an engineer has to take into account when designing a vehicle—including safety, emissions, performance, and cost to the consumer. The fact is the engineer will be completely hamstrung if absolutely contradictory standards are written into law. Yet this could easily happen if Congress sets a fuel economy standard and at the same time allows the statutory standards for oxides of nitrogen emissions to come into effect.

This industry does not need any artificial incentive to improve fuel economy. We already have the strongest incentive a free economy produces—the demand of our customers.

We've answered the demand for energy-efficient cars over the years. Even when gasoline was selling at half of today's prices, Chrysler based successful advertising and marketing campaigns on the fact that its cars delivered more miles per gallon than the competition's. Today, with gasoline mileage more important than ever, the demand is greater than ever. And we've responded to that demand. We are improving the efficiency of our vehicles. We have increased our production capacity of small cars and smaller engines.

If we could get 20 to 30 percent better fuel economy than our competitors, we would do so—and we would proclaim it as loudly and aggressively as we could. That's the way our free enterprise system works—and there's no need to tamper with it.

I think we all know from experience in both government and industry that you can't legislate a technical breakthrough or solve a problem by simply throwing money at it. Technological progress usually requires careful and painstaking work. There are rarely dramatic solutions to our problems. To help reach the President's 40 percent goal, we are taking a number of actions in addition to developing electronic controls to fine tune our engines. These modifications include reducing vehicle weight, improving aerodynamics, lowering axle ratios, improving transmissions, reducing brake drag, lowering idle speeds, and reducing rolling resistance. None of these sound very exciting by themselves. But taken together, they can produce significant improvements in gasoline mileage. We are also planning new lines of smaller, lighter, more fuel-efficient cars over the next few years. The first of these new cars will be available late this year, and will sell alongside our present line of compacts.

The National Science Foundation has said nothing could provide a greater incentive to better fuel economy than a freeze on today's emissions standards. A stable outlook for emissions standards, an organized approach to determining

new standards, and a realistic timetable for implementing those standards would provide the greatest possible incentive for development of more fuel-efficient motor vehicles.

I hope that this committee will resist the temptation to find some easy legislative solution to our energy problem. There is none. Rather, I urge you to take the lead in doing the one thing will move us dramatically closer to our fuel economy and energy conservation goals: freeze emissions standards for hydrocarbons, carbon monoxide, and oxides of nitrogen at today's stringent levels. This will assure better gasoline mileage—and clean air as well.

STATEMENT BY ALAN G. LOOFBOURROW, VICE PRESIDENT—ENGINEERING, CHRYSLER CORPORATION, BEFORE THE SENATE COMMERCE COMMITTEE, WASHINGTON, D.C., DECEMBER 10, 1974

I am Alan Loofbourrow, Vice President of Engineering for Chrysler Corporation. With me today are Harold L. Welch, Chief Engineer—Engineering Program Planning, and Victor C. Tomlinson, Senior Attorney—Legal Staff. I appreciate this opportunity to give you my views on the Energy Conservation Act of 1974 which would mandate a 50 percent improvement in fuel economy by 1980.

In light of the country's energy problems, I can understand why the government would ask automotive engineers: what can you do to improve the fuel economy of your vehicles? Chrysler engineers have been answering that question for years. We have always believed that fuel economy is a marketable item—and so we provided superior fuel economy long before it became a matter of government concern.

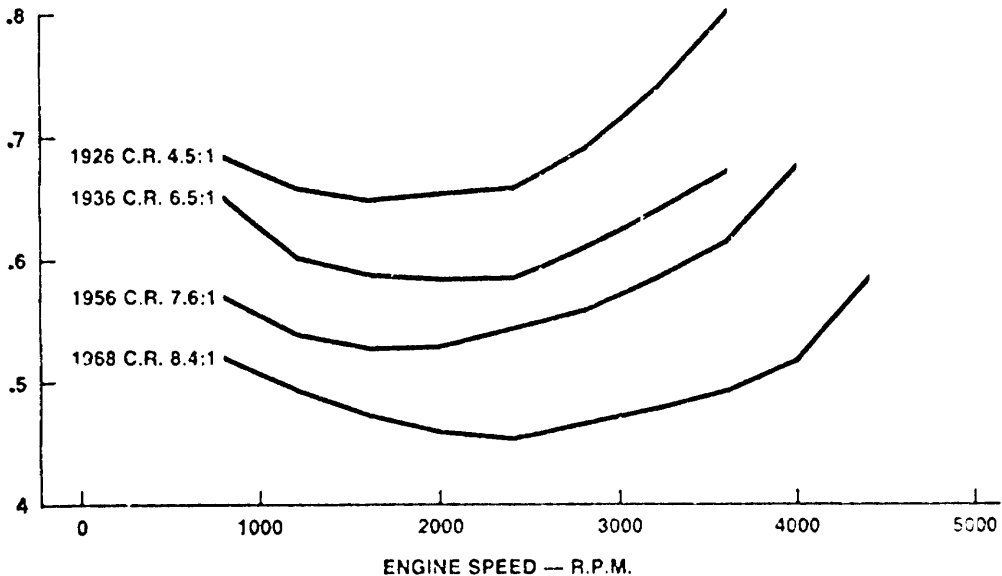
Even when gasoline was selling at half of today's prices, Chrysler based successful advertising and promotion campaigns on the fact that our cars delivered more miles per gallon than the competition's. And they do. As a result of our continuing efforts, we have consistently led the Mobil and Pure Oil fuel economy trials, not only with our small cars, but with our mid-size and full-size cars as well. Today, with gasoline mileage more important than ever, EPA tests show that 1975 Chrysler-built models offer better average fuel economy than those of either of our major competitors.

I'd like to describe how we have improved engine efficiency over the years, so that you can appreciate our technical problems in making improvements in fuel economy.

(Graph: Fuel Consumption 1926-1968)

FULL THROTTLE FUEL CONSUMPTION 1926 TO 1968 CHRYSLER 6 CYL. ENGINES

SPECIFIC FUEL CONSUMPTION
POUNDS FUEL PER H.P.—HOUR



This graph will give you some idea of our progress in improving the internal combustion engine. It shows the amount of fuel a six-cylinder engine with its throttle wide open requires at different engine speeds to produce one horsepower for one hour. The lower the curve, the less fuel the engine needs. If you compare the 224 cubic inch engine of 1926 at the top of the chart, with the 225 cubic inch engine of 1968 at the bottom, you can see that our engineers have improved engine efficiency by about 40 percent in 40 years. In addition the maximum power of the engine more than doubled.

I want to emphasize that this 40 percent was all technical improvement within the engine—it does not take into account the trend to smaller cars or improvements to the vehicle itself.

Improvements to the vehicle include reducing its size and weight, improving its aerodynamics, reducing its rolling resistance, and modifying its drive train.

For example, because of the increase in engine power our engineers were able to reduce axle ratios over the years from 4.61:1 in the 1920s to 2.76:1 in the 1960s. So fewer revolutions of the engine are required to drive the car each mile down the road.

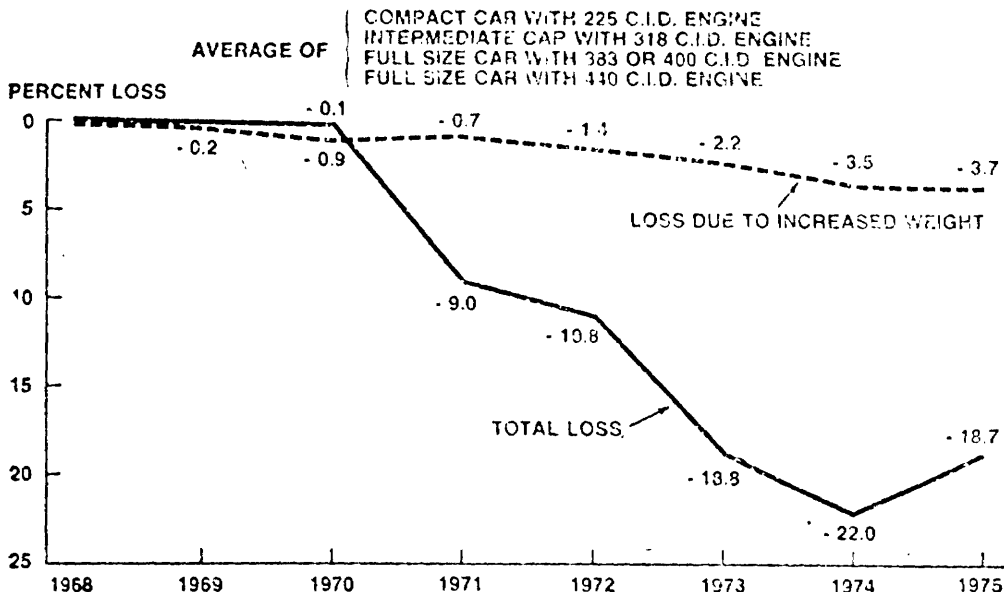
To help use fuel more efficiently, we improved our carburetors and redesigned the combustion chamber. We developed the vacuum spark advance to vary ignition timing according to throttle position and other factors. We helped the engine breathe in air more efficiently by modifying the intake manifold, cylinder head, valve timing and size, and exhaust system. We went from an L-head valve arrangement to overhead valves.

And while we were redesigning the engine for better efficiency, the petroleum industry was raising octane ratings for regular gasoline from about 55 in the 1920s to as much as 95 in the 1960s. Because of this improvement in the fuel, and our better control of the combustion process, we were able to increase the compression ratio of our 6-cylinder engine from 4.5:1 in 1926 to 8.4:1 in 1968. That gained for us both better economy and better performance.

As a result of changes of this kind in all of our engines the 1968 engines were generally the most efficient automobile engines the industry ever offered. These engines were about as efficient as a comparable size diesel engine under some test conditions, and more efficient than the Wankel or any other alternate engine we might be able to consider for production. This is history and it is factual.

(Graph: Urban Fuel Economy 1968-1975)

TREND OF URBAN FUEL ECONOMY 1968 TO 1975 (ROAD TEST DATA)



Unfortunately, the trend to better fuel economy was reversed in 1968. As this chart shows, the average fuel economy for Chrysler Corporation vehicles in city driving dropped by nearly 19 percent between 1968 and 1975.

Part of that loss—about 4 percent—results from weight added to our cars. Much of the weight is required by federal safety and emissions mandates. For example, between 1968 and 1975 we had to add 275 pounds to a full size standard four-door sedan as a result of federal requirements. All our other product improvements added less than 200 pounds to the vehicle weight. There were comparable weight increases for compact and mid-size cars.

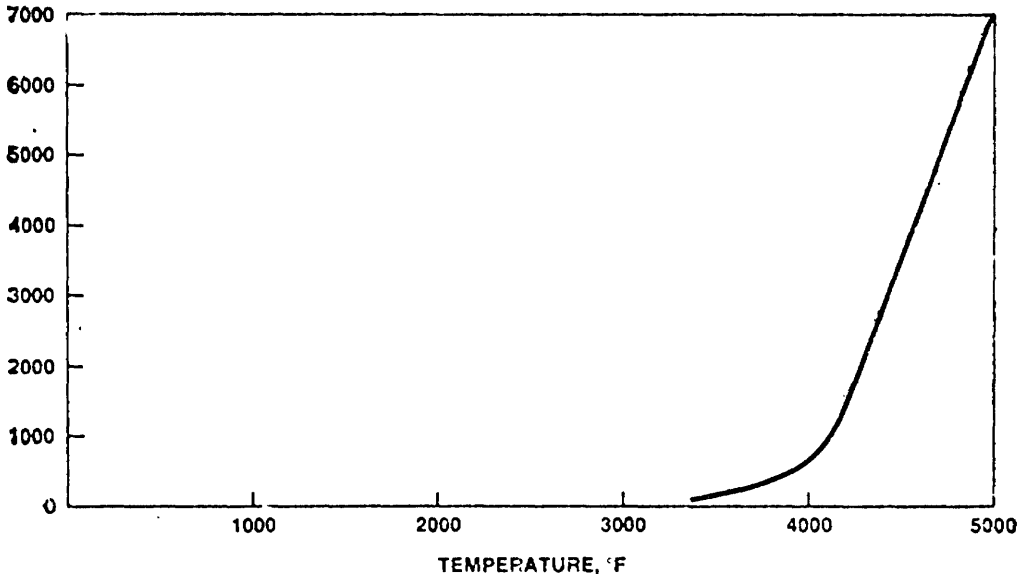
The emissions control systems effectively mandated by the Clean Air Act caused a 15 percent penalty because the engine modifications available that fulfill its requirements also reduce gasoline mileage.

Engineering involves a series of compromises. Whenever we design a vehicle we have to consider a number of factors: emissions, fuel economy, performance, driveability, cost, availability of materials, weight, safety, durability, manufacturing feasibility, and so on. What we do in one area often involves trade-offs in another. In the past, the engineer could balance his goals to get good performance, good economy, good driveability, and so on. But now, he has lost control over these trade-offs. He must go all-out for emissions, and he must add weight to comply with safety and damageability regulations. He cannot get the kind of performance and economy out of the engine he used to get and that the public expected. He may be completely hamstrung if two absolutely contradictory standards for emissions and fuel economy are written into law. Let me give you one example.

(Graph: Relationship of combustion temperature and NOx emissions)

RELATIONSHIP OF COMBUSTION TEMPERATURE AND OXIDES OF NITROGEN EMISSIONS

NITRIC OXIDE
CONCENTRATION, ppm



This graph shows the relationship between temperature and the creation of oxides of nitrogen. Whenever air is heated to about 3000° F, its two principal gasses, nitrogen and oxygen, combine to make nitrogen oxides. Yet, the engine is more efficient at higher combustion temperatures. To improve fuel economy over the years, we had increased average combustion temperature so that in 1968 combustion reached levels of about 4200 degrees. Consequently emissions of nitrogen oxides had also gone up. It is self evident that if we are to reduce these emissions, we will have to reduce the combustion temperature and lose efficiency and fuel economy.

With that background to give us perspective, I would like now to review some of our objections to the Fuel Economy standards in the Energy Conservation Act.

My first objection to the bill is that we do not need mandatory fuel economy standards. The industry is already working without benefit of any legislation to regain fuel economy lost over the past six years. And we've made progress. This progress is the result of the strongest pressure a free economy produces—the attraction of customers. Does anyone honestly believe that if Chrysler Corporation knew how to produce cars that had 20 percent or 30 percent better fuel economy than our competitors, that we would hesitate to do so and proclaim loudly to the buying public that we had this product advantage? Anyone who does so believe simply does not understand how our free enterprise system works. In support of this the Environmental Protection Agency on the basis of its own tests estimated that 1975 model passenger cars get about 13.5 percent better fuel economy than 1974 models, and we did this without government mandates.

Last year Chrysler responded to the public demand in a free market for reduced fuel consumption by increasing production of small cars, and by making economical six and small eight cylinder engines available in more models. We lowered axle ratios on many of our models. We equipped full size models with radial tires as standard equipment, and offer them as options on all cars. Radial tires generally reduce rolling resistance and can increase mileage by up to six-tenths of a mile per gallon on the highway. We offer a Fuel Pacer System that helps the driver develop the good habits that will conserve fuel. We will soon offer an overdrive manual transmission that promises additional significant savings.

As a result of technical improvements and the shift in mix, we estimate that 1975 Chrysler models average 15 percent better fuel economy than 1974 models. We don't need a law to force us to do what we are already doing in response to the demand in the market.

My second objection to this bill is that it makes no acknowledgement of the Clean Air Act. Yet the emissions standards already scheduled for the next few years by that Act will wipe out all of the fuel economy gains our engineers will make by 1980.

Earlier this month we told the Administration we believe we can meet its goal of a 40 percent sales weighted improvement in fuel economy by 1980. For Chrysler that means an increase in average fuel economy from 13.8 miles per gallon in 1974 to 18.7 miles per gallon. It should be completely understood that in making that commitment we assumed some things that are beyond our control: that there would be no federally mandated weight increase from safety, noise, or damageability standards, and most important, that emissions standards would remain at 1975 levels through 1980.

In making that commitment we also anticipated the development of electronic controls that will enable us to fine tune our engines for lower emissions and better fuel economy.

Chrysler pioneered the first major application of electronic technology when it made the electronic ignition system standard on all engines in the 1973 model year. We believe the next major development will come in the 1978 model year. We hope to introduce on several models an electronic spark timing control which will make possible a new non-catalyst emission control system.

The electronic control adjusts spark timing very precisely for a number of variables including engine temperature, throttle position, and engine speed. The precision of this control permits us to modify our engines to burn a mixture of 18 to 20 pounds of air to one of fuel, rather than the present ratio of 16 to 1.

At ratios of about 18:1 and above the nitrogen oxides drop off significantly. While there is some fuel economy loss when an engine is run on a mixture this lean, it is not as great as the loss from other methods used to control oxides of nitrogen. If the development of this electronic spark timing control and several other engine modifications are successful, we believe we can meet present emission standards without most of the emission control devices on cars today, including the catalytic converter and the air pump. By using this system we are confident we can get better fuel economy and driveability than on today's 1975 automobiles.

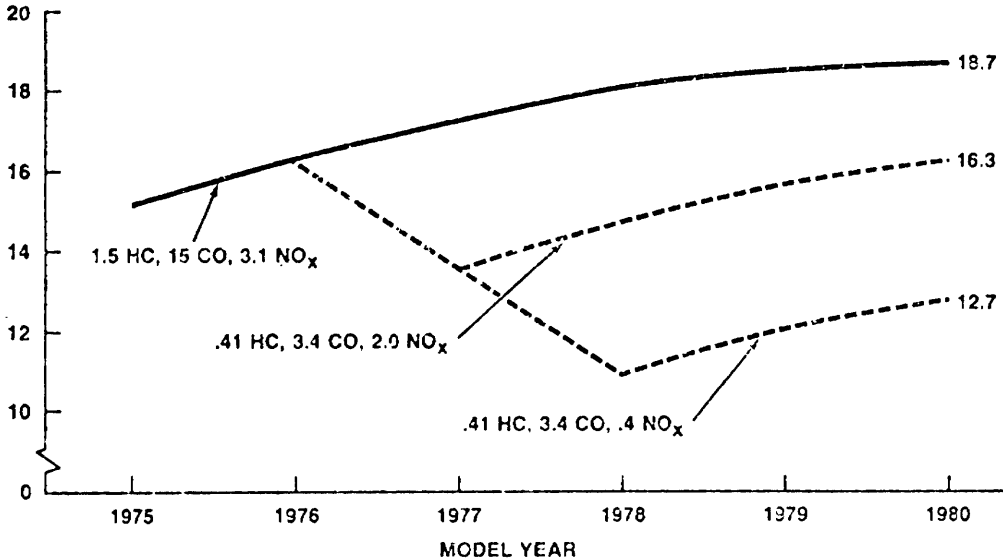
Because the engine runs on a lean mixture of fuel to air we have been referring to this approach as a lean burn system. Since the lean burn system would eliminate the catalytic converter, we could use leaded gas with its higher octane ratings, design our engines for higher compression ratios, and regain some additional economy.

While this is a very promising approach to emissions control and fuel economy, the fact is that we can offer it only if emission standards are held at present levels.

(Graph : Effect of Emissions Standards on Fuel Economy).

PROJECTED FLEET FUEL ECONOMY VS EMISSION STANDARDS

CHRYSLER FLEET FUEL ECONOMY
MILES PER GALLON



This graph illustrates the effect of emissions standards on fuel economy. The top line shows the average mileage improvement we can reasonably expect by 1980 if standards remain at present levels.

The next line shows the fuel economy we can expect if the standards are tightened up in 1977 to 0.41 grams per mile hydrocarbons, 3.4 grams per mile carbon monoxide, and 2.0 grams per mile oxides of nitrogen. Fuel economy would be about 16.3 miles per gallon—only slightly better than today.

The third and bottom line is our best estimate of what will happen if the oxides of nitrogen standard drops to 0.4 grams per mile in 1978. Fuel economy will be less than 13 miles per gallon—a loss from today's levels. In this case the question of fuel economy is actually academic. No one yet has a system that will meet a 0.4 grams per mile oxides of nitrogen standard for more than a few thousand miles. The Environmental Protection Agency, the National Academy of Sciences, and other independent organizations have all pointed out that the standard is more stringent than necessary. But despite these facts, it remains on the books and will be imposed on the industry unless Congress acts to change it.

My third objection to the bill is that a standard mandating a 50 percent improvement in fuel economy in five years would produce severe economic disruptions.

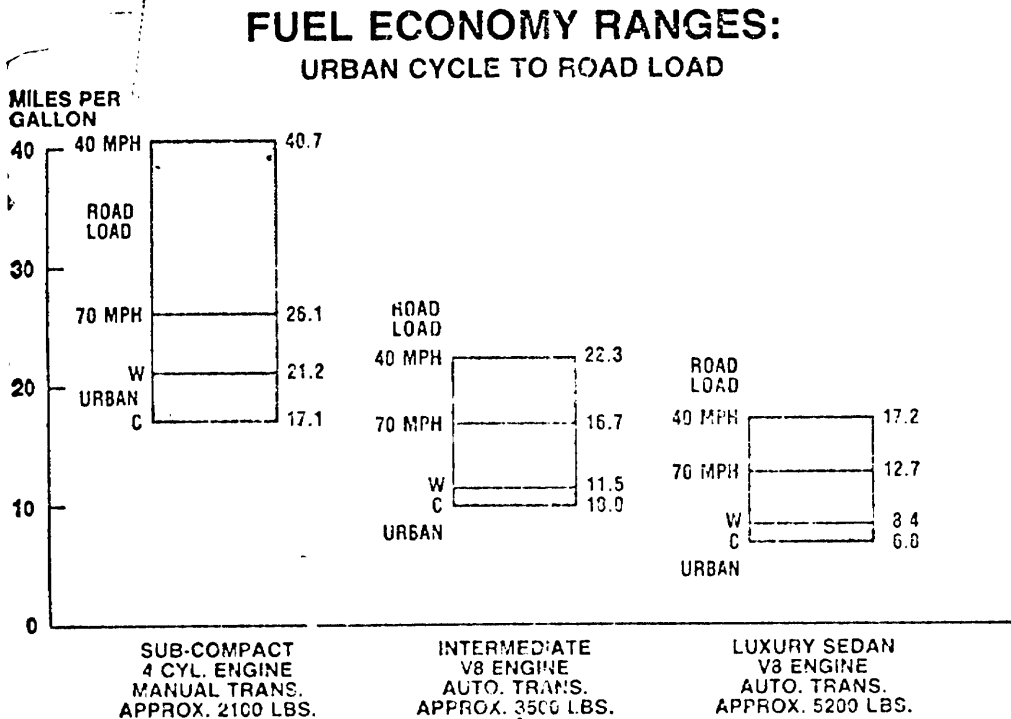
Next to emissions, size and weight are the most important factors affecting fuel economy. We estimate that to meet the bill's goal of 24 miles per gallon in 1980, assuming 1977 emissions standards, 93 percent of the fleet of cars we could sell would be in the subcompact range, and only 7 percent could be mid-size. If we wanted to sell full-size cars, that percentage would be even smaller. In effect, this bill would outlaw a number of engine lines and car models including most full-size sedans and station wagons. It would restrict the industry to producing subcompact size cars—or even smaller ones—within five years, even though the nation does not have the tooling capacity or capital resources to make such a change so quickly.

With the variety of car sizes severely reduced, millions of our customers could not find the right size new car to fit their needs. The projection of greater fuel economy based on a sales mix of fewer large cars and more small ones is meaningless if people don't buy according to the projection.

Currently, more than 20 percent of the households in the country have more than five people. Subcompacts simply cannot accommodate these families. The result is that they will have to continue to drive their older and larger cars, thereby delaying further improvements in fuel economy and emissions control, and cutting automobile sales drastically. We are seeing today what happens when automobile sales drop substantially—more than 200,000 people are out of work today in my industry and the number is still going up. The effect of this standard on auto sales and employment could be even worse.

My fourth objection is that there is no assurance that these standards will meet the bill's goal of saving one million barrels of oil a day. Standards alone will not insure a significant reduction in fuel consumption by 1980. Too many other factors affect economy. The driver, for instance, is the single most important factor in improving gasoline mileage. By careful driving, he can improve his fuel economy by 15 to 20 percent—more than engineers can save in the next few years with all their technical improvements.

(Graph: Fuel Economy Ranges)



This graph compares the fuel economy ranges for subcompact, mid-size, and full-size luxury cars. For each type you can see the gasoline mileage in the worst kind of city conditions at the bottom of the bar, and the mileage at ideal highway conditions at the top of the bar. In the case of the mid-size car, we estimate, on the basis of EPA test cycles, that the average fuel economy is in the neighborhood of 14.5 miles per gallon. But as you can see, the actual economy ranges from a low of 10 miles per gallon under stop and go conditions, to more than 22 miles per gallon at a steady 40 miles per hour. Actual fuel consumption depends on how the car is driven. In some circumstances the luxury car weighing 5,200 pounds can actually get better mileage than the sub-compact weighing 2,100 pounds.

I would like to point out that there is a trade-off between safety and fuel economy. Small cars which generally have better fuel economy are also inherently less safe than larger cars. Studies of more than 420,000 real-life accidents show that occupants of a 2000 pound car involved in an accident are three times as likely to be seriously injured or killed as are the occupants of a 4,800 pound car.

We raise false hopes whenever we give the impression that fuel economy standards will solve our energy problems. Speed limits, traffic management,

the number of miles driven each year, the price of gasoline, and the driver's awareness of what he can do to save fuel can have a greater effect than fuel economy standards.

Fifth, the bill sets an impossible timetable.

It does not take into account the EPA's emissions certification test cycle. It presumes the Secretary of Transportation will set fuel economy standards for a given model year the January before we introduce that model. The fact is we cannot make any changes that close to the start of production. It takes about a year to complete the emissions certification process for EPA. We are forbidden to make major changes without having to start the test procedure all over again. Let me review quickly the timetable we are following for our 1977 models.

In June 1975—six months from now—we make final our decisions on the engines we will offer.

In September 1975 we file an application with EPA, giving them comprehensive technical data on the engines and vehicles we will offer.

In October 1975 we begin 50,000 mile durability test runs for our vehicles on an EPA specified schedule which means they cannot be completed until March of 1976.

In February 1976 we begin a series of 4,000 mile tests to measure emission levels of engines that have passed the 50,000 mile durability test. These so-called data car tests can run up to the start of production.

As we complete our tests, EPA runs its own series of tests to verify the data, reviews all the information that has been generated over the past year, and on the basis of its findings approves our engines and issues a certificate of conformity.

As you can see, any law establishing fuel economy standards in January—when we are in the middle of the emissions certification procedure—is completely unrealistic.

Even if the law did not conflict with the EPA schedule, we could not meet the timetable set by this Bill, because it does not allow sufficient time for research and development. We normally require up to three years for an intensive program to reduce an existing vehicle's weight through the use of new materials and new parts. We need at least five years to design, engineer, test, and introduce a new engine. Even a major change to an existing engine can take up to three years to complete.

In light of all these facts, I urge you to reject the fuel economy standards proposed in the Energy Conservation Act of 1974. We do not need mandatory standards—the industry is already making good progress in improving fuel economy. We will keep on making progress. Because of a number of serious shortcomings, the proposed standards are not realistic. They would create severe economic disruptions. And perhaps most important, they would not accomplish the bill's objectives. The marketplace will probably accomplish them more efficiently.

In its place, I would like to suggest two recommendations we can discuss later if you wish.

First, support proposals to hold emissions standards at present levels through 1980. No other single action Congress can take will have such a beneficial effect on fuel economy. Present standards are more than stringent enough to safeguard the public health. A growing number of people outside the industry recognize this.

Recently, a study by MIT, Harvard, and Columbia for the National Science Foundation concluded that forcing the automobile companies to adopt the catalytic converter now, because it is the only immediately feasible technology to meet the standards, is an "unwise gamble." The study recommended deferring the 1977-78 standards to give us time to develop better technology or new power sources. It would also give the country time to determine what emissions standards are actually necessary to protect public health. I hope the Congress will act quickly on this proposal.

Second, this committee can take the lead in exploring ways government and business can work together to find solutions to the country's energy and environmental problems. The public is tired of confrontations, and of hearings that turn into adversary proceedings. It doesn't want to see business and government locked in combat. The public should expect us to work together to establish realistic long-time goals which can be achieved with the most efficient use of our resources. Because our society's problems demand increasingly complex

technical solutions, the country needs a close partnership between government and industry technology. I'm sure all of us here today realize that without close cooperation between public and private sectors, there can be no lasting or practical solutions to the many problems facing the country today.

I know from my own experiences with the Manhattan Project during World War II that government and business can work together in harmony and trust. In that case, we were partners then in every sense of the word. Working together we successfully carried out an extraordinarily complex technological job in record time. I believe we can rebuild that partnership today—and we should if we hope to resolve the difficult questions of a national energy and environmental policy. It only remains for men of good will to start constructing that partnership. This committee is in an ideal position to provide that needed leadership. You can be sure that Chrysler Corporation will support your effort in any way we can.

[Whereupon, at 12:40 o'clock p.m., the committee recessed to reconvene at 2:20 o'clock p.m., the same day.]

AFTERNOON SESSION

The CHAIRMAN. Mr. Millet and Mr. McElwaine have indicated they can summarize their statements in five minutes. I will call the two together, because they speak to a related subject.

STATEMENT OF RALPH T. MILLET, PRESIDENT, AUTOMOBILE IMPORTERS OF AMERICA, INCORPORATED

MR. MILLET. Mr. Chairman, my name is Ralph Millet. I am president of the Automobile Importers of America, and also representative in the United States for the Swedish automobile manufacturer, SAAB-SCANIA. I will summarize the points in my statement, and then, if I do have time within the five minutes, I would like to make some statements on this morning's presentation.

In summary, my statement suggests that the committee might want to consider a graduated increase in the gasoline tax—and/or, I might personally add, decontrol of oil prices—over the next 4 or 5 years, as an effective way of conserving fuel. However, such an increase should be geared to Detroit's ability to produce greater quantities of smaller, more efficient cars.

I feel that the marketplace should be allowed to determine the fuel efficiency of motor vehicles. However, if Congress feels that legislation is required, it should establish only general goals and objectives related to fuel-efficient cars, and delegate to one agency the authority to implement the legislation. I might compare here the Clean Air Act and the National Traffic and Motor Vehicle Safety Act. The standards are set in concrete in the Clean Air Act, while the discretion to set standards is left to the agency in the Safety Act.

However, whatever measure is finally enacted, it is important that it be applied equally to imported and to domestic cars alike. Any discriminatory treatment in favor of domestic cars would be contrary to the national interest, and in particular inimical to the cause of fuel conservation, the well-being of the imported car industry, the success of the multilateral trade negotiations, and the present export level.

I would like to make some other comments regarding this morning's hearing. First, I would like to clarify the question about the volume of imported cars sold in the United States. There were some statements

made by members of the committee this morning that the imported industry was doing extremely well, and if you look at it from the point of view of share of market, that may well be true. But this is because of the fact that the domestic industry has declined greatly. Actually, the number of imported cars sold in 1974 was substantially below that sold in 1973. I believe that 1,720,000 cars were sold in 1973, and in 1974 that dropped down to 1,370,000. In all probability, the sales for the year 1975, if they proceed at the rate at which they are now going, will reach about 1,500,000. So I think it is somewhat of a misunderstanding to say that the imported car industry has taken over a very large share of the American market.

The other point which I would like to touch on is the question whether you can build a small car which has a fuel economy of 28 miles per gallon, as proposed in the legislation you are considering, and can still carry comfortably six passengers and even tow a trailer or a boat, or what have you? There are a number of imported cars that can very adequately perform this function, although they might not now meet 28 miles per gallon. They certainly would be able to do that by 1985.

I might cite a personal experience. I happened to drive my family, which consists of myself, a wife, and five children, all over the country towing a trailer weighing 1,000 pounds, in a car which weighed 2,750 pounds. It was a small imported car, a station wagon.

Certainly, the ability does exist within Detroit to build cars which can meet the standards in the bill before you. I think it should be realized that Europeans are accustomed to a car in which they are using a large percentage of the engine capacity to perform the function they have to perform, and also using a large part of the capacity of the size of the car. We have a tendency here to use big cars to carry one or two persons, plus a lot of extra horsepower and torque which may not be needed. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Mr. Millet. Now, we will hear from Mr. Robert McElwaine of the American Imported Automobile Dealers Association.

STATEMENT OF ROBERT M. McELWAIN, AMERICAN IMPORTED AUTOMOBILE DEALERS ASSOCIATION

Mr. McELWAIN. Thank you, Mr. Chairman, Senator Packwood. We have submitted fairly detailed testimony on our position on this bill before the committee, and I will confine my remarks to one particular proposal that has been put forward, which is to provide bonus incentives for the purchase of fuel-efficient domestic automobiles. In this, the American businessmen who sell and service imported cars are in agreement with the representatives of the domestic manufacturers who spoke here this morning. We feel the strongest possible incentive for the production of fuel-efficient automobiles is the spur of the marketplace. Public demand and open market competition have already forced manufacturers to the production of more efficient automobiles, and this trend can only accelerate in the future, unless artificial restraints alter the developing product mix.

We are here today to protest, in the strongest possible terms, against legislative proposals that would discriminate against imported auto-

mobiles by providing domestic subsidies to support the purchase of United States and Canadian-produced automobiles providing improved fuel efficiency.

We do this not merely out of self-interest, but in the conviction that such subsidies would be counterproductive, that they would increase rather than decrease gasoline consumption, and would remove the single most effective incentive to the production of more fuel-efficient vehicles, which is unhampered competition in the open marketplace.

Now, such proposals as S. 2046, which would provide Government-subsidized bonuses for the purchase of fuel-efficient domestic automobiles would impose an artificial pricing structure on the automotive market, and by placing the most efficient products at a price disadvantage, disrupt the normal competitive operation of a free market. This legislation, in addition, would be destructive to the 5,000 small American businesses who sell and service imported cars, and jeopardize the employment of 150,000 U.S. workers in those businesses. In addition, it would increase the consumption of gasoline in the United States by transferring the sale of more fuel-efficient imported vehicles to those of less efficient domestic cars. This measure would, according to our analysis, increase the consumption of gasoline in the United States by 50 million gallons in its first year.

A further increase in gasoline consumption probably would result from blunting the competition from the more fuel-efficient imported vehicles, thus removing the incentive to domestic manufacturers to provide truly fuel-efficient automobiles. At the present time, the average miles-per-gallon performance of small imported cars, according to EPA highway figures, is 33 miles per gallon. Under S. 2046, domestic cars delivering only 26 miles per gallon in 1978 would be eligible for the maximum \$300 Government-paid bonus. What this does is establish a \$300 bonus for a purchaser who chooses a 26-miles-per-gallon domestic car over an imported model delivering as high as 39 miles per gallon. Or, to look at it conversely, he would have to pay a \$300 premium in order to buy a car that delivers 50 percent better performance.

Domestic manufacturers, under the spur of imported car competition, have recently committed \$5.5 billion to developing more fuel-efficient vehicles. If the Federal Government were to provide a built-in premium for the purchase of domestic vehicles less efficient than the imports, one has to wonder what percentage of this commitment would the Detroit manufacturers then feel required to spend?

Indeed, the Detroit manufacturers have already demonstrated that by modifying their existing models, they can deliver miles-per-gallon figures of from 34 to 37 miles per gallon. But such models make up only a tiny percentage of their overall production. In General Motors' case, the much-advertised Chevrolet Monza Town Coupe, with a 5-speed transmission, which delivers 34 miles per gallon on the highway, has yet to be delivered to a customer. The 37 miles-per-gallon Chevrolet Vega Notchback Coupe constitutes only 3 percent of total production of all Vegas in this country, which is not even enough to provide each Chevrolet dealer with one such model.

All GM's and Ford's small cars, however, would qualify for the maximum \$300 bonus in 1978, giving Ford and GM little incentive to increase production of their more fuel-efficient models.

Now, this proposed bonus would also have a deleterious effect on employment in the United States. Using accepted figures on the elasticity of price demand, we assume the bonus would transfer the sale of 396,000 automobiles from imported to domestic make, and reduce imported car sales by 25 percent. Now, such a reduction could close from 1,000 to 1,200 imported car dealerships, with a consequent loss of employment for as many as 38,000 U.S. workers, and we do not see any countervailing increase in domestic employment in the United States, for reasons I can explain on questioning.

In the face of all of this evidence, we respectfully urge this committee not to include such a proposal in the energy bill. Thank you, Mr. Chairman.

The CHAIRMAN. Any questions, gentlemen?

Senator Packwood?

Senator Packwood. I have no questions.

The CHAIRMAN. Senator Nelson?

Senator Nelson. I have no questions.

The CHAIRMAN. Thank you very much, gentlemen.

Senator Nelson. I am sorry, Mr. Chairman. I did have a question. Do you have the statistics on the imported passenger cars for the past few years?

Mr. McElwaine. Yes.

Mr. Millet. I gave those before you came in.

Senator Nelson. What was 1973?

Mr. Millet. 1973 is 1,720,000 cars. That does not include Canadian cars. That is just imports from outside of United States and Canada.

Senator Nelson. With Canada what is it?

Mr. Millet. I believe with Canada it was approximately 2½ million cars.

Senator Nelson. That is what puzzles me. This morning I asked, I read from the Commerce Department statistics 2.4, and one of the representatives, General Motors, said no, no that never was above 1.4 million cars.

Mr. Millet. Yes, I heard that exchange this morning. Senator Nelson. I think the figure you are referring to is probably a 1973 figure for all imports, from Canada and other countries.

Senator Nelson. I said foreign imports.

Mr. Millet. Total imports were 2½ million in 1973, of which 1,720,000 were imports from outside of Canada.

Interestingly enough, in 1974 total imports went up to 2.6 million. But imports from countries other than Canada went down to 1,370,000. There was a very sharp increase in imports from Canada in 1974. In 1973 we imported from Canada 780,000 cars. In 1974 we imported 1,230,000. There was an increase of about 50 percent in Canadian cars. Those come in duty free, I might mention.

Senator Nelson. Is my memory correct? In 1963 it was about 400,000 foreign imports?

Mr. Millet. Yes. I believe it was. But I do not know what the figures were for Canada at that time.

Senator Nelson. I say foreign imports. You have counted Canada as a province or something?

Mr. Millet. No, no. I said the figure for imports in 1963 was about 400,000 cars.

Senator NELSON. You said you do not—oh, you mean including Canada.

Mr. MILLET. No, I do not know whether that—

Senator NELSON. When I say foreign imports, I mean any country other than the United States.

Mr. MILLET. I see.

Mr. McELWAIN. That would not include Canadian imports, I do not think, Senator.

Senator NELSON. The 400,000 does not include—

Mr. McELWAIN. Does not. The Canadian imports are always carried in industry figures as a domestic automobile because they are sold, they are indistinguishable from the domestic product. They are sold on the same basis.

Senator NELSON. Do we have in the record all foreign imports, 1963 through 1974, as well as a segregation from Canada and all of the countries. Did you present this?

Mr. MILLET. No. We will be very pleased to submit that.

Senator NELSON. Do you have the statistics?

Mr. MILLET. Yes. I do not have them with me.

Senator NELSON. If the Chairman does not object, I would like to have them printed in the record at this point.

The CHAIRMAN. Without objection, so ordered.

[The information referred to follows:]

IMPORTED CAR SALES HISTORY IN U.S. MARKET--1960-75

Year	Non-Canadian imports ¹	Canadian imports ²
1950.....	497,836	NA
1961.....	378,622	NA
1962.....	339,160	NA
1963.....	385,624	NA
1964.....	484,131	NA
1965.....	569,415	21,809
1966.....	658,123	163,252
1967.....	779,220	360,968
1968.....	985,767	517,084
1969.....	⁴ 1,061,617	676,765
1970.....	⁴ 1,230,961	681,872
1971.....	⁴ 1,487,613	766,432
1972.....	⁴ 1,516,183	844,996
1973.....	⁴ 1,719,913	913,808
1974.....	⁴ 1,369,148	819,813
1975 ³	836,703	NA

¹ European and Japanese cars registered in U.S. market. (Source: R. L. Polk registrations.)

² Cars built in Canada for sale in U.S. market. (Source: Automotive News.)

³ Through June 1975.

⁴ Oklahoma registrations not included (from April 1969).

The CHAIRMAN. Any further questions, gentlemen?

Thank you very much.

Mr. MILLET. Thank you very much.

Mr. McELWAIN. Thank you very much.

[The prepared statements of Messrs. Millet and McElwaine follow. Oral testimony continues on p. 215.]

STATEMENT OF RALPH T. MILLET, PRESIDENT, AUTOMOBILE IMPORTERS
OF AMERICA, INC.

Mr. Chairman and Members of the Committee, my name is Ralph T. Millet. I am the U.S. Representative of SAAB-SCANIA, AB, which manufacturers the

SAAB car. I appear before you today in my capacity as President of the Automobile Importers of America, Inc.—AIA—which consists of all the major foreign automobile manufacturers, except Volkswagen and Mercedes-Benz (see attached list of members). I hope that my views will assist the Committee in its deliberations on the subject of automobile efficiency and energy conservation.

For a number of years, most foreign car manufacturers have concentrated on building a small, light, and maneuverable car that is relatively inexpensive to run and maintain. This has been due primarily to the higher cost of gasoline abroad, which has generally been more than a dollar per gallon, as well as to lower income levels. As a result, the vast majority of imported cars are relatively efficient users of gasoline.

In short, the imported car makes a significant contribution to the cause of fuel conservation. Foreign manufacturers as a whole are committed to making further strides in the conservation of fuel, while continuing to make cars that are safe and clean as required by Federal and state laws. In fact, the benefits afforded by imported cars certainly demonstrate that our free enterprise system works out for the good of all. Over the past 15 years imported cars have given Americans a choice in terms of price, economy, size, weight, efficiency, and technical innovation.

Turning now to the bill before you, H.R. 6860, AIA first suggests that the Committee might wish to consider amending the bill to provide for a graduated increase in the gasoline tax over the next four or five years. In the near term, at least, this would appear to be an effective way of conserving fuel, bringing about less use of the heavier, less-efficient cars, and hastening their retirement. I would emphasize, however, the AIA is not suggesting the consideration of an increased gasoline tax in order to try to obtain a preferred position over domestic cars. AIA believes that any such increase should be geared to Detroit's ability to produce greater quantities of smaller and more-efficient cars. While the imported car industry has stressed the need for fair legislative treatment, by the same token it is not seeking unfair advantages.

AIA is naturally most interested in that part of H.R. 6860 that would establish fuel-economy standards. It is AIA's position that the marketplace should be allowed to determine the fuel efficiency of motor vehicles. In recent years, the availability of the more efficient imported cars has induced the American consumer to purchase such cars in greater quantities. This in turn has led Detroit to place greater emphasis on the production of similar cars. Indeed, the major domestic manufacturers have announced plans to make substantial new investments to render themselves more competitive with imported cars.

If, however, because of the energy crisis, Congress feels that legislative measures are required, AIA would urge that it follow example set by the National Motor Vehicle Safety Act and not the Clean Air Act. That is, the legislation should establish only general goals and objectives related to fuel-efficient cars and should delegate to an agency like the Department of Transportation the authority to implement the legislation. AIA's experience with both Acts indicates that it would be far better to have the administering agency determine the specific fuel-efficiency standards in the light of changing circumstances, such as new technology, shifting energy sources, and differing transportation needs. A specific fuel-economy standard for model year 1985 that appears sound and practical today may well turn out to be either too lax or too demanding ten years from now.

Whatever measure or measures may be finally enacted, it is important that they be applied equally to imported and domestic cars alike. Whether they are in the nature of incentives or disincentives, they must operate in a non-discriminatory fashion, for several reasons. First, a discriminatory measure, such as a bonus for more efficient domestic cars, would in all likelihood result in far less fuel conservation than a non-discriminatory measure, since, in comparison with domestic models, imported models are generally achieving higher levels of fuel economy. Earlier this year, nineteen models attained more than 30 miles per gallon in the Highway cycle, and of these only one was domestically-made. Since that time, the pressures of the market place have stimulated Detroit to bring out several new models that achieve this level of efficiency. An incentive granted only to domestic cars would clearly discourage the purchase of the efficient imported cars. Likewise, a disincentive imposed only on imported cars would not effectively encourage the purchase of smaller, efficient American cars.

Second, a discriminatory measure would harm the imported car industry. Consisting of importers, distributors, and dealers, it is a significant domestic industry. In 1973, for example, it employed more than 143,000 persons, had an annual payroll of \$1.44 billion and sales of \$9 billion, of which over half remained in this country.

Third, a discriminatory measure would be an outright violation of the "national treatment" obligation in our treaties of friendship, commerce, and navigation with Italy, Japan, and West Germany and in the General Agreement on Tariffs and Trade. Under the national treatment obligation, the United States must accord to products of other countries treatment no less favorable than that granted to domestic products in all matters affecting internal taxation, sale, distribution, and use. Such a blatant violation of this obligation affecting all imported cars would seriously harm the efforts of the United States in Geneva to obtain the elimination of discriminatory practices of other countries that inhibit our export potential.

Fourth, a discriminatory measure affecting a major sector of international trade would, in my judgment, probably lead to retaliatory action—of an overt or covert nature—that would hurt present U.S. exports. In other words, there are very concrete reasons why it would not be in the national interest to impose discriminatory measures on imported cars.

In dealing with this question of discrimination, I am aware of an inclination to try to assist Detroit and the energy problem at the same time. Why not, in other words, use an energy bill to give Detroit a shot in the arm?

This attitude is based upon two fallacies. The first fallacy is that imports—that is, all non-Canadian foreign cars—will take a far larger share of the market in 1975 than they did in 1974. In fact, for the present calendar year, it is now very likely that the import share will be about 18%, up only modestly from 15.7% in 1974. It is true that in the first four or five months of 1975, imports were as high as 22% of the market. This was due, however, to the disposal of large inventories of 1974 models. In general, imports are not expected to have a particularly good year, and the absolute number of imports sold in 1975 will be less than the number in 1973, which was 1.7 million.

The second fallacy is that imports are the primary or, at least, a significant cause of Detroit's present difficulties. In fact, imports are not responsible for these difficulties. The domestic automobile industry has been severely hit by the combination of recession and inflation that has affected the entire domestic economy. Indeed, these same forces have hurt the imported car industry, and sales in 1974 and 1975 will be below the volume in 1973.

In conclusion, I would emphasize that imported cars have done much to demonstrate to the American public and automotive industry that efficiency, safety, and low emissions are not incompatible. They can and, I am sure, will continue to serve as a salutary guide and example, so long as discriminatory measures are not enacted or promulgated.

Attachment:

AUTOMOBILE IMPORTERS OF AMERICA, INC.

Members

Alfa Romeo, Inc.
 Bayerische Motoren Werke A.G.
 British Leyland Motors Inc.
 Citroen Cars Corp.
 FIAT Motor Co., Inc.
 General Vehicle, Inc.
 American Honda Motor Co., Inc.
 Jensen Motors Limited
 Lotus Cars Ltd.
 Mazda Motors of America (N.W.) Inc.
 Mitsubishi Motors Corp.
 Nissan Motor Corp., in U.S.A.
 Peugeot, Inc.
 Renault, Inc.
 Rolls-Royce Motors Inc.
 SAAB-SCANIA of America, Inc.
 Subaru of America, Inc.
 Toyota Motor Sales, U.S.A., Inc.
 Volvo of America, Inc.

Associate members

Bridgestone Tire Co., of America, Inc.
 Joseph Lucas North America, Inc.
 Michelin Tire Corp.
 Nisonzer Corp.
 Pirelli Tire Corp.
 Semperit of America, Inc.
 Toyo Tire (U.S.A.) Corp.
 Yokohama Rubber Co., Ltd.

Subscribers

Chambre Syndicale des Constructeurs D'Automobiles (CSCA)
 Van Doorne & Personenautofabriek DAF B.V. (DAF)
 Japan Automobile Manufacturers Association (JAMA)
 Satra Industrial Corp.
 The Society of Motor Manufacturers and Traders Limited (SMMT)
 U.S. Suzuki Motor Corp.
 Yamaha International Corp.

TESTIMONY OF ROBERT M. McELWAIN, ON BEHALF OF THE AMERICAN IMPORTED
 AUTOMOBILE DEALERS ASSOCIATION

The subject of energy conservation is a matter of the utmost concern to the 4,759 American businessmen who sell and service imported automobiles. These businessmen are proud that they have pioneered in educating the American public to the benefits of fuel-efficient automobiles over the past two decades.

It is the position of our members that the strongest possible incentive for the production of fuel-efficient vehicles is the spur of the marketplace. Public demand and open-market competition already have forced manufacturers to the production of more efficient automobiles. The trend can only accelerate in the future—unless artificial restraints alter the developing product mix. We appear here today to protest in the strongest possible terms against legislative proposals that would discriminate against imported automobiles by providing domestic subsidies to support the purchase of U.S. and Canadian-produced automobiles providing improved fuel efficiency.

We do so, not merely out of self-interest, but in the conviction that such subsidies would be counter-productive, increasing rather than decreasing gasoline consumption and removing the single most effective incentive to the production of more fuel-efficient vehicles. That incentive is the tried and true method of unhampered competition in the open marketplace.

Such proposals as S. 2046, the bill to provide government-subsidized bonuses for the purchase of fuel-efficient domestic automobiles would impose an artificial pricing structure on the automotive market and, by placing the most efficient products at a price disadvantage, disrupt the normal competitive operation of a free market.

This legislation, in addition, would be destructive to 5000 small American businesses, jeopardize the employment of 150,000 U.S. workers—and increase the consumption of gasoline in the United States. By transferring the sale of more fuel efficient imported vehicles to that of less efficient domestic cars, this measure would, according to our analysis, increase the consumption of gasoline in the United States by 50 million gallons in its first year.

A further increase in gasoline consumption probably would result from blunting the competition from the more fuel-efficient imported vehicles, thus removing the spur to domestic manufacturers to provide truly fuel-efficient automobiles. At the present time, the average miles-per-gallon performance of small imported cars, according to EPA highway figures, is 39 mpg. Under S. 2046, domestic cars delivering only 26 mpg in 1978 would be eligible for the maximum \$300 government-paid bonus.

This would establish a \$300 bonus for a purchaser who elects to buy a 26-mpg domestic car over an imported model delivering as high as 39-mpg. Or, to look at it conversely, he would have to pay a \$300 premium in order to buy a car that delivers 50 percent better performance in terms of fuel consumption. To describe such a measure as a bill "to provide tax incentives for the . . . purchase of automobiles which use fuel efficiency" is a misnomer of awesome proportions.

Domestic manufacturers, under the spur of imported car competition, have recently committed \$5.5 billion to developing more fuel-efficient vehicles. With

the Federal Government providing a built-in premium for the purchase of domestic vehicles less efficient than the imports, what percentage of this commitment would the Detroit manufacturers then feel required to spend?

Indeed, the Detroit manufacturers have demonstrated recently that by modifying their existing models, they can deliver miles-per-gallon figures of from 34 to 37 mpg. But such models make up only a tiny percentage of their overall production. The so-called MPG model Ford cars constitute only an undisclosed fraction of their total production. In General Motors' case the much-advertised Chevrolet Monza Town Coupe, with 5-speed transmission, which supposedly delivers 34 mpg on the highway, has yet to be delivered to a customer. The 34-mpg Chevrolet Vega Notchback coupe constitutes only three percent of total Vega production, not even enough to provide each Chevrolet dealer with one such model.

All of GM's and Ford's small cars, however, would qualify for the maximum \$300 bonus in 1978, giving Ford and GM little incentive to increase production of their more fuel-efficient models.

Such practical consideration aside, this legislation also would :

Nullify and impair previously negotiated tariff arrangements ;

Violate the national treatment obligation of the GATT ;

And result in the revocation of the GATT waiver for the U.S.-Canadian Automotive Products Agreement.

The proposed bonus also would have a deleterious effect on employment in the United States. Using accepted figures on the price elasticity of demand, we assume the bonus would transfer the sale of 396,000 automobiles from imported to domestic makes and reduce imported car sales by 25 percent. Such a reduction could close from 1,000 to 1,200 imported car dealerships, with a consequent loss of employment for as many as 38,000 U.S. workers.

Domestic manufacturers have displayed many times, the capacity to increase production by substantially greater amounts than this indicated transfer with little or no increase in employment. For each of the 25,000 domestic automobile dealers, a transfer of 396,000 sales from imported cars would mean only 1.3 additional new car sales per month—hardly enough to justify any meaningful increase in employment. We assume, therefore, only a minimal increase in employment on the domestic automobile sale side, which could not balance out the substantial job loss among imported car dealers.

All these statistics are based on studies by Harbridge House, "The Imported Automobile Industry: An Assessment of Key Aspects of Its Impact on the U.S. Economy and the American Consumer" (1973) and "Employment and the Imported Automobile Industry" (1974).

In the face of such evidence that §. 2046 would :

Increase gasoline consumption in the United States ;

Remove incentives for the production of more fuel-efficient automobiles ;

Increase unemployment in the U.S. ;

And violate previously negotiated trade agreements.

We respectfully urge this committee not to include such a proposal in the Energy Bill.

I. ANALYSIS

It has been proposed that the Federal Government pay a bonus to purchasers of domestic automobiles which are relatively fuel-conserving in nature. There are four reasons such a proposal should be rejected :

(a) The bonus would be in effect a domestic subsidy for the U.S. automobile industry which would introduce an artificial competitive advantage for U.S. producers and introduce serious distortions into the marketplace ;

(b) The bonus would result in windfall profits to an oligopolistically-controlled industry for doing what it should have done a generation ago ;

(c) The bonus could result in the revocation of the GATT waiver for the United States-Canadian Automotive Products Agreement of 1965 ; and

(d) The bonus would violate the national treatment obligation of the GATT. These points are explained in more detail below.

II. AN ANALYSIS OF A BONUS FOR DOMESTIC AUTOMOBILE PURCHASERS

A. *The economics of domestic subsidies*

The proposed bonus is in effect a domestic subsidy for manufacturers of automobiles in the United States. Domestic subsidies differ from export subsidies

in that they are made to producers whether they export or not. However, those that do sell abroad obtain an artificial competitive advantage in export markets over foreign producers just as if they alone had received the subsidy. Domestic producers are also given a special advantage in competing against imports. In short, domestic subsidies have the same directional effect in distortions in the marketplace as do export subsidies and import duties.¹

The question that must be considered is whether the effort to subsidize special groups or activities is a desirable economic policy in the long run, despite certain arguably worthwhile short run objectives. Surely the current U.S. subsidy program for the shipping and shipbuilding industries has indicated the dangers involved in subsidizing special interest groups.²

The economic flaw of the proposed subsidy approach is its introduction of artificiality into the domestic marketplace. By giving a price advantage to some producers and not to others, competition based on the relative merits of the products involved is removed. Competition on the merits is the linchpin of our free market economy. Competition on the merits should be lessened only for an overriding social good. The production of fuel-conserving cars by companies that should have been producing them years ago hardly falls in that category of worthwhile objectives.

B. *Windfall profits*

Economists have long criticized subsidies as inefficient. But subsidies are obnoxious on moral grounds as well—it is simply unfair to further bolster the income of one segment of the economy through windfall profits while not making commensurate benefits available to other segments of the population. It is particularly inappropriate to give large tax subsidies to an industry that has consistently refused to provide the smaller fuel-conserving car that consumers have desired over the years. The anterior question here is why Detroit emphasized the production of large cars and deemphasized the production of smaller fuel-conserving cars in the first place. The answer is found in the revealing statistic that General Motors can produce a Cadillac for only \$300 more than it costs to build a full-size Chevrolet, and yet it can sell a Cadillac for \$3,000 more than it can sell a Chevrolet. For two decades, then, the prevailing philosophy of Detroit has been that big cars mean big profits. It is clear that over the years General Motors, Chrysler, and Ford have maximized their profits by playing the role of yielding oligopolists, ceding market shares while maintaining a higher price structure for their larger automobiles. Given the rational profit-maximizing strategy of the U.S. automobile manufacturers in the past, it now seems incongruous to ask the U.S. taxpayers to pay the price of a tax subsidy. If this were to occur, U.S. taxpayers would be providing windfall profits to producers for doing what they should have been doing a generation ago.

C. *The United States-Canadian Automotive Agreement*

At the time the United States-Canadian Automotive Products was negotiated, it was widely recognized that the Agreement, by providing different tariff treatment for the automobile products of different countries, violated the Most-Favored-Nation principle in Article I of the GATT. Accordingly, the United States sought, and received, a waiver from the Contracting Parties of the GATT under Article XXV (5). The Contracting Parties, after serious misgivings, finally granted the waiver on December 20, 1965. It was granted on the condition that there would be no significant diversion of trade in automobiles away from the historical patterns of the world automobile market. The waiver states:

"In the event the parties to consultation in accordance with paragraph 2 above agree there has been a significant diversion or is an imminent threat of diversion of trade, the waiver shall terminate in accordance with paragraph 5, with respect to the automotive product or products in question. If the parties to consultation fail to reach agreement, either may refer the question whether there has been a significant diversion or is an imminent threat of diversion of trade to the contracting parties. If the contracting parties decide that the requesting country has a substantial interest and that there has been a significant diversion or is an imminent threat of diversion of trade, the waiver shall terminate in accord-

¹ Robert E. Baldwin, "Nontariff Distortions of International Trade", in Williams Commission Report (1970), Papers I, at p. 650.

² For an excellent study of the futility of the current U.S. ship subsidy program see Gerald Jantscher, "Bread Upon the Waters" (The Brookings Institution, Washington, D.C., 1975).

ance with paragraph 5, with respect to the automotive product or products in question."

The proposed bonus would result in a "significant diversion" or "imminent threat of diversion of trade". Accordingly, the bonus would "open up" the Agreement to a revocation of the GATT waiver by other contracting parties such as Japan and West Germany, who would justifiably feel that a "substantial diversion of trade" would result from the proposed credit. Moreover, the waiver, by its own terms, would be ended whenever there is "a significant diversion or is an imminent threat of diversion of trade" in automobiles and parts.

D. *The National Treatment Obligation of the GATT*

The bonus would violate the national treatment obligations of the General Agreement on Tariffs and Trade (GATT). The application of the bonus for only domestically-produced automobiles is a clear violation of Article III, q 2 of the GATT which provides that imported goods must be accorded the same treatment as goods of local origin with respect to matters under government control, such as internal taxation.³ The GATT clearly defines the national treatment obligation with respect to internal taxes:

"The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products. Moreover, no contracting party shall otherwise apply internal taxes or other internal charges to imported or domestic products in a manner contrary to the principles set forth in paragraph 1."⁴

Moreover, it has been acknowledged that the GATT rules on national taxation preclude granting exemptions from such taxes for domestic goods but not for imported goods. In 1950 the New Zealand, for example, complained to the GATT Contracting Parties of the "Utility System" used by Great Britain, under which certain domestically produced consumer goods were exempted from the tax while imports were not. Significantly, Great Britain agreed that the tax system was improper under the GATT and one year later abolished the utility system, thereby removing the discriminatory aspects of the purchase tax.⁵

Apart from violating the national treatment obligation of the GATT, the discriminatory credit arrangement which has been suggested by some would amount to the nullification and impairment of previously negotiated tariff concessions. Under Article XXIII of the GATT the other affected contracting parties such as Germany and Japan could request that the application of prior trade concessions made to the United States be suspended or that other appropriate remedies be given. In other words, the suggested bonus mechanism would probably trigger a trade war, a trade war in which the other contracting parties of the GATT would be entirely justified in withdrawing trade concessions from the United States. Since the withdrawn trade concessions might well be in markets other than automobiles, it is likely that U.S. exporters totally unrelated to the automobile market would be made to suffer for the discriminatory taxing arrangement that has been suggested.

III. INCREASED FUEL CONSUMPTION

If the proposed tax credit for purchasers of new automobiles is applied solely to domestic automobiles, there would be a substantial net fuel loss to the U.S. economy. This would result from the superior fuel economy of foreign automobiles, which, according to EPA statistics, are averaging approximately 33 miles per gallon. Thus, even if a credit is given for "fuel-conserving" domestic automobiles there would be a net fuel loss to the U.S. economy.

In order to estimate the fuel losses that would occur, the following general assumptions were made:

- (a) The price elasticity of demand for domestic automobiles is -0.9 ;
- (b) The average imported automobile obtains approximately 33 miles per gallon; and
- (c) The price of domestic automobiles would rise in the lower fuel-consumption categories, as such automobiles tend to be larger and more expensive.

³ See in general Jackson, *World Trade and the Law of GATT*, Chapter 12 (1969).

⁴ General Agreement on Tariffs and Trade, Article III, paragraph 2.

⁵ See Jackson, *supra* note 1, at p. 284.

The calculation was made on a "slab" basis, as one must add up the impact separately for the five different categories for which the credit would be given.

Miles per gallon category	Additional domestic cars sold ¹	Additional gallons of gasoline used ¹
24 and over.....	259,295	25,151,615
23 to 24.....	173,880	19,822,320
22 to 23.....	113,647	15,001,404
21 to 22.....	77,789	11,823,928
20 to 21.....	36,267	6,274,191
Total.....	660,878	78,073,458

¹ See table 1 to 5.

Note: These tables were figured on the basis of a sliding scale credit of from \$100 to \$500, depending on fuel efficiency. It is not possible to make similar estimates based on 1978 production, since no figures on fuel efficiency of 1978 models are available.

TABLE I

24 AND OVER BRACKET

1. \$500 credit (thus, assuming a \$3,000 automobile), is a 16 $\frac{2}{3}$ % reduction in price;
2. There is an increase in demand for domestic automobiles of 15.03%, assuming a -0.9 price elasticity of demand;
3. There is a correlative decrease in demand for imports of 15.03% or 259,295 (.153 \times 1,694,740).
4. There is the following loss of fuel per year, assuming:
 - (a) The average MPG of the replaced foreign automobiles is 33 MPG;
 - (b) The average MPG of the domestic automobiles is 25; and
 - (c) The average usage of each automobile purchased is 10,000 miles per year;
 - (d) * * * average import uses 303 gallons per year; average domestic would use 400 gallons per year;
 - (e) 97 (400-303) \times 259,295 = 25,151,615 gallons, or 598,848 barrels of gasoline (42 gallons = 1 barrel).

TABLE 2

23-24 BRACKET

1. \$400 credit (thus, assuming a \$3,500 automobile), is an 11.4% reduction in price;
2. There is an increase in demand for domestic automobiles of 10.26%, assuming a -0.9 price elasticity of demand;
3. There is a correlative decrease in demand for imports of 10.26% or (.1026 \times 1,694,740) 173,880.
4. There is the following loss of fuel per year, assuming:
 - (a) The average MPG of the replaced foreign automobiles is 33 MPG;
 - (b) The average MPG of the domestic automobiles is 24;
 - (c) The average usage of each automobile purchased is 10,000 miles per year;
 - (d) * * * average import uses 303 gallons per year; average domestic would use 400 gallons per year;
 - (e) 114 (417-303) \times 173,880 = 19,822,320 gallons, or 471,960 barrels of gasoline (42 gallons = 1 barrel).

TABLE 3

22-23 BRACKET

1. \$300 credit (thus, assuming a \$3,700 automobile), is an 8.1% reduction in price;
2. There is an increase in demand for domestic automobiles of 7.29%, assuming a -0.9 percent elasticity of demand;
3. There is a correlative decrease in demand for imports of 7.29%, or (.0729 \times 1,694,740), 113,647.
4. There is the following loss of fuel per year, assuming:
 - (a) The average MPG of the replaced foreign automobiles is 33 MPG;

- (b) The average MPG of the domestic automobile is 23;
- (c) Average use of car=10,000 miles per year;
- (d) * * * average import uses 303 gallons per year; average domestic would use 435 gallons per year;
- (e) $132 (435-303) \times 113,647 = 15,001,404$ gallons, or 357,176 barrels of gasoline.

TABLE 4

21-22 BRACKET

1. \$200 credit (thus, assuming a \$3,900 automobile), is a 5.1% reduction in price;
2. There is an increase in demand for domestic automobiles of 4.59%;
3. There is a correlative decrease in the demand for imports of 4.59%, or $(.0459 \times 1,694,740)$, 77,789.
4. There is the following loss of fuel per year, assuming:
 - (a) The average MPG of the replaced foreign automobiles is 33 MPG;
 - (b) The average MPG of the domestic automobiles is 22 MPG;
 - (c) The average usage of each automobile purchased is 10,000 miles per year;
 - (d) * * * average import uses 303 gallons per year; average domestic would use 455 gallons per year;
 - (e) $152 (455-303) \times 77,789 = 11,823,928$ gallons, or 281,522 barrels of gasoline.

TABLE 5

20-21 BRACKET

1. \$100 credit (thus, assuming a \$4,200 automobile), is a 2.38% reduction in price;
2. There is an increase in demand for domestic automobiles of 2.14%;
3. There is a correlative decrease in the demand for imports of 2.14%, or $(.214 \times 1,694,240)$, 36,267.
4. There is the following loss of fuel per year, assuming:
 - (a) The average MPG of the replaced foreign automobile is 33 MPG;
 - (b) The average MPG of the domestic automobiles is 21 MPG;
 - (c) The average usage of each automobile purchased is 10,000 miles per year;
 - (d) * * * average import uses 303 gallons per year; average domestic would use 476 gallons per year;
 - (e) $173 (476-303) \times 36,267 = 6,274,191$ gallons, or 149,385 barrels of gasoline.

The CHAIRMAN. Now, Senator Packwood has told to me the fact that Mr. William Johnson, professor of economics from George Washington University has to catch a 3 o'clock airplane. So I will call Professor Johnson at this time.

Could you summarize your statement in 10 minutes, Mr. Johnson?

STATEMENT OF MR. WILLIAM A. JOHNSON, PROFESSOR OF ECONOMICS, GEORGE WASHINGTON UNIVERSITY, DIRECTOR, UNIVERSITY ENERGY POLICY RESEARCH PROJECT

Mr. JOHNSON. Mr. Chairman, I want to thank you very much, first of all, for letting me speak earlier. I do have to catch a plane in about 1½ hours from now.

My name is William A. Johnson. I was formerly an Assistant Administrator at the Federal Energy Office and I am currently a professor of economics at George Washington University and director of the university's energy policy research project. I appreciate very much this opportunity to appear before you today to discuss H.R. 6860 and, more generally, various energy problems that now confront the Nation.

On January 15, 1975, President Ford announced major new initiatives intended to reduce imports of oil by 1 million barrels per day by

the end of 1977. According to the President, were the administration program adopted, the United States could become invulnerable to foreign supply interruptions by 1985.

Although one might disagree with certain features of the program, it does contain several important initiatives which, if fully implemented, probably could have accomplished many of the objectives set for it. Especially important, in my judgment, was the administration's emphasis on price incentives rather than volumetric controls to achieve a reduction in demand and an increase in the supply of energy.

H.R. 6860 was to have been a congressional alternative to the administration program. In fact, it would do very little to help achieve our longran national objective of energy security. Many of the bill's stronger provisions have been dropped, including most of those that used price and fiscal means for reducing U.S. dependence on foreign sources of oil. In my judgment, H.R. 6860 will not result in the reduction in consumption anticipated in the original administration proposal. It would also create an extremely complex, exception ridden system of taxation and import quotas that would allow many users of oil to avoid the sacrifices that will be necessary if the United States is to reduce its dependence on foreign sources of energy.

I will confine my formal comments on H.R. 6860 to two of its provisions: first, the establishment of import quotas and an import license auction and, second, the industrial use tax and various tax credits intended to encourage greater supply and more efficient use of energy.

First, import quotas: H.R. 6860 would place a ceiling on imported oil of 6 million barrels per day in 1975 and 1976, raise this ceiling to 6.5 million barrels per day in 1977, lower it to 6 million barrels per day in 1978 and 1979, and raise it again to 6.5 million barrels per day in 1980 and thereafter. The President would be empowered to adjust this ceiling by 1 million barrels per day from 1975 through 1977, 1.5 million barrels per day in 1978 and 1979, and 2 million barrels per day in 1980 and thereafter.

Let me observe, first, that one of the common problems with any quota system is its inflexibility. It is difficult to fine tune quota levels, and it appears to me that this problem has not been avoided in H.R. 6860. Certainly this is the implication of these rather precise limits that have been set in the bill. These limits may be sufficiently generous, so that for all practical purposes, no import restrictions exist. Or they may prove overly restrictive, in which case the nation would face serious shortages. In this latter case, it is likely that Congress might simply enact higher import ceilings as the need arises. Of course, in this case, the quotas would also come to have little meaning, especially in industry investment plans.

H.R. 6860 does contain a provision for allocating supply reductions to end users. The bill would establish public auctions for import licenses, with a separate auction for small refiners and independent marketers. It would also allow import tickets to be resold, thus providing some flexibility in what could otherwise be a highly inflexible system for controlling imports. The prices paid at auction would, presumably, be passed on to the final consumer in the form of price increases. In this way, the shortages created by the Government would be distributed, imperfectly perhaps, by a market mechanism.

Two points should be stressed. First, the belief that quotas will make it possible to avoid price increases is mistaken. Because of the auction provision, there will be some price increases unless, of course, the quota levels are so high that they are ineffectual and bids are insignificant.

Second, in theory a quota auction system should yield the same price and import levels as the tariff license fee approach adopted by the administration. The choice between the two boils down to a choice between different forms of administering an import control program and the differing incentives and disincentives that each form creates.

In early 1973 the Oil Policy Committee considered both the quota auction and tariff license fee approaches. It chose the latter for several reasons, perhaps the most important being that, with a tariff or license fee, companies would be assured that they could purchase the oil they need at some price. This is important because the single most important factor in deciding whether to construct a refinery is the availability of crude oil. However, with the quota auction system security of supply would be less certain. This, in turn, might deter needed investment in domestic refining capacity. Indeed, this is precisely what occurred under the old oil import quota system.

The reimposition of a quota system by H.R. 6860 would also subject the Government to substantial pressures by various interest groups. Everyone would want special treatment. The same interests that received exemptions from the old oil import quotas would demand these exemptions once again.

This has already happened. H.R. 6860 would establish separate quota programs for small refiners and independent marketers. There would also be 2 million barrels per day set aside for distillate and residual fuel oil imports used in home heating and generating electricity, while petrochemical feedstocks would be exempted altogether.

Perhaps the worst failing of the old oil import quota program was the numerous exemptions granted certain privileged groups, including heating oil importers, electric utilities, and the petrochemical industry.

Primarily because of these exemptions the east coast, and the Northeast especially, became heavily dependent upon imported oil. When the Arab embargo was imposed, the east coast imported over 90 percent of its residual fuel oil, while New England imported nearly 40 percent of its home heating oil. Because the exemptions were heavily weighted toward refined products, the United States, in effect, began to export its refining capacity. The easiest way to beat the quotas was to build a refinery in Europe, Canada, or the Caribbean based on foreign crude and then to ship the refined products to U.S. markets. This made the United States doubly vulnerable to the Arab embargo.

Even before the Arabs cut off oil to the United States, several European countries and Canada began to restrict exports of refined products in order to build up their own inventories in anticipation of supply interruptions. The quota system in H.R. 6860 would create the same disincentives to refinery construction because of the preferential treatment afforded product imports.

I also question whether the exemptions contained in H.R. 6860 are justified. Why, for example, should the petrochemical industry receive special treatment? During the embargo the industry demanded and received preferential treatment under the allocation program.

One of the arguments used by the industry was that petrochemicals are essential to the national security and the well-being of the economy. I think this is correct and, for this reason, believe that the petrochemicals industry should also be subject to quota restrictions, except for that portion of imports used in the manufacture of products for export.

I am not arguing for the free importation of oil. Far from it. As long as oil will be used as a political weapon, it is imperative that we take measures to safeguard our national security.

I am arguing that quotas are not the best way to achieve this objective. A major advantage of the price and fiscal measure proposed by the administration is that they would be relatively immune to favoritism and privilege. It is surprising to me that memories of the old oil import quota system, and all its deficiencies, have dimmed so quickly. The program was the subject of tremendous political controversy throughout its existence. When it was abandoned in April 1973, there was general acclaim by those who were familiar with it and how it operated.

Mr. Chairman, let me if I may, summarize very briefly the remainder of what I say, since my time has run out.

I go on to talk about the various tax provisions that are contained in H.R. 6860. These tax provisions seem to me, to be rather anomalous. First of all, the industrial use tax contains a number of exemptions. It is difficult for me to understand which uses of oil by industry would be subject to tax after the exemptions are tallied up. The purpose of the tax is to encourage greater conservation through higher prices: yet many potential sources of conservation will be eliminated because of these exemptions.

Various other tax provisions and tax credits in H.R. 6860 also suffer from a selective bestowal of special privilege. There are tax credits for a number of things, ranging from using waste as fuel to the purchase of electric-powered vehicles, and the development of oil shale. One problem with these tax incentives is that they apply to only a few of the ways of conserving energy or of producing alternatives to oil and gas. Why, for example, are there not credits for the installation of more efficient oil and gas furnaces, or the production of heavy oils, or secondary and tertiary recovery?

It also seems rather strange that having just eliminated one tax loophole, the depletion allowance, which favors more conventional ways of producing oil, we are now in the process, in H.R. 6860, of creating a number of other loopholes for unconventional ways of producing oil. I would think that the path of consistency would either be to bring back the depletion allowance or to avoid tax loopholes altogether and to attempt to develop various ways of encouraging the production of oil that are neutral with respect to technology. I am concerned that the emphasis on nonconventional methods of producing oil will lock us into high-cost alternative methods that may in the future prove to be less than optimal.

The best approach, in my opinion, is to raise the prices of all forms of energy and to provide equitable price and tax incentives for conservation and domestic production of all energy sources. And to this end, I urge the Senate Finance Committee to avoid selective tax credits as a way of providing incentives for greater conservation or produc-

tion and to adopt instead measures that are neutral with respect to technology.

The CHAIRMAN. I am sorry, sir, but you have exceeded your time limit. We will print the entire statement.

Mr. JOHNSON. Yes; please, if you would I would appreciate it.

The CHAIRMAN. Do the Senators have any questions?

Senator Brock.

Senator BROCK. Mr. Johnson, you were in the Federal Energy Office, and I would like to just take you from that experience to your current proposal.

Would not a quota system inevitably lead back, then, to the bureaucracy and the inefficiencies that come therefrom?

I would cite, for example, the fact—and I do not know if you had it in your testimony—I do not recall it, anyway—that we have lost new refineries to a rather considerable degree. I do not know if you know how many barrels per day of refinery capacity has been lost in the last couple of years.

Do you have that?

Mr. JOHNSON. I do not know about in the last couple of years. Do you mean new projects that have been canceled because of one reason and another?

Senator BROCK. Yes.

Mr. JOHNSON. I did a tally about 6 months ago, which estimated that in excess of 2 million barrels per day of new refinery capacity, or rather plans for building new refinery capacity, has been canceled. That is an estimate as of January, and there have been more cancellations since then. In some instances, these were new refinery plans that were never announced and which have been quietly scrapped.

Senator BROCK. Well over 2 million barrels a day in lost capacity as a result of the existing allocation system, in conjunction with the previous controls.

Mr. JOHNSON. It is a result of several factors that enter into the decisions of the various oil companies. There have been, throughout the existing oil controls, uncertainties about what the prices will be. The entitlements program, makes it highly uncertain that companies will be able to utilize the crude oil they develop for themselves. And if they have to sell it, it makes it uncertain as to what price they will be allowed to sell at. All of these factors have created uncertainties and greater hesitancy to build refineries in the United States.

Senator BROCK. All right.

Now, let me take you to the second step of a logical sequence. If you deregulate, as some of us believe we should and as you have testified, and yet leave on quotas, are you not going to be forced to reimpose price controls? Because, by the very nature of quotas, if you have less supply than you have demand, whether it is mandated by Government or not, then there is going to be massive competition for that available supply. Are you not going to run into an explosive inflationary situation caused by the very quotas which you hope will reduce the problem?

Mr. JOHNSON. We could very well. If you are going to restrict imports, that could very well lead to artificial shortages, which would tend to drive up prices.

Let me make, if I may, the observation that, if we deregulate oil prices, at the same time, I would think that there would be every justification for the President to remove the \$2 license fee on imports. The notion that there would be a price increase resulting from deregulation of something like 9 cents a gallon is, I think, rather excessive. Theoretically, this could occur. But, I think more likely, particularly if the license fee were removed, the price increase would be considerably less and probably no more than 5 cents.

To me, all we need, really, is the removal of the ceiling on old oil. This would create price equality. It would create a greater amount of certainty. It would do away with the need for entitlements and, in turn, with much of the need for an allocation program at the present time. And we would not have to have the massive bureaucracy that we now have in FEA to administer the distribution and pricing of oil.

Senator Brock. Let me talk with you just for a moment about the present oil allocation problem itself. It is my deep conviction that States such as mine, and the Senator from Louisiana's, are being required now to subsidize States in the northeast because of the forced reallocation of domestic crude on a formula basis to the consumption in those areas where it was not naturally there. Is that a fair thing for me to say, or is it wrong?

Mr. JOHNSON. No, I think it is a fair statement. The subsidy occurs partially in the allocation program. It also occurs in the entitlements program which was established by the administration in order to offset the bad effects of the two-tier price system. We have here one control begetting another.

Under the entitlements program, refiners that had the foresight several years ago to invest in oil in the United States have been forced by the Government to first purchase the right to use that crude oil from someone else. And who is it that they have to purchase that right from? They have to purchase it from companies that chose instead to rely on other sources of oil besides domestic sources. It is primarily importers of crude oil that are now being subsidized by refiners who used domestic sources of oil under the entitlement program.

Now, it happens that a lot of the companies who have used imported oil have been from the northeast, as well as from the northern tier States. The effect of the entitlements program is to subsidize these refiners, and certain marketers, who have served the northeast.

Whether the subsidy goes ultimately to the consumer is a question mark. No one knows, and FEA will have to conduct an audit to determine that. But there is a subsidy that is taking place, which is being paid primarily by consumers, in the southern part of the United States. The southern States seem to be getting hit the hardest, and following them, States in the Midwest and the Rocky Mountain area. The subsidy being paid primarily to consumers or oilmen in the northeast.

Senator Brock. You may gather why—be advised that I have written Frank Zarb and asked him to give me a factual breakdown of the amount that people in my State, and States throughout the South and the Midwest, are subsidizing northeastern States. I want to know how much it costs my consumers in terms of pennies per gallon of

gasoline, just because, first of all, our States are poorer than those States. We have a lower per capita income now. I think it is an absolute fraud that the administration and the Congress have created a situation where the poorer States of this country are being required to carry the more affluent ones on their back.

Mr. JOHNSON. I did a paper a while back that showed that the State that was most adversely affected by the entitlements program was Alabama, followed by your State, Tennessee, whereas, I recall that, on average, the entitlements program has cost Tennessee something like six-tenths of 1 cent per gallon for gasoline.

Following Tennessee was Mississippi, North Carolina, and Florida. Then several Rocky Mountain and midwestern States.

Senator BROCK. Maybe the Senator from Colorado would have a problem here, too.

Mr. JOHNSON. Colorado, I think, ranked about sixth or seventh highest on the list of States that were adversely affected by the program.

Senator BROCK. But even Colorado is affected by this entitlements program in terms of higher consumer prices—adversely affected. That is what bothers me about this system of layering one control on top of another. It seems to me we have reached the point of where we are defrauding the people—certainly, in my instance—the people of the lower income States in order to assuage the political problems of those elsewhere.

Mr. JOHNSON. I think you are right.

Senator BROCK. That is all I have, Mr. Chairman.

Senator HASKELL. Mr. Chairman, I have just two questions. Dr. Johnson, is it your view that in the United States, we should try and work toward ways of using less energy, whether it be petroleum or otherwise?

Mr. JOHNSON. Most certainly. I think we consume altogether too much energy.

Senator HASKELL. All right.

I just want to lay a foundation. If that is what you believe, how are we going to go about it?

Mr. JOHNSON. The only way I think you can really enforce effective conservation is to provide an incentive for people to conserve. And the best way to do that is to raise the price of energy to the level that reflects its real costs to society. Part of these costs are environmental; part of these costs are the threat to our national security created by imports.

Senator HASKELL. OK. Thank you very much. I have no further questions, Mr. Chairman.

The CHAIRMAN. Thank you very much, sir.

Mr. JOHNSON. Thank you.

[The prepared statement of Mr. Johnson follows:]

TESTIMONY OF DR. WILLIAM A. JOHNSON, PROFESSOR OF ECONOMICS,
GEORGE WASHINGTON UNIVERSITY

My name is William A. Johnson. I was formerly an assistant administrator at the Federal Energy Office and am currently a professor of Economics at the George Washington University and Director of the University's Energy Policy Research Project. I appreciate this opportunity to appear before you today to

discuss H.R. 6860 and, more generally, various energy problems that now confront the Nation.

On January 15, 1975 President Ford announced major new initiatives intended to reduce imports of oil by one million bpd by the end of 1975 and two million bpd by the end of 1977. According to the President, were the Administration program adopted, the United States could become invulnerable to foreign supply interruptions by 1985. Although one might disagree with certain features of the program, it does contain several important initiatives which, if implemented fully, probably could have accomplished many of the objectives set for it. Especially important, in my judgment, was the Administration's emphasis on price incentives rather than volumetric controls to achieve a reduction in demand and an increase in the supply of energy.

H.R. 6860 was to have been a Congressional alternative to the Administration program. In fact, it would do very little to help achieve our long-run national objective of energy security. Many of the Bill's stronger provisions have been dropped, including most of those that used price and fiscal means for reducing U.S. dependence on foreign sources of oil. In my judgment, H.R. 6860 will not result in the reduction in consumption anticipated in the original Administration proposal. It would also create an extremely complex, exception-ridden system of taxation and import quotas that would allow many users of oil to avoid the sacrifices that will be necessary if the United States is to reduce its dependence on foreign sources of energy.

I will confine my formal comments on H.R. 6860 to two provisions: 1) the establishment of import quotas and as import license auction and 2) the industrial use tax and various tax credits intended to encourage greater supply and more efficient use of energy.

IMPORT QUOTAS

H.R. 6860 would place a ceiling on imported oil of 6 million bpd in 1975 and 1976, raise this ceiling to 6.5 million bpd in 1977, lower it to 6 million bpd in 1978 and 1979, and raise it again to 6.5 million bpd in 1980 and thereafter. The President would be empowered to adjust this ceiling by one million bpd from 1975 through 1977, 1.5 million bpd in 1978 and 1979, and 2 million bpd in 1980 and thereafter.

Let me observe, first, that one of the common problems with any quota system is its inflexibility. It is difficult to fine-tune quota levels, and it appears to me that this problem has not been avoided in H.R. 6860. The limits may be sufficiently generous that, for all practical purposes, no import restrictions exist. Or they may prove overly restrictive, in which case the Nation would face serious shortages. In this latter case, it is unlikely that Congress might simply enact higher import ceilings as the need arose. Of course, in this case the quotas would also come to have little meaning, especially in industry investment plans.

H.R. 6860 does contain a provision for allocating supply reductions to end users. The Bill would establish public auction for import licenses, with a separate auction for small refiners and independent marketers. It would also allow import tickets to be resold, thus providing some flexibility in what could otherwise be a highly inflexible system for controlling imports. The prices paid at auction would, presumably, be passed on to the final consumer in the form of price increases. In this way, the shortages created by the government would be distributed, imperfectly perhaps, by a market mechanism.

Two points should be stressed. First, the belief that quotas will make it possible to avoid price increases is mistaken. Because of the auction provision, there will be some price increases unless, of course, the quota levels are so high that they are ineffectual and bids are insignificant.

Second, in theory a quota-auction system should yield the same price and import levels as the tariff-license fee approach adopted by the Administration. The choice between the two boils down to a choice between different forms of administering an import control program and the differing incentives and disincentives that each form has.

In early 1973 the Oil Policy Committee considered both the quota-auction and tariff-license fee approaches. It chose the latter for several reasons, perhaps the most important being that, with a tariff or license fee, companies would be assured that they could purchase the oil they need at some price. This is important because the single most important factor in deciding whether to construct a refinery is the availability of crude oil. However, with the quota-auction system security of supply would be less certain. This, in turn, might deter needed investment in domestic refining capacity. Indeed, this is precisely what occurred under the old quota system.

The reimposition of a quota system under H.R. 6860 would also subject the government to substantial pressures by various interest groups. Everyone would want special treatment. The same interests that received exemptions from the old oil import quotas would demand these exemptions once again. And this has already happened. H.R. 6860 would establish separate quota programs for small refiners and independent marketers. There would also be a 2 million bpd set aside for distillate and residual fuel oil imports used in home heating and generating electricity, while petrochemical feedstocks would be exempted altogether.

Perhaps the worst failing of the old oil import quota program was the numerous exemptions granted certain privileged groups, including heating oil importers, electric utilities, and the petrochemical industry. Primarily because of these exemptions the East Coast, and the Northeast especially, became heavily dependent on imported oil. When the Arab embargo was imposed, the East Coast imported over 90% of its residual fuel oil, while New England imported nearly 40% of its home heating oil.

Because the exemptions were heavily weighted toward refined products the United States, in effect, began to export its refining capacity. The easiest way to beat the quotas was to build a refinery in Europe, Canada or the Caribbean, based on foreign crude and then to ship the refined products to U.S. markets. This made the United States doubly vulnerable to the Arab embargo. Even before the Arabs cut off all oil to the United States, several European countries and Canada began to restrict exports of refined products in order to build up their own inventories in anticipation of supply interruptions. The quota system in H.R. 6860 would create the same disincentives to refinery construction because of the preferential treatment afforded product imports.

I also question whether the exemptions contained in H.R. 6860 are justified. Why, for example, should the petrochemical industry receive special treatment? During the embargo the industry demanded and received preferential treatment under the allocation program. One of the arguments used by the industry was that petrochemicals are essential to the national security and the well-being of the economy. I think this is correct and, for this reason, believe that the petrochemical industry should also be subject to quota restrictions, except for that portion of imports used in the manufacture of products for export.

I am not arguing for the free importation of oil. Far from it. As long as oil will be used as a political weapon, it is imperative that we take measures to safeguard our national security. I am arguing that quotas are not the best way to achieve this objective.

A major advantage of the price and fiscal measures proposed by the Administration is that they would be relatively immune to favoritism and privilege. It is surprising to me that memories of the old oil import quota system, and all its deficiencies, have dimmed so quickly. The program was the subject of tremendous political controversy throughout its existence. When it was abandoned in April 1973, there was general acclaim by those who were familiar with it and how it operated. By 1973 exemptions had become so numerous that many in the industry no longer took the program seriously. There was a prevailing feeling in the industry that, in a shortage, additional imports would always be permitted by the government. The public would not stand the cold; nor could the government stand the heat.

The quota may seem more direct than a tariff. However, it is also more subject to political pressures. Former Secretary of the Interior Stewart Udall, who had the responsibility for administering the old quota system under the Johnson Administration remarked in 1969 that he was fortunate in avoiding a major political scandal because of the quota program.

CHANGES IN TAX PROVISIONS

H.R. 6860 would also make a number of changes in the tax code, taxing certain industrial uses of petroleum and natural gas and providing incentives for certain types of production and conservation.

First, the industrial use tax. Under this Bill, taxes on industrial users would increase over a period of years. Exempted from the tax, however, are a number of industrial users. Once again, H.R. 6860 makes a number of special exceptions for special interests. Among these exceptions are oil and gas consumed by the petrochemical industry and oil used as a fuel for vehicles, vessels and aircraft. Also included is oil used as a fuel in farming and mining, as well as oil used by various tax-exempt and charitable institutions, apartments, hotels and manufacturers of

textiles and glass. It is difficult for me to think of what industrial users might be covered by this tax. And any that are have another change to escape, for FEA is authorized to recommend further exemptions.

The purpose of this tax is to encourage greater conservation through higher prices. Many of the industrial users exempted from the tax are capable of greater conservation if given an incentive. Under H.R. 6860 they are not.

The various tax provisions in H.R. 6860 also suffer from the selective bestowal of special privilege. There will be tax credits or other tax advantages for the use of waste as a fuel, the purchase of electric powered vehicles, the extraction of oil from shale and coal liquifaction and gasification, as well as credits for the installation of solar energy units and home insulation. One problem with these tax incentives is that they apply only to a few of the ways of conserving energy or producing alternatives to oil and gas. Why, for example, are there not tax credits for the installation of more efficient oil and gas furnaces? Or the production of heavy oils? Or secondary or tertiary recovery?

Also, it seems inconsistent to me that having just eliminated one tax loop-hole—the depletion allowance—which gave a special tax advantage for conventional ways of producing oil and gas, the government will now enact new tax loopholes for unconventional way of producing oil and gas. Drilling for oil in the United States is not inherently less desirable than processing shale. In fact, from the standpoint of the environment it may be more desirable. It is also much cheaper. The various tax provisions in H.R. 6860, in effect, reward certain technologies and ignore others. For this reason, they may help to saddle the Nation with high cost and less than optimal energy sources over the long run.

The best approach, in my opinion, is to raise the price of all forms of energy and to provide equitable price or tax incentives for conservation and the domestic production of all energy sources. To this end, I urge the Senate Finance Committee to avoid selective tax credits as a way of providing incentives for greater conservation or production and to adopt, instead, measures that are neutral with respect to technology. The most effective way to accomplish this is to deregulate the price of oil and natural gas and, if it is thought necessary, tax away the windfall profits that would result. This and the benefits to all segments of the industry.

Let me focus on deregulation of the price of "old" oil. Deregulation would, in my judgment, be the single most important step that the Congress and the Administration could take to reduce U.S. dependence on foreign sources of energy. The President is to send a deregulation program to the Congress in a few days. I would hope that this program is given careful consideration by the Congress. The price ceiling on old oil is causing substantial problems for both the industry and the Nation and should be phased out as quickly as possible.

In August, 1973, the Cost of Living Council created the so-called "two-tier" price system for crude oil. Old oil is subject to a price ceiling, while new and released crude oil can be sold at the free market price. The free market price is, in turn, roughly equivalent to the landed cost of imported oil. In November, 1973, Congress also deregulated stripper crude. This is defined as production from wells yielding ten barrels or less per day. Because of these exemptions, a complex system of price controls has been created under which roughly 40 percent of the crude oil consumed in the United States is subject to a ceiling of \$5.25 per barrel, while the remaining 60 percent sells for between \$11 and \$13 per barrel.

The two-tier system has created an impossible competitive situation for refiners and marketers unfortunate enough to consume relatively large amounts of high priced oil. It has also encouraged various interest groups to try to use their influence in Washington to obtain, for themselves, the economic benefits resulting from possession of old oil. Partly for this reason, the Administration announced in December, 1974, an old oil "entitlements" program that, in theory, will redistribute the possession of old oil to refiners and certain importers of refined products. Under this program, refiners that have explored for and developed domestic sources of crude oil may not be able to refine this oil unless they first obtain permission from another refiner. One entitlement allows the purchase of one barrel of old oil. During the most recent month, an entitlement was worth \$7.29.

The groups benefitting the most from the entitlements program are importers of crude oil and certain importers of refined products. There is a strong incentive under the entitlements program for companies to shut-in production of domestic old oil and to run imported oil instead. The entitlements program, in effect, subsidizes imports and, for this reason, contradicts the basic objective

of the Administration's energy program—to reduce U.S. reliance on foreign sources of oil. If for no other reason, the removal of the ceiling on old oil, or, at least, the difference between old and other oil prices would be a major benefit to the nation. It would do away with the justification and need for an entitlements program and the disincentives to self-sufficiency that this program has created.

I estimate that the deregulation of old oil would result in about half of the Administration's goal of a one million bpd reduction in demand for oil by the end of 1975.¹ Deregulation would also encourage some increase in production, although by how much is uncertain. Even though the two-tier system has provided ample incentives for new drilling, it has, at the same time, discouraged production from existing wells. This has occurred in at least two ways.

First, it frequently does not pay to employ secondary and, especially, tertiary methods of recovery of oil sold at \$5.25 per barrel. However, many of these enhanced recovery methods would be remunerative at \$12 per barrel. Enhanced recovery is most likely to be applied to declining wells, that is wells whose production is defined as old oil under the government's price regulations.

Second, and perhaps worse, there is an incentive under the two-tier price system to shut in and plug old wells prematurely. This is particularly true if the casing steel, pipe, pumps and other manpower and materials at these wells can be used more profitably at newly drilled wells producing unregulated new oil.

The two-tier system has also encouraged some unnecessary drilling of new wells in order to create new and released crude oil. No one really knows the extent to which domestic production has been lost or unnecessary drilling encouraged because of the two tier price system and the entitlements program. One extremely rough estimate, based on work by Paul MacAvoy at M.I.T., is that crude oil production was about 580,000 bpd less than it would otherwise have been in 1974 because of the price ceiling on old oil.² In other words, deregulation of old oil might, by itself, realize or at least come close to realizing the Administration's goal of a one million bpd reduction in imports this year. Half of this goal would be achieved by reducing demand; the other half, by increasing domestic supply.

The deregulation of crude oil has been opposed, with some justification, on the ground that it would allow domestic producers to become de facto members of OPEC. They would be permitted to earn very substantial monopoly profits from the sale of U.S. oil at world prices. The President has proposed a windfall profits tax on oil to transfer most of these profits from oil companies to the Federal Treasury. This would preserve most of the demand-reducing effects of deregulation. However, the windfall profits tax proposal, if adopted, would lose many of the supply increasing effects of deregulation unless it also contains a plow-back provision.

There is also concern that higher prices resulting from the deregulation of oil would have a substantial impact on consumers, especially low-income consumers. This criticism, incidentally, applies to the higher prices resulting from the import license auction and the industrial use tax as well. But if the goal is to protect the consumer, it is much better to do so by means of tax credits, lower tax rates, direct cash payments or other fiscal means, and to allow the price mechanism to serve its primary function—to allocate oil and gas efficiently among various users and to provide maximum incentives for production.

We should, in other words, use fiscal measures to redistribute income and the price system to encourage energy conservation and production. Instead, existing price controls are retained because of concern that deregulation would shift income from consumers to the oil industry. This same confusion of functions occurs in H.R. 6860. H.R. 6860 mixes incentives for energy development with efforts to alleviate the effects of these incentives on the consumer. There is a general rule that applies: tax and price policies that are designed to serve two purposes simultaneously usually serve neither well. Nor do they serve the Nation well.

Thank you.

¹ This estimate assumes a price elasticity of demand of -0.1 and an increase in the average price of crude oil from \$9 to \$12 after deregulation.

² Paul W. MacAvoy, Bruce E. Stangle, and Jonathan B. Tepper, "The Federal Energy Office as a Regulator of the Energy Crisis," unpublished paper, Sloan School of Management and Energy Laboratory, Massachusetts Institute of Technology, p. 5.

The CHAIRMAN. Next we will call Mr. Robert Nathan, speaking for the Small Producers for Energy Independence. Mr. Nathan, I am pleased to have you before the committee. It was my privilege to read a statement that you presented before the Interior Committee, and I was very much impressed by your documentation, by both your statement and the facts you gave to support it. I would like to interrogate you more about that after you have presented your statement and others have had a chance to go into it, because I want to know exactly how you arrive at some of these figures that you have presented.

STATEMENT OF ROBERT A. NATHAN, ON BEHALF OF SMALL PRODUCERS FOR ENERGY INDEPENDENCE

Mr. NATHAN. Thank you very much, Mr. Chairman, members of the committee. Let me briefly summarize this statement of mine. I believe that in addition to this testimony today that has been distributed with a few charts and tables, you also have, I believe, the full document on which these conclusions are based, and it is called, *Calculation of New Oil Costs in the United States, years 1959 through 1974*, dated May 1 of 1975; and that was produced by a firm of petroleum engineers to whom we made this assignment of making some of these calculations of new oil costs.¹

Now, very briefly, the purpose of this exercise in which we engaged is a fairly simple and a direct purpose; namely, to try to determine what I think economists could characterize as the economic cost of exploring and producing new oil. We did not get involved with the development and the cost of ongoing activities in all areas. This is primarily related to the cost of new oil.

Let me just make one general economic observation, and that is that we found, as we went through this analysis over the last 15-16 years—namely, from 1959 through 1974—that increasingly, for a good many years, the cost of new oil production rose very substantially, whereas the price at which oil was sold in the United States lagged very considerably. In that testimony which is before you, if I may refer to exhibit 2, which is just the second page after the end of the text—the end of the text is on page 7; page 8 is a table of data, and page 9 is a chart. And in that chart, we can see, going back to 1959, the top line is what is called the cost of new oil, and I will explain in a minute precisely what we have in mind there. But this is a year-by-year estimate of the economic cost of exploring and producing new oil. The lower line going back to 1956, on the other hand, is the price received for new oil during each year, and reviews the east Texas field as typical and representative. And if you will notice, the cost of new oil, year by year, has been rising, although there are some slight deviations, as in 1964 and 1972, slight declines. But by and large, the price was rising quite substantially during most of that period, whereas the price of oil sold during the year, new oil, was practically flat from 1956 through the next 15 years; and the gap between the cost of the new oil and the price rose very substantially.

¹ This document is reprinted at page 250 of this volume. The tables and appendixes were made a part of the official files.

And that is included on my next chart, namely exhibit 3, which is on the next page.

And there we see a solid line, entitled New Oil Price Difference; and that is the difference between the two lines on exhibit 2—namely, I just took the difference between the economic cost of oil each year and the price received each year—and of course up until 1972, that gap grew very substantially.

And we see, then, a very sharp rise in the price of the economic cost less the price received, and that was the gap.

Now, the main point that this chart reveals is the fact that as that gap between the economic cost of oil and the price received for oil grew—namely, as that lag, as that deficit in the price in relation to cost grew—there was a very marked decline in drilling, and from an economic point of view that is what one would have expected. And we see on that exhibit 3 that, whereas in 1960, the exploratory wells drilled were very nearly 12,000; at the low point in 1971, there were less than 7,000, so that you have a drop of almost half in the number of new, exploratory wells drilled during that period. And this, of course, as I say again, derived from the fact that the price clearly was not adequate to cover the costs, and this served as a disincentive and a disadvantage in terms of new exploration.

Now, there are two observations I would make about this. First is that of describing this exercise very briefly. What we discussed with these petroleum engineers in Texas was the problem of how to arrive at what meaningful costs were of new oil exploration in each year. And as the result of our conversations, a model or an approach was undertaken in which we took each year as a distinctive entity. Take 1959. What we did was to look at what the drilling for new oil was in 1959. We took the number of wells drilled, and we took the total amount invested. We took the costs, then, all of the costs—royalty costs, operating costs; all of the advantages, depletion costs, the intangible allowances—and we took into account everything that was invested and what the costs were.

Then we took—and by the way, those costs included the dry holes as well as the producing wells—and then we projected those new discoveries over a life pattern which was typical, based on actual empirical experience. And that roughly is projected over about a 25½-year take-out or extraction of that oil. And we then projected, on the basis of 1959 prices, tax rates, depletion allowances—all the elements in 1959—and applied those costs to this pattern of production extending over the next 25 years. And then, we discounted that revenue back to 1959, on the basis of providing a 15-percent rate of return on investment. Now, we could have used any rate of return. You could do this exercise using a 10-percent rate of return, a 20-percent rate of return, a 12½, a 15 or 18 or whatever you will.

We decided to use a 15-percent rate of return, because in our judgment, exploratory drilling is a fairly risky business; and I would say this before this committee, that this is not a purely theoretical observation. I have had quite a bit of experience, or I did some years ago, in actually engaging in putting syndicates together on oil drilling. After a couple of years, I decided that was not for me. It was a mistake, and I got out of it, and never would go back again, because you may some-

times be lucky and hit two out of two or three out of four, but you often could hit five out of five dry holes; and the record is that approximately four out of five wells drilled are dry. So you have a crap game going all of the time, so you work with the averages. But there are some people that do better than the averages, but a lot of people do much worse than the averages.

So, what we did then was to conclude that, given the nature and character of the risks in this business, a 15-percent rate of return was not unreasonable. But as I say, one can compute this any way one wants. And on the basis of that, we arrived at what price oil had to be in 1959 to cover all costs, and to cover a 15-percent rate of return on investment. We did that again for 1960, for 1961, for 1962, and we did it for every single year. And all of these computations are shown in this book, which is submitted herewith.

Now, we have gone over this. I have done a lot of testifying before public utility commissions on cost of capital rate of return, and I think this concept of economic cost is a very sound and commonly used one. We discussed this with many economists, and on the whole, I think we have found a considerable amount of support for the results. I will not sit here before this committee and say that the results are absolute, precise, exact, because one can exercise judgments. It may be possible, on some of these issues, you ought to give them a 10-percent rate of return, not 15, in computing this. That could be done. But when I stopped to realize that electric utilities in the United States, despite their hardships as the result of inflation, have been earning on the average between 11 and 13 or 14 percent on their return, I do feel that 15 percent is reasonable.

One can say, let us cut depletion in half, and see what that would look like. You can make all kinds of adjustments. The technique is here, the data are here, the procedures are here. So we have these results.

Now, let me just wind up by saying, what is the meaning and the significance of this information? Very briefly, basically, in a free enterprise system, capital tends to flow in relation to incentives and rewards. It is fundamentally that way, and I think new oil drilling will be sizable if the incentives are substantial. And if the incentives are not substantial, it will decline. And over the period, most of the time, from 1959 to relatively recent periods, I believe the drop from 20,000 to 10,000 independent oil producers, the drop—nearly half—of wells drilled, the drop in the yields per well that would accrue to these producers, all reflect a disincentive. Because foreign oil was available at substantially below the economic cost of new drilling in the United States, the country is now faced with a policy issue.

So, in my judgment, if the price of new oil is controlled at levels with any degree of significance below that economic cost which we arrived at, or which anybody else can compute—and maybe it would vary somewhat from ours—in my judgment, we are going to have less and less drilling. And the issue posed to the Congress and to the country is, do we want to explore and to exploit our new resources? Do we want new drilling? If so, then I think the answer lies in a price that is adequate to provide these incentives; and if the price set is going to be substantially below the cost, we are just going to have considerably less drilling.

The Washington Post this past week said that the House committee has just voted to extend controls and roll back prices of previously uncontrolled new production. They said it is a disastrously bad idea. As an economist, I myself do believe that setting, rolling back the price of new oil below the cost, will inevitably result in less production, less exploration of new oil, and I do not think that is in the best interest of the country.

The CHAIRMAN. It seems to me, Mr. Nathan, that you have rendered a real service in seeking to provide us one of the answers, without which I do not think we can arrive at any intelligent conclusion. We have to know a number of things if we are going to serve the Nation's interests well. We need to know what it costs to attract capital to produce more energy, and in this area we just do not have any figures. We have heard all of this screaming, that the price was too high, because the price went up compared to a previous price. But people simply did not explain that at that previous price the industry domestically was in the process of going out of business.

Is not that about the size of it?

Mr. NATHAN. That is correct. It was in the process of slowing down very substantially, the exploration for new oil sources.

The CHAIRMAN. Each year they were drilling less wells than they were before and producing less energy. Now, here is the thing that impressed me, and this was in your previous statement, too. Before the other committee you said that based on your calculations, the economic cost of finding and producing new oil would be between \$12.50 and \$13 in 1974.

Mr. NATHAN. That is also in my new testimony, at the bottom of page 6.

The CHAIRMAN. Now you have done one other thing that I think is a great help to all of us; and, that is, you have presented us a book of figures here which are the figures that you relied upon in arriving at these conclusions.

Are these all from published sources?

Mr. NATHAN. Practically all from published sources. They have the survey, they have the Government materials, the materials are all there. The assumptions are spelled out.

As I said, Mr. Chairman, if anybody disagrees with our procedure and they say you should have 12 percent, they can recompute it easily; or, if somebody says take out this or take out that, it is all recomputable. I think the system, the approach that we have here is a very reliable one.

The CHAIRMAN. We have been told about the tremendous problems of oil, but almost without exception, people speaking of that have been talking about the fantastic profits that someone has been making in oil in the Near East or oil in Venezuela. Now, that is an entirely different problem, is it not?

Mr. NATHAN. Yes. That has nothing to do with the exploration for new oil in the United States.

The CHAIRMAN. There is one other point here. You say that for producing oil, and you are speaking for small producers, these people do not own filling stations, do they?

Mr. NATHAN. No, no. These do not own distribution facilities. These are the independent producers who account for some 85 percent of the exploratory drilling.

The CHAIRMAN. Now, you are not saying, as I understand it, that that is the rate of return a person is entitled to expect for operating a filling station?

Mr. NATHAN. No, no. This has to do with the rate of return entirely associated with exploration—wildcatting.

The CHAIRMAN. You are not saying that is what the rate of return ought to be for transportation, for moving the oil around?

Mr. NATHAN. No, sir.

The CHAIRMAN. But, for this type of operation, it looks to you that that is about what it would be.

I was noticing here a figure from a document that we published here which indicated that in 1975, and these are the major companies, on a basis where they took their percentage depletion, if you look at it in terms of what they actually made, on a cost basis they made about 14.7 percent domestically. But that included the whole operation, as I understand it.

Mr. NATHAN. That is correct. It includes the distribution, refining, and everything.

The CHAIRMAN. So, if you were including everything, would you think that 14.7 percent would be more than you would need to pay the major companies?

Mr. NATHAN. I would have to look at the composition as to what proportion is, what I call, you know, the risk area. But, I tell you—14 percent; actually 14 percent is not an abnormally high rate of return. If one looks at the Federal Trade Commission and the SEC data, the rate of return for most manufacturing is somewhere in the 12 to 15 percent range. So, this does not sound exceptionally high.

The CHAIRMAN. As I understand it, your feeling is that you need not necessarily have that rate of return in marketing, distribution or even refining.

Mr. NATHAN. Well, certainly the risk in marketing of gasoline or other oil products and refining, in my judgment, is a substantially lower risk than in wildcat drilling or exploratory operations. And, if one were to conclude that 14 percent is appropriate, or 12 percent is appropriate for those purposes, certainly 15 percent is not excessive for new drilling. It is quite reasonable, I would say.

The CHAIRMAN. I notice for last year, now, here is a document that—well, it is the same document from our committee to which I referred last year—all manufacturing corporations, looking at nondurable manufacturing corporations, their rate of return was 17.2 percent.

Mr. NATHAN. All manufacturing—that is, after taxes? That is surprising, because last year was a recession year.

The CHAIRMAN. That is 1974: annual rates of profit on stockholders equity by industry—all manufacturing corporations, 14.9 percent; nondurable manufacturing. It all falls in that area—17.2 percent. That was taken from the Quarterly Financial Reports of the Federal Trade Commission.

Mr. NATHAN. Yes. That is a sample they do regularly. In the nondurable, last year we did not have nearly the decline in economic activity in the nondurables that we had in the durables, the automobiles and building materials. They were the ones that were hit worst in the recession.

The CHAIRMAN. It seems to me, if we are going to do a responsible job, one, we have got to look at what it would take to attract capital, to do what you want capital to do. Two, we need to look at how much capital is needed to do this job, and then three, we need to think in terms of where are we going to get it from. Are we going to get it out of earnings, or are we going to get it out of investments, or a combination of the mix? And, if so, how much?

What would be your thought along that line as to how you would generate enough capital to produce this Nation's requirements of energy?

Mr. NATHAN. Well, I think that most important of all, Mr. Chairman, is to try to get this economy moving up again. If we can get some degree of recovery, we will be surprised to see how rapidly savings will rise and profits will rise too; because, when the economy is depressed, there is a reduction in income, and there is a reduction in aggregate savings. I think we can attract the savings. I think what we have to do, following what you stated, and I agree with it, is to provide incentive to get the investment so that people actually do invest.

Now, my whole concern about the general economy, Mr. Chairman, is that too large a proportion of our investment in the last 2 or 3 or 4 years has been in debt investment, and not enough has been in equity investment. I think that this is attributable to the fact that we have had a rather bad inflation, that the inflation has resulted in a very substantial rise in interest rates. The very high level in interest rates has resulted in lots of people investing through the debt instrument rather than through stocks or other equities. The result is that many, many companies have emerged out of these recent periods with a very high debt equity ratio that has made their stock rather precarious. So, you go into a vicious circle. The more they invest in debt, the more precarious their financial structure, and the less people are inclined to invest in equity. It is a self-defeating process. The more you borrow, the less coverage you have of your interest rates. So, a lot of companies, especially utilities, are in very serious trouble as a result of this.

But, I think that the answer does lie in an adequate rate of return on equity to permit equity investments at attractive terms.

The CHAIRMAN. Senator Nelson?

Senator NELSON. Did you say, or are you saying, that for example, the lid should be lifted off the price of old oil?

Mr. NATHAN. No, sir. I am not saying that. I am talking only about new oil.

Senator NELSON. Would you do anything about old oil?

Mr. NATHAN. Well, I would try to find out what the costs are on old oil. I think that to the extent that the cost of extracting old oil does not involve these very rapid rises in costs and exploration, if you lifted the lid off of old oil, you would undoubtedly have a very substantial windfall.

In other words, I think that old oil would tend to move to the level of the price of the new oil, and that is not too much different from the imported price. I think that if you took off the controls or eliminated all controls on new oil, then I think something would have to be done in the nature of some kind of recapturing the windfalls for a period of time.

Senator NELSON. If you removed the lid on oil?

Mr. NATHAN. On old, not new, because I think new is a different matter. I think, from a very straight, tough, hard-hitting, realistic point of view, the price of new oil must be high enough to cover the costs.

And the analysis we have made here, Senator Nelson, indicates that in 1974 that cost of new oil is somewhere in the \$12.50 to \$13 area. And, as I say, I have talked to economists who have looked at the figures and they say, well, I would eliminate that, or I would give a 12½-percent rate of return, or 13, so they may come out with \$12 or \$12.25. I have seen no one come out with less than—using this kind of analysis—then the \$11 or \$12 range at the lowest.

Senator NELSON. This is cost?

Mr. NATHAN. Yes. The economic cost of exploring and producing new oil, yes, sir.

Senator NELSON. So then if the economic cost of producing new oil in 1974 was \$12.73 a barrel, what then is your estimate of what the retail price should go at—will go at? What would the retail price be?

Mr. NATHAN. Well, the retail price will be affected somewhat, Senator Nelson, but not substantially, because it depends on what proportion of the total oil produced is new oil, as distinguished from imported oil, and as distinguished from old oil.

In other words, your price is a combination of all of the sources of supply. It depends on how much old oil you have, let us say, at \$6 or \$7 a barrel; how much imported oil at \$13 or whatever it may be after October; and what the new oil is, say at \$12.80.

I think that if you leave the new oil uncontrolled, as it is now, I do not think it is going to have any really meaningful impact on the price of the finished products of petroleum at this time. It is already reflected.

Senator NELSON. Well, it all goes at the world prices, does it not, ultimately? I mean all new oil?

Mr. NATHAN. Well, it will tend to move toward the world price, but not necessarily at that price. One can vary it. You see, you do have the problem—I was listening to Dr. Johnson—you do have the problems of geographic differentials and how these things level out. You know prices never quite equalize. Under theoretical economic terms, everything tends to reach an equilibrium. The only trouble is, that equilibrium is elusive and it keeps sort of moving away from me. This is one of the problems he was talking about geographically, that presumably if you did have some kind of differential in allocation and New England began to pay for substantially higher prices and Tennessee or somewhere else had somewhat lower, presumably industry would move quite rapidly, and production would increase here rather than there. But—and these adjustments take time—but basically I do think that uncontrolled oil prices will tend to move towards the marginal price, and now the marginal price is imported oil.

Senator NELSON. What is the world price now?

Mr. NATHAN. Oh, landed, at about \$12 or \$13 a barrel.

Senator NELSON. Just one more question, then. The common assertion that has been made by almost everybody I read, whether it is editorial—including Mr. Kissinger in Europe and so forth—is that

the OPEC price is a very high artificial, nonmarket price, and yet the pressure, talking about the cost of production for 1974, is at the OPEC retail price.

What is your observation about that?

Mr. NATHAN. Well, there is no question but that the OPEC prices are politically determined prices. This is not a competitive, free market, free enterprise price. This was set by the OPEC countries getting together and deciding what they were going to charge, and they decided to charge something in the nature of a multiple of 4 or 5 of what the price was before.

Now, if the OPEC prices were to fall, and we were to have domestic, new oil, competing, then we are going to have a drop in new oil production. It is just that simple. One price is an arbitrary, politically determined price, by a cartel. If that price, set by the cartel, is substantially below the cost of new production in the United States, there is no way, Senator Nelson, that you are going to be able to get full production and full exploration of domestic new oil. It is just that simple.

Now if one were to say, "yes, but as a matter of American national policy, we want to encourage new oil exploration" and it comes to this \$12.80 that I have come up with, and OPEC, let us assume—I do not believe for a minute it would—were to cut its oil down to, say, \$6 a barrel, then you are not going to have any new drilling of any significance. It will decline rapidly here, or you may have to put some kind of a subsidy on one side and a duty on the other side.

But, this internationally set price is not an economic one, but it has economic consequences.

Senator NELSON. I assume what you are saying is that in fact the cost of production is so much lower abroad that they could make a profit at various levels below what we could in this country?

Mr. NATHAN. Oh, tremendous. You know once you hit a field like they hit there in Kuwait or Abu Dhabi or Saudi Arabia, the lifting cost is not a tremendous amount. Basically what makes the new oil cost in the United States so expensive is that it is really exploratory and risky. If somebody tomorrow were to strike a big, major, huge, all-out oil field like Prudhoe Bay, tremendous quantities, the price of that would not have to be \$12.83. The price of that would be largely development, drilling around, you know what you have got and the drilling costs and the development costs and the lifting cost is going to be way below the exploratory costs.

Senator NELSON. But, nevertheless, the price is still going to tend to be what the world price is.

Mr. NATHAN. Yes, in economic terms prices tend to move toward the margin.

Senator NELSON. Thank you.

The CHAIRMAN. Senator Packwood?

Senator PACKWOOD. In your estimation, if Congress would pass a windfall profits tax, should we decontrol old oil?

Mr. NATHAN. If a windfall tax is passed, it would have the same economic effect. I have one real concern about this, however, Senator Packwood, and that is I am very, very distressed about the inflation problem.

I think we now have had 10 years of inflation in the United States. We have seen what that inflation has done to the public utilities. We have seen what that inflation has done to the interest rate mechanism on housing. We have seen how that inflation has had a differential impact on intermediary financial institutions and I would, at this stage in our economy when we are having a serious recession and we seem to be making some progress on inflation, but we are not sure whether it is going to last and we are not sure, whether when the economy turns up we are not going to be faced with worsening inflation, I would hesitate to introduce into the price stream any higher costs than I had to.

And so I am not sure that now is the best time. Now there are ways to do it. Art Okun, for instance, came up with a very interesting idea, and that is he said, well let the price rise, recapture it with a windfall tax, then take that windfall tax and give it to the States and localities and say we will give you this money if you will cut your excise taxes, so that the Consumer Price Index that catches the higher oil price will be reduced by the reduction in excise taxes. Because, otherwise, if you are going to get higher oil prices into the Consumer Price Index, you are going to get it into the escalator clauses; you are going to get right on the inflationary spiral.

Senator PACKWOOD. That is very similar to the President's program. He gives rebates not only to States, but to individuals, in addition.

Mr. NATHAN. Well, but you see the trouble, Senator, is that the rebate to the individual does not reduce the Consumer Price Index.

Senator PACKWOOD. That is true.

Mr. NATHAN. The Consumer Price Index will affect a lot of wage settlements and wage adjustments. You see, when you have that escalator clause, the indexing procedure, when you increase the Consumer Price Index you are almost assuring a further round of price increases, and the spiral is too contagious. And I just do not think we are out of the inflation mess yet.

Senator PACKWOOD. I have no other questions, Mr. Chairman.

The CHAIRMAN. Senator Haskell?

Senator HASKELL. Thank you, Mr. Chairman.

Mr. Nathan, your analysis is extremely interesting and I certainly would think your methodology sounds reasonable. Nobody can quarrel with the 15-percent return—at least I do not think you can.

I suppose what we are really saying is to induce the average producer to stay in business in 1974, an intelligent, average producer should expect to get \$12.72. That is basically what you are saying?

Mr. NATHAN. That is correct, sir. That is, in essence, correct.

Senator HASKELL. This is minor, but just as a matter of curiosity, the economic price from 1973 to 1974 was about 50 percent increase.

Mr. NATHAN. Yes.

Senator HASKELL. What were the factors working there?

Mr. NATHAN. Well, we have it in here in the big report. We show the price series, and this shows what happened to drilling costs, what happened to pipe, what happened to all of the expenses. For instance, on table 8, if you look through, right in the middle of the report, there is a whole series of tables—

Senator HASKELL. I will not take your time now, but—

The CHAIRMAN. What page is that on?

Mr. NATHAN. It is table 8. It is, oh, about a quarter of an inch into the report. You have a whole series of tables. Just look at table No. 8. This is an index of well costs. And, without going into detail, you will see the total drilling costs due to rising prices went from an index of—in 1969 it was 100. It jumped from 130.2 in 1973 to 175 in 1973 and 1974. And you can see how at the top, just the payments to the drilling contractors, went up from 133.2 to 199.6. That is a 50 percent rise in drilling cost.

Senator HASKELL. Mr. Nathan, I am lost. What line am I meant to look at?

Mr. NATHAN. The top line.

Senator HASKELL. I see. I have it.

Mr. NATHAN. The top line says "Payments to drilling contractors." That is the man who is engaging in the drilling process. He does not usually buy his drilling equipment. He contracts it out. And that index of drilling—

Senator HASKELL. That is about a 50-percent increase right there.

Mr. NATHAN. Then if you look down below, your road and site preparation only went up about 10 percent. Transportation went up about 20 percent. Fuel went up 50 percent. So that you see what you have here, Senator Haskell, was an inflation problem, coupled with a tremendous demand in drilling equipment relative to supply of drilling equipment.

The CHAIRMAN. If I might just interject, at this point—the price of mud went up by 84 percent? I had always thought that that was something you could always get at a reasonable price, mud.

Mr. NATHAN. It is a rather modest item, but it is an important use there. You see this is what you pay for the item, per se. But behind this are other costs, such as manpower, transportation, and the like.

Senator HASKELL. I have no further questions. I think it is a very rational, very complete, very interesting presentation. I presume—let me ask you another question. This is not dealing with oil. We have this natural gas problem and I have not seen any solution yet that does not have bugs in it. And I say the present situation is appalling.

Mr. NATHAN. Yes.

Senator HASKELL. But have you given any thought to that? Now I realize this is an irrelevancy, from your testimony.

Mr. NATHAN. Well, I have done some work for pipelines, gas pipelines, and also some work on the natural gas demand and supply and the curtailment measures. I think that what we have to do is on new gas we will have to allow the cost to go up very substantially again because the drilling costs are so high and the number of failures is higher than it used to be, and the production per well is lower than it used to be because there is no use kidding ourselves, as we have gone along and exploited our natural resources in oil and gas, we have clearly had a process of going after the most accessible.

I saw a chart once which showed on the left-hand side the thousands of cubic feet of gas discovered, per thousand foot of wells drilled. In other words, this gives you an index of your yield in terms of gas discovered per thousand feet drilled. And so this yield, starting—and, by the way, across the bottom of the chart is years, 1910, 1920, 1930, 1940. It goes back over 65 years; it goes back to 1910—that chart just starts up high and goes down at an amazingly steady rate and has come down

near the lowest level and has leveled off there and the result is that your response in terms of production per thousand feet drilled is way down, and that is very costly.

Now I think that what we ought to do is to try to explore our gas resources as fully as possible, and I am afraid we just are going to have to go to liquefied natural gas and gasification of coal, which is very expensive, but I do not think you are going to get gas at anywhere near the present prices. That is, substantial new exploration. Old, they are making out very well on old gas because the price is substantially higher and the lifting cost is not much. But the new gas costs are going to be very high.

We did not try to do that. We did that here with related gas. This is oil and the gas that comes with the oil is included here. But we did not do gas. But I have not much doubt, Senator Haskell, if you did the same analysis we have done for gas, you would find the new gas cost has gone up substantially.

Senator HASKELL. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Brock?

Senator BROCK. Mr. Chairman, I forgot to ask earlier. If I might, I would like to insert some remarks at the opening of the session, this morning, related to the subject.

The CHAIRMAN. Without objection, it is agreed to.

Senator BROCK. Mr. Nathan, you have done an enormous amount of work, and obviously a superb piece of work. I have just a little bit of a problem with your response to Senator Packwood, relating to the decontrol of old oil and gas.

There is not anybody in the room that does not share your concern over inflation. But the problem with a controlled price, whatever the reason for inflationary purposes or for some other reason, the problem with the controlled price is that it forces unrealistic market decisions. And I would use as an example the testimony of the president of General Motors who was in this morning, and he said they were using natural gas to produce the energy for their automobile plants because it was the cheapest possible commodity available. That is an immi- nently logical economic decision to make.

But, the fact is that natural gas prices have been held below the market by the action of this Government, and not by the market- place, as long as I can remember—and have been around certainly longer than I have been in Congress—and, as a result, we have forced an increase in the utilization at the very time where, by the increase in level of cost in the development of new resources we have forced a reduction in the investment needed to enhance our reserves, our identified reserves and supplies.

Now is that not going to be the case on any controlled price situa- tion? Are you not forcing the wrong decisions to be made by the market on the basis of a political judgment?

Mr. NATHAN. Well let me say that I share with you, Senator Brock, that over the long run, or over a period of time, sustained controls will have very serious implications in terms of allocation of resources. And I think that undoubtedly as we look back now, our natural gas prices have been much too low. It has been a clean fuel. It has been an attractive fuel. It is low cost in terms of extracting, once you hit

it. The lifting costs are insignificant. You have pipeline costs. You have your byproduct costs—but on the whole, it is a very low cost to derive.

So, we set these prices. In retrospect, I think we would have been a lot better off if we had let those prices go up. However, I have three questions in my mind, sir.

One is that we do not know about how much response you will get on the supply side, any more than we do on oil. If Senator Nelson or Senator Long had said to me, Mr. Nathan, if you let new oil prices go to \$12.83 are you confident you are going to get a tremendous amount? And I would say no. I do not know. All I am saying is that if you do not let it go near the cost, you are never going to know because you will not get the drilling.

And I think the same thing is true of gas, but I do not know what the response is.

The second thing, I think, has to do with the fact that one of the reasons I guess that we felt that gas prices should be kept low was that our access to oil was very, very low abroad. Now that is not true any more, but I also believe that this inflation that I was talking to Senator Packwood about is a very serious matter because there is no doubt, Senator Brock, that inflation is a terrible allocator of resources, too. Inflation has a miserable impact.

I have seen public utilities in this country, as a result of inflation, and as a result of the regulatory lag having their stocks sell at 50 percent of book, and having, as I said before, a financial structure that is terrible. I have seen public utility bonds go from AAA ratings down to a B rating.

So inflation is a bad allocator of resources, and recession is a bad allocator of resources, because you see what happens to certain sections of the economy like housing, but I certainly would not want to see us maintain controls over the long run. I think transition, yes.

SENATOR BROCK. I do not argue that at all. The problem is that every time you put a control on, you have got to put another control on to make it work, and then you have got to put another control on top of that, and it builds on itself and there is no way to get out without the house falling in on your head because you have built a house of cards.

MR. NATHAN. That, I think happens, when you have them on a long time.

SENATOR BROCK. We have kept them on a long time.

MR. NATHAN. Yes; we certainly have.

SENATOR BROCK. How long have we had them on natural gas: 30 years or so? The Senator from Louisiana knows better than I. And I tell you something, maybe I am sensitive to the subject, but I have got some good friends in my State that are not working today. Some of them in Nashville, at a Ford glass plant, because they cannot use anything but natural gas. That is the only way they can make that glass. You cannot use coal in that facility. You cannot use electricity. You cannot use oil. It is natural gas.

And here we sit, not allowed to pay any price in order to keep people working, and I am bone weary of this political judgment that says, well, we are going to hold down the price because we cannot afford to raise it. And, in the process, a lot of Tennesseans right now—my State

is more effected than most, I grant you that, but the fact remains that they are out of work because they cannot get gas at any price and the market is making a rational decision that is going to hurt us in the long run because of that price.

We are doing the same thing with oil and I would personally be willing to see a deregulation now, but at least I would like to see us do it over a couple of years. I would like to have some end point in mind and I think it ought to be set into law so that those who make the decisions—when you build a plant, you do not build it for next year. You build it for 5 and 10 years down the road. The decisions we are making to build plants, if there are any being built with this idiotic policy today, are based upon the wrong economic premise.

Now if we said, in law, that we were going to deregulate prices in stages, you would be making these economic decisions on the right premise. You would know where to locate your plants. You would know what fuel to use. You would know where you were going. But, you do not today.

Mr. NATHAN. Well there is no question that it is going to have some strange economic consequences we cannot anticipate now. I think we are just, over the years, Senator Brock, we will have to come around to using more liquified gas and more gasification of coal.

Senator BROCK. We are doing a lot of research down at TVA and Oak Ridge National Laboratories on gasification, liquefaction. It is superb.

Mr. NATHAN. It is going to be very expensive.

Senator BROCK. It is as expensive as the dickens.

Mr. NATHAN. It may shift our industry quite substantially, but I agree with you. I have moved gradually toward it. I do not know if I would agree on 2 years, but I would move gradually toward it.

Senator BROCK. Would you give me an outside figure?

Mr. NATHAN. Five years.

Senator BROCK. Oh, come on. That is ridiculous.

Mr. NATHAN. You want to comprise halfway between four and five?

Senator BROCK. Let us compromise at two and a half.

Mr. NATHAN. Well, I do, but Senator I am really worried about inflation because I think this country is now in the worse recession since the 1930's and I wish I could sit here before this committee and tell you I was confident that we have broken the back of inflation or the recession, but I just cannot.

Senator BROCK. I cannot either, but do you honestly think the wage and price controls we had on 2 years ago did not contribute to the recession that we are now in?

Mr. NATHAN. I am not sure they contributed to the recession, but I think the recession was pretty much a result of an effort through overall monitoring and fiscal policies to break the inflation by curtailing aggregate demand. I am not so sure—I am not for wage and price controls, across the board, or wage freezes, but I do wish the President would use his moral authority and moral persuasion to—and, by the way, I say this about labor as well as prices—to try to get a modification of the wage and price increases at this stage.

Senator BROCK. Sort of like the social contracts that are working so well in England?

Mr. NATHAN. Social contract is not working well in England, because I do not think they have any. I think our labor has been far more responsible.

Senator BROCK. No question about it. If they were not, we would really have a mess.

Mr. NATHAN. Yes, we would really be in trouble.

Senator BROCK. Thank you very much.

The CHAIRMAN. Mr. Nathan, I am going to ask those who might not agree with your conclusions to do their own study and look at your published data and your information and I would like to have a few extra copies of it—the backup information here—so we can make it available to them. If they do not agree with this they should tell us what is wrong about it and see what conclusion they reach after they put the pencil and challenge some of these figures that they might want.

But it seems to me that what you have said here illustrates something that Congress has not been aware of; that those Arabs might have had some logic in what they were doing when they put prices where they put them. Because if you look at what is likely to happen, if you are an exporting country or an exporting cartel there is only one of those nations that you are exporting to that has the potential of not only becoming independent in short order but also of exporting instead of importing. And that is the United States of America.

Now, where did they put those prices? They put them right about where you are putting them on the basis of saying, well, now you do not need to import this from us if you do not want to. You can go ahead and achieve energy independence. But you cannot produce this any cheaper than we are selling it to you.

Mr. NATHAN. That is right. Yes, they may have had a sense of something around this magnitude, I do not know and I am not saying that the \$12.83 is 100 percent perfect.

But I think it is a very, very near correct figure.

The CHAIRMAN. It would not be very smart for them, all things considered, to put their price to where within 3 or 4 years, their cartel would be completely shattered by the economic factors favoring production in the United States and elsewhere. A good place to put it would be to put it right about, or slightly below the point where the United States could achieve independence.

Mr. NATHAN. Yes, I think that is logical.

The CHAIRMAN. Now, if you look at what they were saying at their meeting. They were saying that they were selling this stuff it all together to lower price, that the rest of the world could not produce it any cheaper than that. And their argument has that much intrinsic value. I am not saying they are right about that.

All I am saying is that they were just illustrating something that I was always led to believe was the first lesson that a young man is supposed to learn about business. I was told the story about the businessman who went home and he said, now son, let us see if you have now mastered your first lesson in business. How much is two and two? And the son said, Pop but that all depends. And he said, it depends on what? And he said, are we buying or are we selling?

And now from the point of view of those Arabs, yes, they can produce that stuff at 50 cents a barrel or less. But when they are selling

it to you, a good businessman is not going to sell his cost of production, he is going to sell it at what it is going to cost the other man to produce it.

Mr. NATHAN. That is correct.

The CHAIRMAN. It is somewhere in that area, between your cost of production and the other guy's cost of production that their price is going to fall.

And what they were going to do is to move their price up to something that would appear, based on your calculations, to be pretty close to what it would take us to produce new oil in the United States?

Mr. NATHAN. That is correct.

The CHAIRMAN. Now, I hope we can find ways to achieve this.

There is one other thing I think I should ask you about. Now, you are testifying for a very fine group I have all the sympathy in the world for and I have expressed it many times. You are testifying for the Independent Domestic Producers, I take it, small independent producers?

Mr. NATHAN. That is correct.

The CHAIRMAN. Most of those people are still getting their depletion allowance?

Mr. NATHAN. Yes, sir, a little bit, but they are still getting some.

The CHAIRMAN. I know that there are quite a few complaints about the fact that we drafted something that was too tight for some of them to live with on, that they cannot sell something, they cannot comply with their contracts—where a man drills and then after he gets the well drilled if he finds oil he assigns an interest to all of the partners. And we have got it drafted so when he goes to sign it they do not get their depletion allowance and all of that. But maybe that can be worked out by regulations.

However, those people, theoretically at least, are still getting the depletion allowance.

Now, what would this figure have to be for a medium, or a large independent, or a major company that is not getting a depletion allowance?

Mr. NATHAN. I think to eliminate depletion allowances entirely would probably add something in the vicinity of \$1.90 a barrel to this figure.

The CHAIRMAN. Because I think, since you are testifying for the other people, you can be regarded as being sort of an impartial or unbiased witness talking about the competition.

Mr. NATHAN. I would be glad to do that, sir.

The CHAIRMAN. Thank you very much.

Senator NELSON. Did I understand the chairman to say he was going to have some critical evaluation? Do you have any critics of this methodology?

Mr. NATHAN. Orally, Senator, nobody in all of the discussion we have had with people, nobody has criticized the technique. The criticism has been, somebody says, well, 15-percent rate of return is too high, you ought to use 10 or you ought to use 12, somebody else said, well, you have got in there the bonuses you pay for the right to drill and since that derives from the price of oil and if the price is higher they are willing to pay a higher bonus.

But one of the things you will find in our methodology here is that we lag our bonus payments by 2 years. In other words, our 1974 bonus in here is what was paid in 1972, because what you acquired in land leases in 1972 you do not start usually drilling that. So, we have had a 2-year lag. So, we have not got the really very, very big most recent bonuses in there.

But even if you take that out and even if you reduce it to 12.5-percent rate of return you might get this \$12.83 down to \$11.50, \$11.75, \$12.

Senator NELSON. The reason I asked the chairman is that when I find a good New Dealer like you hand-in-hand with a conservative Tennessean, I tend to be concerned about it. I am a little unsure.

Senator BROCK. We found some areas of disagreement.

Senator NELSON. Not very much.

The CHAIRMAN. I appreciate your statement here and I publicly invite anybody to obtain a copy of the backup information which has been developed and to offer a critique of it if they want to. Because when I read your statement that you delivered before the Interior Committee, my reaction was that that is an approach which I think is essential to solve this problem. We need to know the answer to a number of questions.

One, what will it cost to produce energy? What is it going to cost us to produce oil? What is it going to cost us to produce gas? What will it cost to produce coal?

The next thing you want to know is how much money is it going to take and how much on an annual basis. Then we need to know how we go about getting all of that and we ought to try to make some plan to bring those things about.

Now to proceed on any other basis, to just run around here shouting we are paying too much for something—if you cannot back it up, one way or another you are just talking about passion and hard feelings that somebody raised the price or that those Arabs you think really give you the worst of it. That is not going to solve the problem.

It seems to me as though the price will come down as far as the world market is concerned when the United States can produce its own requirements. Then we will have some leverage.

Mr. NATHAN. Yes, I agree with that.

The CHAIRMAN. Thank you very much.

Mr. NATHAN. Thank you, sir.

[The prepared statement of Mr. Nathan and a document entitled "Calculation of New Oil Costs in the United States, Years 1959 through 1974", dated May 1, 1975, follows. Hearing continues on page 255.]

TESTIMONY OF ROBERT R. NATHAN, ON PETROLEUM PRICING ON BEHALF OF SMALL PRODUCERS FOR ENERGY INDEPENDENCE

The development of policies and programs designed to maximize the independence of the United States in the energy area is both highly important and complex. One element of this issue which has been discussed by many Congressional committees relates to prices of crude oil produced in the United States.

The deep concern of the United States with the problem of inflation makes it especially important to understand the relationship between oil prices, oil supplies and oil demand on the one hand and the dangers of continuing inflation on the other. Particularly relevant is the impact of oil prices on the supply of oil, and, most importantly, new oil.

As my testimony will indicate, my associates and I have studied the economic cost of drilling for and producing new oil.

It is clear that if prices set for new oil are inadequate to cover the costs of exploration and producing new oil, exploration and production will be discouraged. This is a simple and blunt economic fact that no rhetoric or generalizations can erase. The recent history of prices and exploration strongly emphasizes the fact that adequate prices are an important determinant of drilling for new oil.

I urge this committee to take into account the differential costs between new oil in past years and the present levels of such costs. Also it is essential to take into consideration the cost of new oil as distinct from old oil. It is in the interest of the United States to drill extensively in order to know all that can be known about total supplies. In this respect we must provide incentives to maximize the exploration and exploitation of new oil, and this principally calls for prices of new oil that will cover costs. Any level of prices below that level will curtail new exploration and additions to supply.

As you may know, on April 28, 1975, I submitted to the Senate Committee on the Interior a statement entitled "The Cost of Finding, Developing, and Producing Crude Oil in the United States." This statement was based on a detailed analysis of the true economic costs involved in all aspects of new production of crude oil in this country. The results are both significant and provocative. It is quite clear that for some time oil prices in the United States have been at levels well below actual costs and this has had a discouraging impact on finding and developing new sources of oil supplies. These findings may not be good news for us, but it is essential that the facts be developed and aired in order to arrive at policies which will be compatible with moving toward the fulfillment of our national objectives of reducing our dependence on insecure sources for energy and reducing the unfavorable balance of payments resulting from heavy imports of crude oil and petroleum products. Simultaneously, we must take into account the longer-run needs of consumers and the problems of general inflation.

The following observations relate specifically to the cost and price problems of new oil development in the United States and should help to shed light on a complex and sensitive subject. It should be noted that these problems are quite distinct from two other issues that must be addressed by overall energy policy: the problem of conservation by constraining demand and the problem of preventing or offsetting unintended enrichment of producers of old oil or impoverishment of consumers. Here we are dealing only with incentives and means to add to domestic supplies.

Unless oil can be sold by producers at prices sufficient to cover costs plus a return on the operator's capital investment sufficient to sustain exploration, then surely wildcat drilling in the United States will decline. It is the rate of return on capital investment that provides the driving force to sustain the level of exploratory activity. This, in turn, determines the level of our oil discoveries and production volume. It is in this context that we must take note of the huge cost increases that have been experienced in finding, developing, and producing crude petroleum.

The attached table, Exhibit I, provides data on the economic cost of finding, developing and producing crude oil in the United States for each year during the period 1959 through 1974. The oil (and regulated gas) reserves found each year represent the total quantity of usable reserves that are available for production attributable to all new wells drilled within that year. The total level of capital investment in drillings each year in the United States (excluding Prudhoe Bay) is also shown. Revenues from the sale of each year's discovered reserves of oil and their attendant costs were projected year by year over the calculated life of the reserve. The price at which each year's discovered oil was assumed to be sold over the life of the reserve was then determined to be at that level which would yield a discounted cash flow rate of return to the producer of 15 percent after payment of all costs, including income taxes. This is referred to as the "economic price," in that it represents the price necessary to induce wildcat producers to take the risks and incur the costs attendant on finding and developing new sources of crude oil.

In the calculations, all costs incurred in the drilling of dry wells as well as new discoveries have been taken into account. All tax incentives, such as intangible drilling costs and percentage depletion, as they actually existed in

each year, have been added to cash flow in arriving at the price needed to yield the 15 percent rate of return. The 1974 calculated price does not, therefore, reflect the increased costs and reduced capital accumulation which will result from the changes in percentage depletion rates and the 65 percent taxable income ceiling enacted in 1975. It does not take into account the 10 percent minimum preference tax on percentage depletion or the higher than 50 percent income tax bracket of many individual entrepreneurs.

An enterprise engaged in oil exploration is distinctly unique from most other kinds of business. It utilizes depleting capital as income and then expends the larger part of this income in ventures, many of which result in a negative return. Four out of five exploratory wells drilled are dry. A 15 percent return on invested capital must be regarded as an extremely conservative base for calculating the economic price in an industry that is so speculative and risk-laden.

The year-by-year economic price and the actual price received for oil discovered over the 1959-74 period are shown graphically in Exhibit II. As is evident, only in 1959 did the price actually received equal or exceed the economic price for new crude oil. The consequences of this price situation should have been anticipated. During this 1959-74 period the number of barrels per exploratory well drilled dropped by almost 50 percent. The level of drilling activity fell by 56 percent. The number of independent oil producers declined from an estimated 20,000 to 10,000. The price chart largely explains these declines. Reasonable returns from exploratory drilling involved real costs that far exceeded the prices at which oil was being bought abroad.

Despite the recent price increases in crude oil, the economic cost of new oil remained above the price actually received through 1974. If new oil prices were rolled back or if ceilings on new oil were set at levels below the economic cost, taking into account the cost effects of the changes already made in percentage depletion, we could well again experience the situation that resulted in the precipitous decline in the discovery of oil reserves over the past 20 years. Oil is more difficult to find than in the earlier years of the industry, but scientific techniques are increasingly sophisticated and costly. If the decline in domestic discoveries is to be reversed for any extended period of time, the existence of appropriate economic incentives—absent for so many years—is a necessary prerequisite for more exploration.

Several observations can be made that are pertinent to your hearing and will serve to update the basic study findings to which I previously referred. First of all, exploratory activity declined somewhat during the past 3 months, after reaching a 10-year peak in mid-March. One would have expected such activity to increase in face of the rising reliance on imports. Explaining the decline in active rigs, from 1,672 in March to 1,625 for the week ending July 7, must, to some extent, be speculative. However, it seems clear that the changes made in the percentage depletion allowance, with the consequent reduction in internal capital sources and lowered borrowing capability, plus the specter of price controls on new crude oil production, all contributed to the change from increasing to decreasing exploration.

A second development of significance has been the continued firmness in the prices of imported oil despite the worldwide drop in demand, production cut-backs, and increased U.S. tariffs. Indeed, despite repeated predictions of sharp drops in the price of imported oil by government officials and others, the outlook seems to be for higher rather than lower prices.

It is well known that imports of crude oil are holding at high levels and threatening to go higher. What is not as well known is that during the four weeks ending June 27, 1975, imports from Canada into the United States east of the Rockies dropped to 412 thousand barrels a day from 682 thousand barrels a day in the comparable period last year. As a nation, we are not only becoming more import-dependent, but more dependent on imports from less secure sources. If and as recovery takes place in the economy, there will be more imports.

As an alternative to larger imports or increased domestic production, the nation could undertake a massive conservation program. Nothing has happened since my April testimony that would lead me to believe this is in the cards—short of another oil embargo.

What the foregoing adds up to is a trade-off between increased imports of Mideast oil—the only place from which they are available—and increased domestic production, which depends heavily on new oil. We calculated the economic

cost of finding and producing new U.S. oil at between \$12.50 and \$13.00 in 1974. That is an average cost. Some new oil may be produced at a lower cost and some at higher levels. However, it is clear that as the price of new oil is controlled at levels below the economic cost of finding and producing it, less new oil will be sought, less produced. As a price ceiling is reduced, it is inevitable that the level of new oil production will also be reduced.

Assuming that a serious conservation program is not undertaken, then the quantity of new oil not discovered and produced because of price ceilings set below the economic cost of producing new oil will be imported from the OPEC nations. This contributes to our balance of trade problems and increases the threat to our national security resulting from imports from insecure sources. Indeed, to pay a higher price for domestic new oil than the cost of imports could be regarded as a national security insurance premium. At the present time, however, the reverse is true and it could be said we are enjoying a national security bonus rather than payment.

EXHIBIT I.—COST OF NEW OIL, TOTAL UNITED STATES, YEARS 1959 THROUGH 1974

[Dollar amounts in millions]

Year	Gross oil reserves (millions of barrels)	Gross gas reserves (billions of cubic feet)	Gross oil and gas sales	Royalty expense	Ad valorem and state taxes	Operating expenses	Adjusted gross income	Total invested capital	Intangible drilling cost	Depletion allowance	Depreciation	Taxable income	Invest. tax credit	Federal income taxes	After tax net income	Net cash flow	Net cash flow discounted 15 percent	Gross oil price (dollars per barrel)	Gas price (dollars per thousand cubic feet)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
1959	3,793	4,594	\$11,740	\$1,467	\$680	\$1,893	\$7,700	\$3,630	\$2,341	\$2,362	\$857	\$2,139	0	\$1,070	\$6,630	\$3,000	0	2.86	0.194
1960	2,785	3,373	10,179	1,272	594	1,505	6,807	3,150	2,042	2,087	706	1,972	0	986	5,821	2,671	0	3.40	.210
1961	2,773	3,358	10,025	1,253	567	1,531	6,674	3,120	2,048	2,052	701	1,873	0	936	5,738	2,618	0	3.34	.227
1962	2,511	3,041	10,174	1,272	570	1,550	6,723	3,202	2,078	2,100	704	1,909	\$49	901	5,882	2,680	0	3.77	.233
1963	2,133	2,583	9,721	1,215	538	1,565	6,403	3,095	2,075	2,004	718	1,607	50	753	5,650	2,555	0	4.27	.237
1964	3,118	3,775	11,223	1,403	641	1,670	7,508	3,475	2,155	2,307	769	2,277	54	1,085	6,424	2,949	0	3.32	.231
1965	2,234	2,705	9,098	1,137	522	1,498	5,940	2,917	1,981	1,852	693	1,414	48	659	5,282	2,365	0	3.79	.234
1966	1,986	2,560	9,998	1,250	562	1,477	6,709	3,135	2,009	2,085	758	1,857	41	837	5,822	2,687	0	4.73	.236
1967	1,874	1,908	9,808	1,226	569	1,426	6,587	3,132	2,088	2,042	753	1,704	43	809	5,778	2,646	0	4.99	.240
1968	2,003	2,258	10,833	1,354	634	1,478	7,367	3,446	2,268	2,273	781	2,045	55	968	6,399	2,953	0	5.13	.246
1969	1,522	1,901	11,146	1,393	640	1,493	7,620	3,406	2,112	2,358	757	2,393	37	1,159	6,461	3,055	0	7.01	.251
1970	1,766	2,138	13,352	1,669	770	1,667	9,247	3,590	1,891	2,323	692	4,340	0	2,170	7,077	3,487	0	7.25	.257
1971	1,267	1,488	10,818	1,352	605	1,546	7,315	3,032	1,751	1,864	606	3,093	42	1,504	5,811	2,779	0	8.22	.273
1972	1,803	1,764	10,105	1,263	561	1,499	6,781	2,986	1,893	1,726	696	2,467	49	1,185	5,597	2,611	0	7.36	.293
1973	1,049	1,450	9,458	1,182	448	1,451	6,377	2,846	1,855	1,628	669	2,225	47	1,066	5,311	2,465	0	8.63	.279
1974	1,206	1,677	16,099	2,012	762	2,137	11,187	4,632	2,739	2,813	987	4,648	69	2,255	8,932	4,300	0	12.73	.449

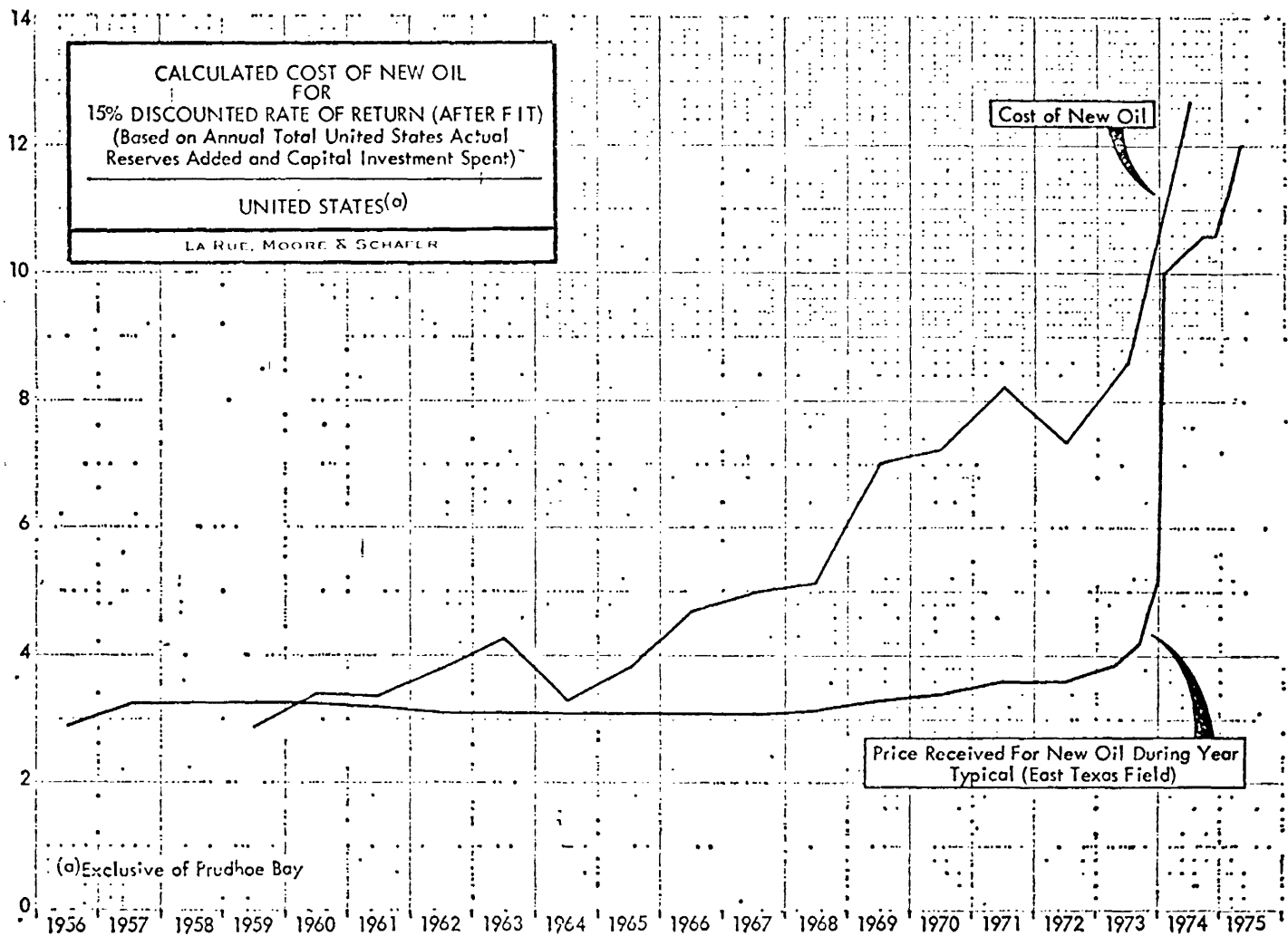
Note: Figures are for total United States except Prudhoe Bay field in Alaska. All financial data expressed in constant dollars for year of initial projection. Columns may not add precisely because of computer rounding.

EXPLANATORY NOTES

Column:

- (1) Oil reserves added by drilling plus expected upward revisions.
- (2) Gas reserves associated with oil.
- (3) Col. (1) multiplied by col. (18) plus col. (2) multiplied by col. (19).
- (4) 12.5 percent of col. (3).
- (5) Variable tax rate multiplied by col. (3) minus col. (4). Tax rate is approximately 6 percent.
- (6) Direct operating costs including field labor and supplies, maintenance, general and administrative overhead.
- (7) Col. (3) minus col. (4) minus col. (5) minus col. (6).
- (8) Total capital investment attributable to oil reserves added in year including leasehold costs.

- (9) Portion of total capital attributable to intangible drilling costs.
- (10) Includes cost and percentage depletion based on law at time of 1st yr projected.
- (11) Cumulative depreciation of tangible drilling costs and leasehold equipment.
- (12) Col. (7) minus col. (9) minus col. (10) minus col. (11).
- (13) Investment tax credit is variable for each year depending on law at start of year. Zero some years.
- (14) Col. (12) multiplied by 50 percent minus col. (13).
- (15) Col. (7) minus col. (14) or alternatively col. (12) minus col. (14) plus col. (10) minus col. (9) plus col. (11).
- (16) Col. (15) minus col. (8).
- (17) Col. (16) discounted at 15 percent per annum compounded annually. Must total zero.
- (18) Gross oil prices at wellhead required for 15 percent discounted rate of return after federal income taxes.
- (19) Gross gas price for the purpose of calculating coproduct credits.



OIL PRICE (Dollars Per Barrel)

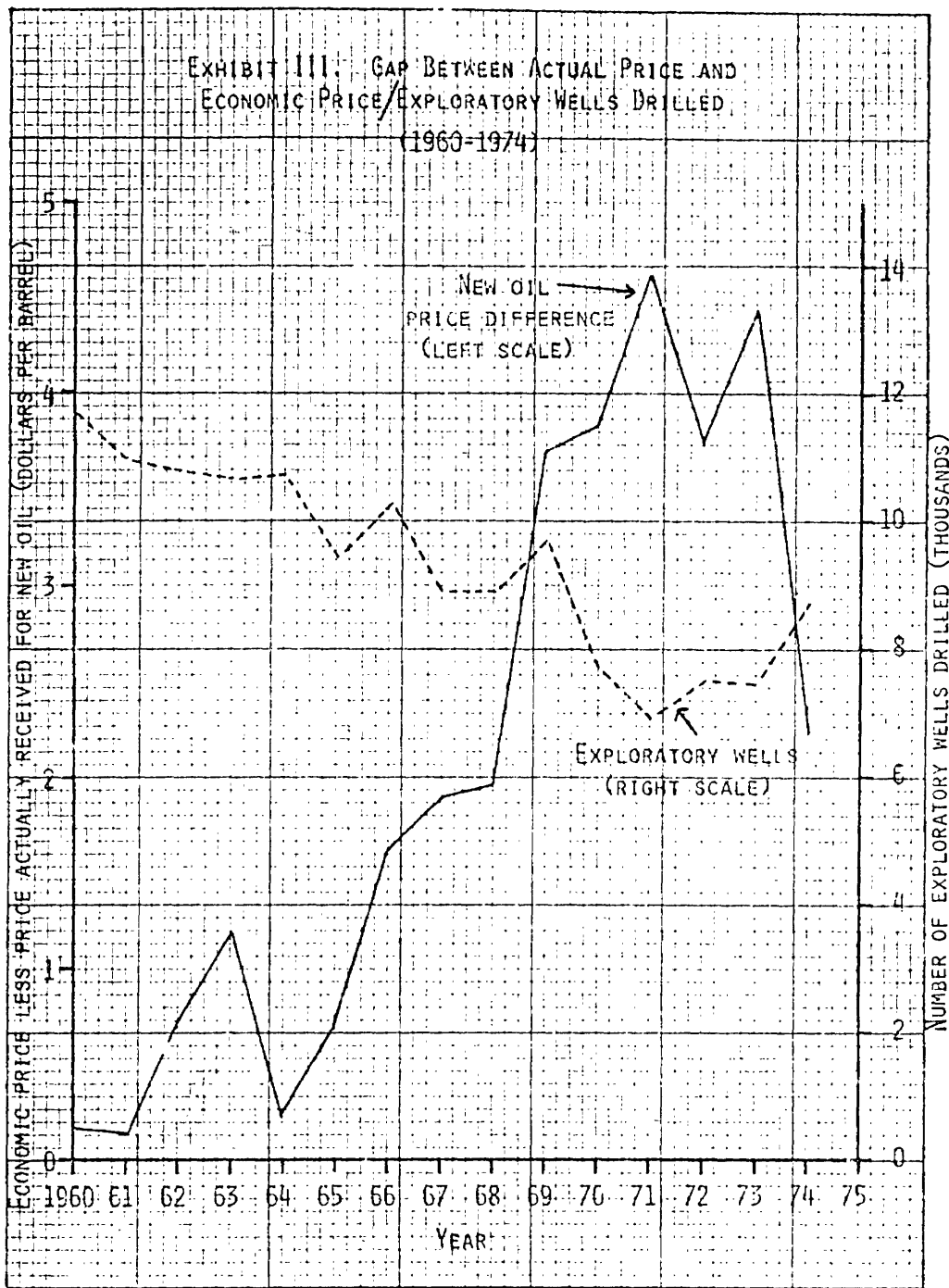


EXHIBIT III A.—ECONOMIC PRICE OF NEW OIL AND PRICE RECEIVED FOR OIL

[Dollar per barrel]

Year	Economic price for new oil ¹	Price received for oil ²	Difference
1959.....	2.86	3.25	-.39
1960.....	3.40	3.25	.15
1961.....	3.34	3.20	.14
1962.....	3.77	3.10	.67
1963.....	4.27	3.10	1.17
1964.....	3.32	3.10	.22
1965.....	3.79	3.10	.69
1966.....	4.73	3.11	1.62
1967.....	4.99	3.11	1.88
1968.....	5.13	3.16	1.97
1969.....	7.01	3.32	3.69
1970.....	7.25	3.40	3.85
1971.....	8.22	3.60	4.62
1972.....	7.36	3.60	3.76
1973.....	8.63	³ 4.20	4.43
1974.....	12.73	³ 10.50	2.23

¹ Col. 18, exhibit I.² Price received for oil during year (east Texas field).³ New oil.

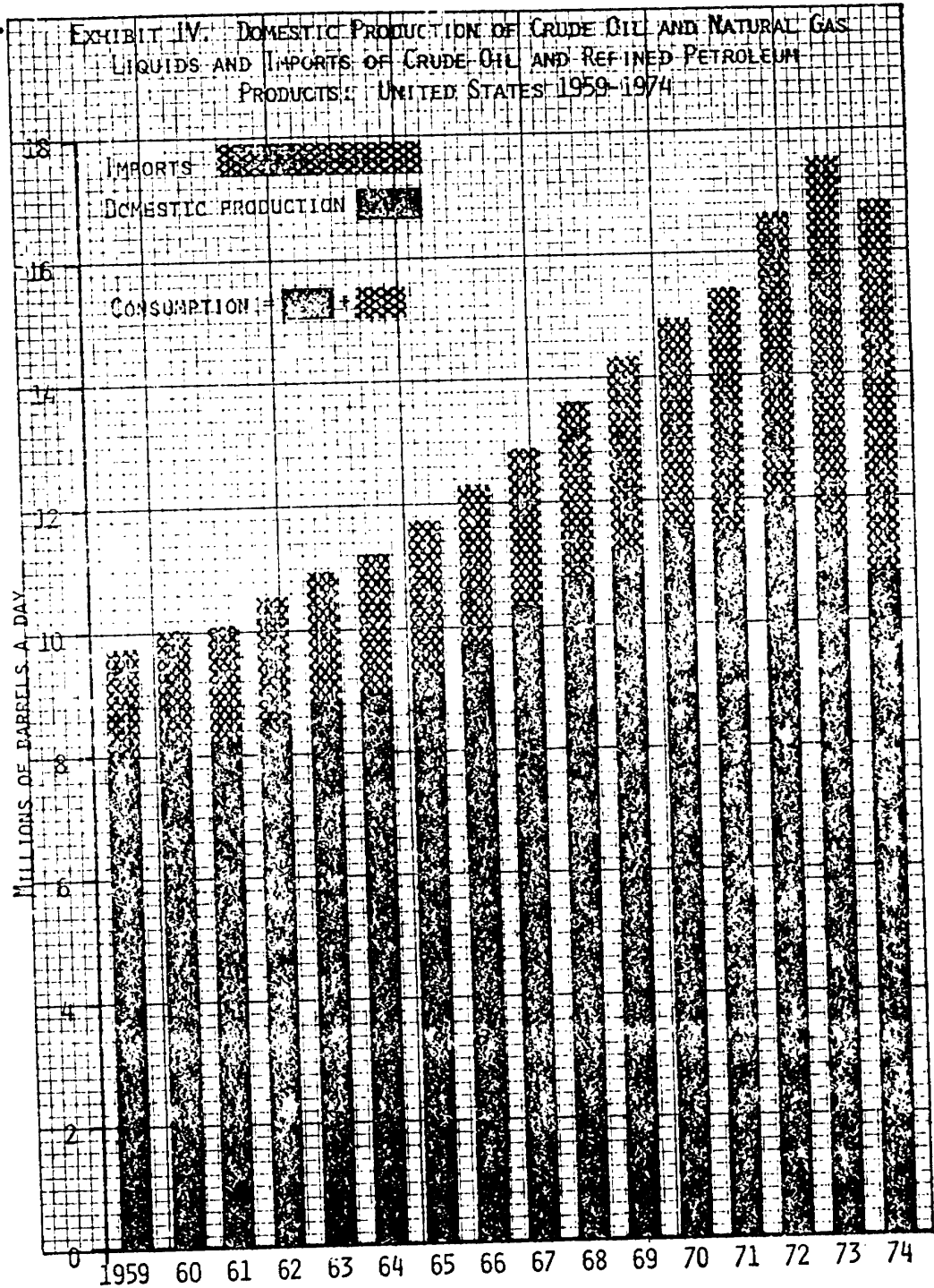


EXHIBIT IV.A.—DOMESTIC PRODUCTION OF CRUDE OIL AND NATURAL GAS LIQUIDS AND IMPORTS OF CRUDE OIL AND REFINED PETROLEUM PRODUCTS, UNITED STATES 1959-74

[In thousands of barrels per day]

Year	U.S. production	Imports into United States	U.S. consumption
1959.....	7,969	1,780	9,749
1960.....	8,194	1,815	10,009
1961.....	8,242	1,917	10,159
1962.....	8,496	2,082	10,578
1963.....	8,838	2,123	10,961
1964.....	8,976	2,258	11,234
1965.....	9,242	2,468	11,710
1966.....	9,720	2,573	12,293
1967.....	10,329	2,537	12,876
1968.....	10,796	2,839	13,635
1969.....	11,215	3,166	14,381
1970.....	11,549	3,419	14,968
1971.....	11,523	3,926	15,449
1972.....	11,861	4,741	16,602
1973.....	11,256	6,256	17,512
1974.....	10,781	6,083	16,864

LA RUE, MOORE & SCHAFER,
Dallas, Tex., May 1, 1975.

CALCULATION OF NEW OIL COSTS, UNITED STATES, YEARS 1959 THROUGH 1974,
MAY 1, 1975

FOREWORD

Scope of Investigation

A study has been made to estimate the economic cost of finding, developing, and producing crude petroleum in the United States, exclusive of the Prudhoe Bay field in Alaska, for each year during the period from 1959 through 1974. Yearly historical additions to the United States oil reserve inventory were analyzed as were the expenditures associated with petroleum exploration and development and production. Projections of production and revenue attributable to the reserves added were processed using an economic model designed specifically for the purpose. As an aid to interpreting the significance of derived economic oil costs, various petroleum activity indicators were compiled and compared to the selling price of oil. While this study is specifically concerned with crude petroleum and its associated gas, the techniques used are also generally applicable to natural gas exploration since many economic factors are common to both.

Authority

This study was authorized by Mr. Robert R. Nathan, President of Robert R. Nathan Associates, Inc.

Source of Information

Information used in this study was obtained from published sources which we consider to be the most reliable and complete, our own files, and work papers compiled during previous work on cost data for Project Independence. The calculations of new oil cost are consistent with those developed by the Interagency Task Force on Oil, chaired by Dr. V. E. McKelvy of the U.S. Geological Survey. Some of the more important published references may be found in Appendix A and other sources are given as footnotes on various tables and figures in this report.

SUMMARY AND CONCLUSIONS

A series of computations have been made for each of the years from 1959 through 1974 to estimate the economic cost of crude petroleum in the United States. These studies show that the economic cost of crude petroleum in the United States, exclusive of Prudhoe Bay, increased from \$2.86 per barrel in 1959 to \$8.70 per barrel in 1973. During the same period, the typical selling price of new oil increased from \$3.25 to \$4.00 per barrel.

As a consequence of the ever increasing disparity between the actual economic cost and selling prices, petroleum exploration during the period declined sharply.

Between 1959 and 1973 total drilling activity dropped 50 percent, drilling rigs in service declined by 60 percent, and over 100 producers, many of substantial size, found it more attractive to sell their properties to larger international firms than to continue exploration activities.

Nationwide costs have not been compiled for 1974, but we have estimated capital expenditures based on the number of wells drilled and have calculated the economic cost of oil found in 1974 to be \$12.84 per barrel. As a result of the Arab embargo, the 1974 selling price for crude oil increased to approximately \$10.00 per barrel, providing great stimulus to exploratory drilling and a marked reversal in the 15-year trend of declining activity.

Economic cost is defined as the cost of finding, developing, and producing crude petroleum plus the minimum return on the operator's capital necessary to sustain exploration. The economic costs of new oil supplies are calculated by the discounted cash flow rate of return method whereby revenues from the sale of oil and their attendant costs are projected yearly over the expected life of the reserve. Oil prices are adjusted within the economic model until the discounted cash flow rate of return to the producer (after federal income taxes) is 15 percent, the minimum required, in our opinion, to maintain exploration levels. Detailed results of the economic calculations and the methods used in their derivation are contained within the text of the report.

One important factor affecting economic oil costs is the depletion allowance which has now been repealed for the nation's major producers. Calculations made previously using the same economic model but not included in this work have shown that elimination of the depletion allowance will increase economic costs of new oil by approximately 20 to 24 percent.

Submitted,

JOHN D. LARUE, P.E.

DISCUSSION

Petroleum exploration

The basic elements of petroleum exploration are much the same around the world. Crude oil production is the culmination of a man's idea—the successful testing of a correct hypothesis of where oil might be found. Ideas come from many sources, such as a study of aerial photographs, reconnaissance seismic surveys, examination of logs from unsuccessful wells, and analogies with conditions elsewhere. Pursuit of exploration ideas may result in a piece of tangible information which strengthens the idea. This piece of information, which is frequently referred to as a "lead", may be nothing more than the subtle change in contour spacing on a map or the way a river changes its course as it flows through the plain.

Leads which offer the most promise are investigated by assigning additional geologists, geophysicists, engineers, and supporting staff to make interpretations of all available geologic data and postulate petroleum accumulations. If the idea still appears to have merit (in the order of one in one hundred will), the lead may be upgraded into a "prospect". At this point, leases are purchased, geophysical crews are engaged to make surreys, and geological core holes may be drilled. Exploration geologists and geophysicists will then interpret the new information to see if the original concept was valid. If the new data still supports the prospect (in many cases it will not) and it appears to have sufficient commercial potential in relation to others being evaluated, the prospect is slated for one or more exploratory wells.

Proof of petroleum reserves comes only from drilling exploratory wells—there is no other way. The best of modern geophysical techniques give only a shadowy inference of places to look for petroleum accumulations. The exploratory well may be productive or dry, but the odds greatly favor its being dry. In 1974, for example, 6,000 of the 8,600 exploratory wells drilled failed to find either oil or gas and were abandoned as dry holes. If the exploratory well is successful in finding oil, new oil reserves are added to the United States Inventory Reserves added by drilling are classified into three general categories: new fields, new reservoirs in old fields, and extensions to old fields. Reserves added by drilling have historically been revised upward, most commonly through implementation of enhanced oil recovery techniques.

Development and exploration

The foregoing, which is generally referred to as the exploratory phase in the life of an oil field, is followed by the development of the field when additional wells are drilled and equipment is installed to accommodate oil production.

Development investment is usually divided by accounting conventions into two categories: well drilling and equipping costs, and lease equipment costs. The well-associated costs include all conduits through which oil is produced to the surface and the wellhead assembly. Lease equipment includes surfaces and sub-surface pumping equipment, pipelines to storage, and lease storage tanks required for holding and measuring crude petroleum before it is sold.

Exploitation of the field begins when the first well is placed on production and continues until operating costs equal the operating revenues at which time the field is abandoned. During the exploitation period which typically lasts 25 to 30 years, wells require continuing attention to keep oil production at economic levels: the costs of labor and materials to maintain equipment and oil production are referred to as producing or operating costs.

Economic considerations

A glance at dry hole statistics on Table 4 shows that many failures accompany the successful wells which define new oil fields. Each failure represents a considerable expenditure of time and monies in terms of geophysical and geological cost, lease acquisition, general and administrative cost, and all other outlays attributable to getting the prospects to the point where they are abandoned or selected for drilling.

Any viable entity engaged in prospecting for and producing crude petroleum must generate enough economically successful ventures to pay for both its failures and successes. Moreover, to justify continuing exploration activity, the producer must earn a return on investment commensurate with his risks. Should the producer do otherwise, petroleum exploratory activity would decline and firms having revenues from oil production would seek more secure investment opportunities. One tremendously complicating factor is that oil is discovered in a somewhat random fashion and a firm exploring for oil may continue in a net-loss position for several years before it can be determined that it is unable to continue or until a discovery is made which covers the previous losses.

In this study we have endeavored to set out in the most straightforward manner possible the relationship between oil found and cost attributable to the finding of that oil. The frame of reference is the entire United States during the past 16 years, exclusive of the Prudhoe Bay field in Alaska which is in a geological province for which we have very little history.

The 15 years prior to 1974 have been a period of declining petroleum exploratory activity. During this period, an increasing number of producers found that in the face of rising costs they could not find enough new oil to justify attempts to replace their reserves and, therefore, began de facto liquidation. Because of the random nature of petroleum finding, a few explorers prospered during this period, but most, and indeed the nationwide exploratory industry as we shall show later, did not.

We have quantified the effects of increasing costs and decreasing finding rates on the cost of new petroleum reserves in the United States. It serves no useful purpose to state that finding costs are so much a barrel and lifting costs have increased to a specific level unless one is so familiar with the magnitude of these numbers that they can intuitively be converted into profitability. Since few people, even those within the petroleum industry, can readily make this transition, the historical economics of oil finding have been expressed in terms of the economic cost of new oil.

The economic cost of new oil is calculated by taking into account the amount of oil discovered in any one year and the cost of finding, developing, and producing that oil, plus the minimum rate of return on the operator's investment necessary to sustain activity. When the economic cost is compared to the actual selling price of crude oil, great insight is provided into the forces that drive petroleum exploration levels. The next section, "Methodology", gives a detailed account of how economic costs of new oil are calculated.

Methodology

Activity in petroleum exploration, like most endeavors, is driven by the producer's anticipation that he might improve his position. The major considerations in exploration decisionmaking are current petroleum prices, extrapolation of past economic experience, and the current laws and regulations concerning petroleum finding and extractive processes. If prior experience seems to justify continuation of exploration, the limiting constraint then becomes the availability of risk capital which is normally generated internally since petroleum exploration ventures cannot be financed through commercial lending institutions.

In this study we have isolated historic yearly expenditures for petroleum exploration and development and the ultimate petroleum reserves added through drilling during the same year. These reserves were projected over their expected lives so that the future annual gross revenue from the sale of crude oil and its associated gas could be calculated. All costs associated with the oil production were deducted to calculate net cash flow to the producer after federal income taxes.

Laws concerning depletion allowance and investment tax credit in effect during the year of discovery were used in calculating the net cash flow since these factors were the ones influencing exploratory activity in that year. Maximum advantage of intangible drilling deductions and depletion was taken, which implicitly assumes that the producer had other income against which to deduct a large portion of intangible drilling costs.

Economic costs of new oil were calculated by the discounted cash flow rate of return method wherein oil prices were adjusted until the producer's discounted rate of return after federal income taxes was 15 percent, the minimum required, in our opinion, to maintain exploration levels. The discounted cash flow method was used in this study because it is a universally accepted decision-making investment criterion in petroleum exploration and production ventures. Individual economic projections for the years 1959 through 1974 may be found on Tables 11 through 26. The bottom line of these projections is summarized on Table 1, which also includes as footnotes the derivation of the columns appearing on the economic projections. The exact calculation procedure and derivation of economic parameters may be followed by examining Tables 2 through 10.

No claim is made that the calculation is precise. One might correctly argue, for example, that the geological expenditures predate drilling by several years or that royalty expenses are substantially greater than the one-eighth used in the calculation or that oil wells cost more to operate than gas wells. These refinements were not made because basic data are not available to permit more detailed differentiation of the costs. Further, it is better, in our judgment, to handle the statistical data on a consistent basis rather than to introduce arbitrary assumptions which would add little to the accuracy of the calculations and would not materially change the results. A conscious effort has been made to perform the calculations in such a manner that the resulting economic costs of new oil are not overstated. In general, introduction of more detailed data and refinements in the technique would result in slightly higher oil prices; however, the methods used provide a consistent basis for making meaningful year-to-year comparisons.

Historical reserve additions in the United States are shown on Table 2. Total reserves added by drilling include extensions of old oil fields, discovery of new fields, and new reservoirs discovered in old fields. A second category of reserve additions includes revisions to existing reserves which are the algebraic summation of the positive and negative adjustments to reserves in all of the fields in the United States. The oil reserve revisions show a long positive historic trend, primarily because recovery factors have been increased as a result of secondary recovery projects. Revisions listed in 1974, for example, may come about in part because a West Texas field found in the 1960's was placed on waterflood in 1973.

Historically, each barrel of new reserve added through drilling will accrue an additional three-fourths barrel of oil through the revision process and the ultimate reserve added must be credited to the year's exploratory efforts.

Table 3 is a compilation of historical expenditures in the United States associated with exploring, developing, and producing crude petroleum for the years 1959 through 1973. Drilling statistics for the same period plus 1974 are on Table 4, and Table 5 depicts the calculation of operating expenses allocated to oil wells, compiled from data presented on Tables 3 and 4. Implicit in the calculation of operating expenses is the assumption that operating costs for oil wells are the same as gas wells. This assumption, which is required because oil and gas well operating costs for oil wells generally exceed those for gas wells.

Table 6 shows the combined capital cost for oil and gas wells as compiled from data on Table 3. Capital investments allocated to oil operations based on data appearing in previous tables are on Table 7. Also shown on Table 7 is the adjustment in capital expenditures in the Prudhoe Bay field so that the calculated capital costs apply to the United States, excluding Prudhoe Bay.

Cost components related to well drilling and completion costs are on Table 8, together with the cost index for the years 1968 through 1974. The basic cost data used for the years 1959 through 1973 have not yet been compiled for 1974; thus, it was necessary to use the supplemental material from Table 8 to estimate capital

expenditures for 1974. Table 9 shows a comparison between drilling costs appearing on Table 4 and those computed from a completely different source listed on Table 8. The correlation between the two sources was judged satisfactory for use in estimating the drilling cost component of 1974 capital expenditures. Calculation procedures for estimating the total 1974 capital expenditures related to oil are shown on Table 10.

The detailed calculation of discounted cash flow rate of return and economic oil price for individual years from 1959 through 1974 is shown on Tables 11 through 26. The results of these calculations are summarized on Table 1 and footnotes appearing on Table 1 apply to Tables 11 through 26 as well.

Analysis of results

The results of the calculations summarized on Table 1 are shown graphically on Figure 1, which depicts the economic cost of new oil and the price actually received for new oil during the same year. The East Texas field was chosen as a reference for new oil selling price because of its large size and long history of consistently tabulated oil prices.

Figure 2 shows the cost of the average well drilled during the period from 1959 through 1974, and Figure 3 shows the average monthly operating cost per well during the same interval, with 1974 being estimated by extrapolation of the curve. The trend in the amount of oil discovered per exploratory well is shown on Figure 4. Data presented on this figure are exclusive of allocated reserve revisions.

Figure 5 shows the number of drilling rigs sold at auction in the United States. The significance of these data is that auctions of drilling rigs are usually distress sales and most of the rigs sold in this manner are junked or dismantled and used for spare parts. The first drilling rig auction took place in 1960 and by the end of 1973 over 60 percent of the nation's drilling equipment had been permanently removed from drilling service. The reason for loss of the drilling rigs may be seen in Figure 6, which depicts the total drilling activity, an increasing number of drilling contractors were forced to sell their equipment and cease or reduce their operations.

Figure 7 is another activity indicator which shows total oil wells drilled. Figure 8 indicates the total exploratory wells drilled in the United States, and Figure 9 shows the total footage drilled.

All of the activity indicators shown on Figures 6 through 9 have one thing in common: in the 15 years prior to 1974, the level of petroleum exploration had shown a continual decline. The reason for the reduction in activity is apparent from Figure 1, which shows that during the early 1960's the economic cost of new oil began to exceed the price for which it could be sold in the United States. By 1971, the economic cost of new oil was about \$8.00 a barrel, or more than twice the selling price. A predictable consequence of the decline of petroleum activity was the sale of many substantial producers to larger or international firms and the beginning of the liquidation of the country's oil reserves.

By 1974, economic cost of new oil had increased to over \$12.00, based on estimated 1974 capital expenditures and operating costs.

The first major reversal in the 15-year trend of declining exploration activity occurred as a result of increased worldwide petroleum prices in late 1973, when the United States selling price of new oil reached \$10.00 per barrel.

[Whereupon, at 3:45 p.m., the committee adjourned, to reconvene at 10 a.m., Friday, July 11, 1975.]

ENERGY CONSERVATION AND CONVERSION ACT OF 1975

FRIDAY, JULY 11, 1975

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 2221, Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senators Long, Harry F. Byrd Jr., of Virginia, Nelson, Gravel, Bentsen, Haskell, Curtis, Fannin, Hansen, and Packwood.

The CHAIRMAN. The meeting will come to order.

I wish to make a statement regarding procedure. An objection has been made to the committee meeting after 12 o'clock while the Senate is in session. However it is the judgment of the chairman of this committee that this legislation is so vital to the Nation's future that it would be unwise to post; one or delay this hearing or in any way delay the progress of this bill toward enactment.

Under the rules of the Senate, so long as there is a quorum present, it is not within the power of the Senate to require any individual Senator or any group of Senators to be present on the floor, although objection can be made to a committee meeting. If we are precluded from meeting officially, we will meet unofficially. We will meet as a group of Senators, if we are given no alternative, and obtain the information, and find some way of making it available to the Senate, even if the chairman has to pay the stenographer himself.

Because some of the statements may occur after 12 o'clock, I will order that the secretary obtain and make a part of the record, all of the prepared statements of all witnesses, just as though they were read. And I will also order that the secretary obtain and make available for the record all statements, all questions and all answers that were made yesterday while the Senate was in session. Any statement that was made after objection was made in the Senate of the committee meeting is ordered to be printed as a part of the record.

I now call the first witness, Mr. Herbert S. Richey, vice chairman of the chamber of commerce, and such advisers and associates as he may care to have join him.

We are very pleased to have you here today, Mr. Richey, and I am sure I speak for the overwhelming majority of this committee who share a profound admiration for your fine organization and its record of service to this country.

STATEMENT OF HERBERT S. RICHEY, VICE CHAIRMAN, CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA; ACCOMPANIED BY: WALKER WINTER, CHAIRMAN, TAXATION COMMITTEE, CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, AND PARTNER, ROSS, HARDIES, O'KEEFE, BABCOCK & PARSONS, CHICAGO ILL.; DAVID LUKEN, ACTING DIRECTOR, NATURAL RESOURCES SECTION, CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA; JAMES GRAHAM, ASSOCIATE DIRECTOR FOR ENERGY, CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA; AND ROBERT R. STATHAM, DIRECTOR, TAX AND FINANCE SECTION, CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA

Mr. RICHEY. Thank you, Senator. We are delighted to be here.

My name is Herbert S. Richey, and I am vice chairman of the board of directors of the Chamber of Commerce of the United States, and president and chief executive officer of the Valley Camp Coal Co., located in Cleveland, Ohio.

I am accompanied by my fellow board member Walker Winter, chairman of the national chamber's taxation committee and a partner in the Chicago law firm of Ross, Hardies, O'Keefe, Babcock & Parsons; David Luken, acting director of the chamber's natural resources section and James Graham, associate director for energy; and Robert R. Stratham, director of the chamber's tax and finance section.

We are appearing before this committee on behalf of the Chamber of Commerce of the United States, the largest association of business and professional organizations in the United States, and the principal spokesman for the American business community. The national chamber represents over 3,500 trade associations and chambers of commerce. It has a direct membership of over 48,000 business firms and an underlying membership of approximately 5 million individuals and firms. Based upon the energy utilized by the commercial and industrial sector of our economy, the national chamber federation probably represents the largest energy-users bloc in the United States. On behalf of the national chamber, I wish to thank the committee for this opportunity to present its opinions on national energy policy and the House Energy Tax bill, H.R. 6860.

The Nation's energy problem, serious as it is, could be treated simply. We need to reduce our reliance on foreign energy suppliers. To do that, our prime objectives must be to: One, increase domestic production of energy supplies, and two, reduce consumption by curbing wasteful practices. In our competitive enterprise system, there is only one sure way to accomplish both objectives: Remove price controls from oil and natural gas.

This market approach would allow prices to rise. The higher prices would provide an incentive for producers to explore and develop greater domestic supplies of oil and natural gas. The higher prices would also spur consumers to conserve fuel, to look for ways of reducing their consumption. In addition to removing price controls on oil and natural gas, the Congress, in coordination with the administration,

should remove constraints and encourage refinements in four additional major areas.

One, facilitate the availability of our natural resources. We must accelerate leasing and development of the Outer Continental Shelf, OCS. Revise Federal lands policy to resume coal leasing on public lands and expand leasing of public lands for oil shale and geothermal development. Expeditiously develop the capability to utilize Alaskan natural gas. Support increased research and development of underdeveloped domestic energy resources such as oil shale and geothermal energy.

Two, revise existing constraints on energy production and consumption. Establish realistic standards and procedures for surface coal mining and land reclamation. Assure a balance between measures for environmental protection and the economic utilization of domestic energy resources. Amend the Clean Air Act to permit greater use of coal. Develop procedures to expedite the siting of energy facilities, including nuclear power plants, refineries and deep water ports. Substitute coal-fired or nuclear powerplants for oil or natural gas fired plants wherever feasible.

Three, assist in revision of energy demand. Establish national mandatory heating and cooling efficiency standards for new buildings. Stimulate development of new technologies for industrial energy conservation. Maximize resource recovery and energy recovery technology. Develop an ethic of energy conservation on the part of the American public. Support active public and private campaigns to conserve energy.

Four, free the marketplace to allow the capital formation essential to meet future energy requirements.

There is no better example of the misguided use of price controls than the history of natural gas production. The Natural Gas Act of 1938 was enacted to protect consumers from the inherently monopolistic operation of natural gas pipelines which basically are regionally noncompetitive. However, producers of natural gas, which are highly competitive and regionally mobile, were specifically exempt from the act.

These pricing policies have caused the present natural gas shortage and have contributed to our overall domestic energy shortage in three ways. One, artificially low natural gas prices reduced the economic incentive to locate and develop new supplies of natural gas. A reduction in the rate of discovery of new gas accompanied the FPC's price policies of 1958-70.

Two, demand for natural gas accelerated sharply in response to the declining real price of natural gas. Many inefficient and inappropriate uses of gas were employed. The clean-burning quality of natural gas also increases its value, though not its price, in these environment-conscious times. Predictably, the rapid rise in demand for natural gas and the drastic reduction in new findings has brought about the present shortage, causing severe curtailments of natural gas deliveries to businesses, hindering production and employment.

Three, beyond just the present natural gas shortage, artificially low natural gas prices have contributed significantly to our domestic shortages of other fuels. These low prices had a depressing effect on

fuel oil prices since fuel oil competes with natural gas for many uses. As a consequence of the artificially low fuel oil and natural gas prices, the domestic fuel supply situation deteriorated in two ways: A shift developed away from coal as a fuel and was hastened by rising coal prices, due primarily to increased labor costs and stringent environmental controls. New exploration and development was forced away from domestic resources to foreign resources. Most of the easy domestic oil and gas deposits had already been discovered. Present costs of exploring and developing offshore areas and Alaska are about 10 times the cost of typical onshore drilling. The result was expanded development of relatively inexpensive foreign reserves, such as Venezuela, Indonesia, the Middle East, to meet domestic demands.

Thus, the combined effect of artificially depressed natural gas prices, reduced development and use of domestic supplies of all fossil fuels, and accelerated demand has brought the United States to its present precarious situation. To reverse this trend, new natural gas should be deregulated immediately.

A recent Business Week article on the intrastate natural gas market illustrates perfectly what happens when a market is allowed to function freely. In recent years, some Texas intrastate gas pipelines have curtailed deliveries just as severely as the interstate lines. Following an almost textbook example, the shortages caused prices to rise in the unregulated Texas gas market, which in turn encouraged new drilling and production. The result has been the production of more gas than Texas can consume, forcing the price down from around \$1.90 to in some cases \$1.20 Mcf, a price which interestingly is below some currently proposed statutory ceilings for gas.

The article points out that the higher prices have made gas users far more frugal. An expert estimated that most plants have cut consumption by about 15 percent simply by using better insulation, recovering waste heat, and taking other gas saving steps. Additional evidence indicates that the higher prices resulted in a 20 percent net increase in producing gas wells over the previous year. A study by the Texas Wildcatters Association shows that gas production from new discoveries amounted to almost 1 trillion cubic feet in 1974. That was 15 percent above the 1973 figure and 2½ times the 1970 level.

Decontrol of crude oil will also significantly increase production and decrease consumption. The Interstate Oil Compact Commission has estimated the decontrol will increase production from old oil wells by 350,000 barrels a day, resulting in a net addition to reserves of 10 billion barrels a day by 1980. The Federal Energy Administration and the Chamber of Commerce have estimated that decontrol would result in increased conservation of 400,000 barrels per day. A large percentage of these savings will displace foreign crude oil.

Utilization of coal. The U.S. Bureau of Mines has estimated that there are 434 billion tons of coal in the demonstrated coal reserve base of the United States. It is estimated that 50 percent of this coal is recoverable. The demonstrated reserve base is coal in relatively thick beds which lie close enough to the surface to be mined by conventional surface or underground methods. Thus, a minimum of 217 billion tons of coal is available for recovery by present technology and within present economics. At current consumption levels, this is enough coal for

300 years. Even at the doubled production rate projected for 1985, this is enough coal for a century and a half.

However, the demonstrated coal reserve base is only a minor fraction of the coal known to exist in the United States. The U.S. Geological Survey has identified 1.6 trillion tons of coal deposits at depths of less than 5,000 feet, and it is estimated that about as much additional coal lies in deeper seams or in unexplored areas. Coal at these depths is mined in other parts of the world, but in the United States it has not yet become necessary to go to such depths and expense.

In short, the United States has a nearly boundless abundance of coal, enough to last for centuries. What is required is a policy which will encourage the fullest development and use of the available reserves, including the development of technology to mine and transport the coal in the amounts needed in the future, and a commitment to assure full use of this most abundant domestic resource. Such a policy should also consider that synthetic fuels from coal can make a timely contribution to dwindling supplies of natural gas.

An important Government action would be to resume coal leasing on Federal lands, which has been frozen for more than 3 years. The requirement for an environmental impact statement on most Federal actions has evolved into a paper bludgeon to thwart most expansion plans of the mining industry involving Federal lands or Federal actions. Additionally, SNG, shale oil, geothermal, nuclear, solar, and other potential forms of energy can make a significant contribution to the high degree of domestic energy self-sufficiency.

We believe quotas, if implemented, would legislate shortages which will require allocations and will mean restricted energy for all segments of the economy, especially if we do nothing to increase domestic supply equal to the shortfall.

The proposal to tax the business use of oil and natural gas is ill-conceived and misplaced on several counts. When fully effective, the excise tax on the business use of oil and natural gas will be \$1 per barrel for oil and 18 cents per thousand cubic feet for gas. This is a negative approach to the stated purpose of the provision, encouraging business conversion for greater savings. The answer to encouraging greater energy saving is not to put a penalty tax on business but to let the market system produce more efficient energy supplies and new sources of energy.

If the tax is designed to encourage industrial conservation of oil and gas, this has been, and will continue to be, accomplished more efficiently in the marketplace by interaction with higher energy prices. A recent Department of Commerce survey of industrial consumers shows that industry in 1974 cut energy consumption on a per unit of output basis by a median 7.6 percent which then-Secretary of Commerce Frederick Dent called very substantial. The majority of the energy reductions were in the 6 percent to 8-percent range. However, 10 reporting industries recorded savings of over 30 percent. As technology responds to higher costs, efficiency will continue to improve.

If the tax is designed to encourage industrial conversion to coal, this can also be better accomplished through the marketplace where industry can determine what energy source is most desirable based on cost and availability. Industries which are unable to convert to coal,

either because of poor transportation facilities or because of air quality constraints, would be unjustly penalized. Those industries which desire to convert to coal should be assisted through a prompt capital cost recovery system, which is considered in a later section, rather than by prodding through penalty taxation. Penalty taxes drain needed capital for companies to invest in energy efficiency equipment. Additionally, because natural gas is so underpriced, a tax on it would have little effect on conservation or conversion, since its price would continue to remain below the price of coal or crude oil.

An excise tax on oil and gas will raise revenue, but do nothing to increase production of gas or oil which should be the thrust of national energy policy. The most efficient conservation, as we have seen, will result from higher energy costs which will also encourage exploration and production of new sources of energy.

Capital is an important factor in energy exploration and development. Estimates of the capital needs of the energy industry over the next decade have reached \$1 trillion. Existing and anticipated tax policies greatly influence investment decisions by the energy companies. Additional tax burdens or threats of additional taxes can discourage investment and impede the development of essential energy supplies. Thus, there exists a correlation between taxes and the energy crisis.

Facing a capital shortage, the energy industry was dealt a severe blow by the Tax Reduction Act of 1975. The act increased taxes for 1975 on the petroleum industry by almost \$2 billion. The severe limitation placed on the percentage depletion allowance alone could reduce available capital in 1975 by \$1.7 billion. These adverse changes in the tax laws with regard to natural resources could seriously impair the search for new energy.

There have been numerous proposals to impose an excess profits tax on energy producing companies. We oppose excess profits taxes. They run counter to the competitive enterprise system, are economically unsound, are difficult to administer, and are not a solution to the current energy crisis. A tax on excess profits suggests that the Government can decide how much profits should be and which profits are excessive and which are not. If this is possible with the energy producing segment of the economy, then why is it not possible with other segments of the economy? Where do we stop? What will be the shortages next year and the next, and which businesses will be subjected to Government regulation and control of their profits?

Excess profits taxes discourage capital investment for the development of new energy resources. There is a definite psychological effect on investors who know that any success will be subject to a tax that could consume most or all the profit. In addition, an excess profits tax could have the effect of causing companies to delay capital investment actions until such time as the tax expires, resulting in a definite postponement in the development of productive facilities.

We are opposed to any form of excess profits tax. If one is imposed, however, it must contain a plowback provision. Without a plowback provision, the capital vital to the solution of America's energy needs may not be available.

I would like to thank the committee for allowing the chamber of commerce to come to comment on this most critical national issue.

The CHAIRMAN. Thank you very much, sir.

We are proceeding under the early bird rule, and unless objection is heard, we will continue in this fashion. And since the chairman was the first Senator present, I will avail myself of the opportunity to ask the first question.

You have suggested that we should amend the Clean Air Act in order to use more coal. How much additional pollution can we expect in the atmosphere in the metropolitan areas if we switch to natural gas and fuel oil to the extent that it is being used, and use coal instead?

Mr. RICHEY. Senator Long, that is a difficult question to answer specifically. There are many areas that are not in metropolitan districts that can convert to coal, which we do not feel would load the air with impurities.

I might also add here that there have been great strides in recent years in the collection of particulate matters.

I think when people speak of air pollution from coal, they speak particularly of sulfur emissions, and there is a great argument as to the lack of—well, there is really a lack of knowledge on the effect of sulfur emissions. What we, as coal people—and I am speaking here as a coal man—have recommended is that the high sulfur coal be allowed to be burned, that the standards for health should be set at ambient levels—that is, the level that we breathe—and not at the mouth of the smokestack. And that in times when there are weather inversions—cloudy days, heavy days, drizzly days—that the powerplants within or near urban areas, metropolitan areas, be required then, on a temporary basis, to convert back to lower sulfur fuels.

I think I am right in saying that approximately 50 to 60 percent of coal reserves in the Eastern part of the United States are what are now called high sulfur reserves. And of the low sulfur reserves, a great number are committed to the production of metallurgical coal for steelmaking.

The CHAIRMAN. Well, it has occurred to me that along the eastern seaboard, so long as the wind is blowing from the west—and that seems to be the prevailing direction—

Mr. RICHEY. Yes; that is the prevailing wind.

The CHAIRMAN [continuing]. If you put your generating plant somewhere near the coast, and so long as the prevailing wind is blowing westward, it simply carries the smoke out to sea. And while it is nice to see the horizon, it would not make a lot of difference except in the summertime when bathers are out there wanting to see it. So that during the winter months, when we have to do a lot of heating, it would not make much difference, anyhow.

Now, when it is blowing the other way, you might switch over to use gas or fuel oil or something that has a much lower degree of pollution to it.

We are going to have to find some ways of making some compromises if we are going to become energy sufficient. I think that is clear.

Mr. RICHEY. This is correct.

The CHAIRMAN. Now, it has also occurred to me that we must immediately take steps to reduce consumption by curbing wasteful practices.

We now have utility rate structures all over America which were designed to encourage waste. You drive down the road and you see a sign with three little birds on it, saying, "Electricity is cheap, cheap,

cheap," urging you to use more electricity. And electricity is priced so that the first x number of units you will buy would be at about 14 cents a kilowatt-hour, and then it would drop down to about 7 cents a kilowatt-hour.

It seems to me that it should be just the other way around: that the early units ought to be the cheap units and the late units ought to be the expensive units. So if you could persuade a fellow to insulate his home, the savings would be twice as great as it would be if the rates remained unchanged. That is, if a person used the same amount of energy, his bill would have to be increased; but if he reduced his energy consumption, his bill would be about the same as it was before.

Can you offer us any suggestions along that line?

Mr. RICHY. Senator, I think that there are some studies on that matter going on at the present time. Our feeling is that with the price of natural gas and oil domestically increasing, that people will turn more and more to electricity for domestic heating and other domestic functions.

The price of electricity is going up, as you know; and I think we have covered in our report, and certainly back it up with further statistics, that this already has caused savings. I know that in my own industry, the coal industry, we have always been pretty poor, and we saved every nickel of electricity we could, that was a big part of our costs. I think more industries that were profitable perhaps used electricity a little more freely.

I was amazed to receive from one of our largest corporations, General Motors, a rather thick report, some 2½ inches thick, that showed the ways that they saved electricity. For example, if I recall the figures right, they produced as many cars, let us say, in 1973 as they did in 1968 or 1969, with a tremendous reduction in electricity. Now, this can be done. In the household, I think it is a little more difficult for a person to save electricity.

There are some talks now going on——

The CHAIRMAN. May I interrupt for a moment?

You are making a point that has appealed to me for some time. I look at television and hear the fellow advertising that if you insulate your home, you will save \$150. That is, if you put his 6 inches of insulating material in the attic, you will save \$150 in the winter.

Now, if you structured utility rates be it for natural gas or be it for electricity, in such a fashion that the last units came very high, then he could advertise not that this is going to save \$150, but that it may save \$300.

Now, the House bill would give a person a tax break to help a person to insulate his house. If we require them to reverse the rates, that adds to the incentive so he saves \$300 in a year. If it cost somebody \$1,000 to insulate his home and if you give him about a \$200 tax break and reverse utility rates, in 2½ years that would pay itself out. Then if we can find a way to help finance it over a longer period than 3 years and have the utility company collect for the monthly payments as part of the bill, he would wind up paying no more than he was paying before. In fact, he would pay less. And after a few years, he would actually have a smaller bill rather than a larger bill, by a very substantial amount, because he had insulated his home.

Now, fundamental to all of that, it seems to me, should be simply the restructuring of the rates. That does not cost the taxpayer any thing. Why should we not do that?

Mr. RICHEY. Well, as I said, I believe study is going on on that. I believe it should be made.

Now, your specific example, I do not think anybody can disagree with that.

The CHAIRMAN. Now frankly, the man who pointed this out to me was the man who was the chairman of the board of a big pipeline company. This company is delivering to all of these utilities, and to him it is absolutely silly to be still pursuing a rate structure which was built to encourage waste at a time when you ought to be encouraging economy.

Mr. RICHEY. I think perhaps there is another side of the coin, speaking for business and as a businessman, if I have a mine or we have a factory and the more electricity we use the higher rate we pay, this is discouraging expansion. I think this is what I fear. And I see a flop over, as I have been reading in the papers, in the rate structure of electricity. It seems to me that to encourage expansion and thus produce more jobs, large users should have a quantity discount of some sort. And I think this is the present rate structure now.

The CHAIRMAN. If you are doing what I am talking about doing, it will put people to work manufacturing insulating material and installing it in the attics of the houses. Down in my part of the country, they are building homes with the air-conditioning running 24 hours a day in the summertime and the heating running 24 hours a day in the wintertime, with no insulation whatever. The air-conditioning machine goes constantly; it never cuts off at all—either heating or cooling, as the case may be. And it seems to me we ought to make it so expensive to waste energy that people cannot afford to waste it; and you would provide more employment, not less, to do what I am talking about, because you would put people to work insulating those homes.

Mr. RICHEY. Well, I was speaking generally of the whole business economy, not just the insulation industry. It sounds to me like your problem down there is that there should be building standards that would require insulation of homes.

The CHAIRMAN. That is not a problem down there alone. I bought John Mitchell's apartment after he moved out of the Watergate, and it has glass walls. The outside walls are practically all glass, with no insulation whatsoever. And nobody has done a blessed thing in the whole Watergate complex, one of the most expensive apartment complexes in Washington, to do anything about insulation. In fact, I do not think anybody has even turned off the pilot lights on the gas ranges inside that building.

Why not proceed to make it so expensive to waste energy that the people who are supposed to be running that apartment building will say, we cannot afford this; we have got to start insulating.

Mr. RICHEY. Senator, if I might come back to our written testimony here, the chamber's position is that by freeing up the marketing prices of domestic fuels, gas and oil, that they are going to rise according to the laws of supply and demand, which will fund more money for more discoveries. But this alone is going to raise the cost of power,

heat and so on in this country. In the electric utility industries, they are going to have to be paying more and more for fuel than they have been, and their rates thereby are going to go up, which I think will accomplish what you are suggesting we do.

The CHAIRMAN. Well, I have exceeded my time.

Mr. RICHEY. But before I can go and really comment on your proposal—which I do not totally disagree with—as I said, it is my understanding that there are some very serious studies made of this project, and I think we ought to wait until those are out before we try to make decisions.

The CHAIRMAN. Well, it seems to me we have wasted 2 years the way it is now. Indeed, before this committee meeting got started, you told me that insofar as mining coal is concerned we ought to quit waiting and go on and do something.

Now, what I am saying is, insofar as insulating homes is concerned, we ought to quit waiting; insofar as turning out the pilot lights on those gas ranges, we ought to quit waiting. We ought to get busy and start doing something.

Now, I am willing to have somebody prod me and use a stick on me to make me do what should be done, but I do not feel like being the only guy in the whole Watergate complex that is trying to conserve on energy. I want to make my neighbor do the same thing. And then I am willing to do my part.

Mr. RICHEY. I think it will have to be done as you say, through the pricing mechanism.

The CHAIRMAN. Senator Haskell.

Senator HASKELL. Thank you, Mr. Chairman.

Mr. Richey, I would like to pursue Chairman Long's general line of questioning.

For example, taken into the industrial area, with the quantity discount way of structuring rates there is no disincentive to use, of course. Furthermore, what it does is exacerbate the peak loads. And we all know that high peak loads require substantial capital investment.

Mr. RICHEY. That is correct.

Senator HASKELL. For example, by using a rate system with a break for off peak usage for example, we would save tremendous capital investments.

Another aspect of domestic pricing of utility rates has been mentioned. I have a friend who has a country house and another mutual friend was out there and he said, let's turn out the lights. And this fellow said, oh, the hell with it; I never use up the minimum. Well, you know, something is wrong.

Mr. RICHEY. I do not live in an area where we have a minimum. This is something new to me.

Senator HASKELL. I see.

Well, I am just pointing out the whole area of utility rate structure is a marvelous way, if we do it wisely, to save tremendous capital investment. And we are going to need to conserve power, in my personal opinion.

Mr. RICHEY. No question at all.

Senator HASKELL. And also at the same time it saves energy. I would comment that in Senator Nelson's State the utilities commission

has done some experimenting. The Public Service Commission in New York, as you are undoubtedly aware, is looking into the matter substantially. But I concur heartily with the chairman that this possibly could be one of the most fruitful areas for exploration in energy saving.

And I would appreciate it if perhaps your organization would give a little thought to the subject matter and advise us what you think about it. I think that might be very helpful.

Mr. RICHEY. I think that would be very possible.

And I would like to comment on your first statement on off peak loading. This is very important. I do not know if it is still done. I remember when the electric utility industry back in the 1930's first began to promote the sale of electric hot water heaters. They were so programed or timed that they only heated during the offpeak hours, and you got a reduced rate from the hot water heater. Now, whether that still goes on or not, I do not know. But the only problem with it was if you ran out of hot water during the peak time, then you had to pay the premium price. Fortunately, in our industry we are basically a 2- and 3-shift industry, so we are using power 24 hours a day, and this helps a great deal. But we do have a great capacity that is not used, from about midnight at night until 6 or 7 in the morning.

Senator HASKELL. Well, if your organization would give a little thought to the general subject matter and advise use of your thinking—

Mr. RICHEY. Yes, I think we can do that.

Senator HASKELL. I have no further questions.

The CHAIRMAN. Senator Packwood.

Senator PACKWOOD. Let me pursue coal burning with you a little bit more. I am not that familiar with it, in the generation of electricity, because I come from the West and we use mostly hydroelectric power.

In your statement you say if the clean air provisions go into effect in mid-1975, it would effectively outlaw 200 million tons of coal, which is a third of all the production in this country.

Mr. RICHEY. That is right.

Senator PACKWOOD. Then you say, with emerging sulfur dioxide removal technology, about 100 million tons of this 200 million, I assume, could continue to be burned, but the equipment probably will not be ready for installation until around 1979. The other 100 million has so much sulfur in it that even these techniques we are now talking about will not work?

Mr. RICHEY. It will work, but it will produce sulfur emissions higher than the secondary standards permit.

The due date is now past, and to my knowledge there has been no restriction yet in the burning of the higher sulfur coals.

Senator PACKWOOD. Excuse me, how is that accomplished? If the deadline is past, the restrictions are in effect?

Mr. RICHEY. I believe EPA has taken the position that utilities who are working toward the development, purchase and installation of sulfur removal equipment, and who are making attempts and accomplishing in fact the blending of higher sulfur coals with lower sulfur coals to reduce the total level of sulfur going into boilers, that they are continuing to operate.

There is just no way that I can see that if 200—my figure is 240 million tons. I happen to produce high sulfur coal, so I am pretty close to it. That this has shut down some 28 percent of the electric generation in this country, and you just cannot do that.

But we are working toward a goal, Senator. To me it is not a goal that can be accomplished by pulling a shade down and saying today everything is black, everything is white. It is going to take time to do it. For example, I do not believe that the electric utility industry could equip itself with the so-called sulfur scrubbers in order to develop the limestone to work in the scrubbers, nor to produce the extra coal that is needed to dry the limestone to put in the scrubbers, nor to dig the holes to put the effluent in, nor to develop the transportation system to haul the limestone from the limestone mine to the plants. And from the date of the Clean Air Act until this July, there is just no way.

So, this is going to have to be stretched out.

I might like to add a point. When I spoke to Senator Long about the ambient air levels, I mentioned my own company produces high sulfur coal. We sell to two major utility companies in the country who, for the last 2 years, have had sulfur measuring devices stationed away from plants where this coal is burned, as far as 25 miles at the ambient level. Now, they have put them in river valleys; they have put them up on hills; they have put them in forests; they have put them on farms; they have put them in cities, and they have yet to pick up a sulfur reading in the air.

Senator PACKWOOD. A sulfur reading? None at all?

Mr. RICHEY. No, sir. And this data is available.

Senator PACKWOOD. Would you send that to me? I would appreciate it.

Mr. RICHEY. Sir?

Senator PACKWOOD. Could you get that data for me? I would like to have it.

Mr. RICHEY. I would like to have the two utility companies who are doing this, because they are outspoken about it—in fact, one gentleman has some very straightforward ads in the paper.

Senator PACKWOOD. They are burning your coal, which is very high sulfur coal—

Mr. RICHEY. Well, it is relative.

Senator PACKWOOD. Two or three weeks ago, I read a story—not more than 3- or 4-column inches; I have not followed up on it—that the Batelle Institute had patented a device for economically taking sulfur out of coal.

Do you know anything about that?

Mr. RICHEY. No; just what I have read in the paper.

Senator PACKWOOD. Does it sound hopeful? Batelle is a good institute.

Mr. RICHEY. Oh, sure, high sulfur coal producers would greet something like that as reasonable.

Senator PACKWOOD. I have no other questions.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Byrd.

Senator HARRY F. BYRD, Jr. Thank you, Mr. Chairman.

Mr. Richey, your statement, I think, is a fine one.

Mr. RICHEY. I would like to credit the staff of the chamber for it. They are quite knowledgeable.

Senator HARRY F. BYRD, Jr. The staff developed a good presentation.

I agree with your statement, too—I think it is a good statement—on page 25, in regard to the capital formation, the capital needs of the energy industry. It seems to me also that you are on sound ground in your statement with regard to the excess profits tax, which was tried in World War II and proved very unsound. I do not remember the entire history of it, but I think it was taken off after a relatively short period. It did not work well. But the other side of it is that if you completely decontrol all petroleums, tremendous profits will be obtained, I suppose, by the oil companies. And without an excess profits tax, which I do not favor, how do you achieve equity for the consumer?

Mr. RICHEY. Senator, your point is well taken. The chamber historically has been for the immediate removal of such things, but we are in a different circumstance right now. Our feeling—my feeling is that if things were cut loose immediately, there would be such a rush for drilling pipe, drilling rigs, steel, labor, geologists, transportation equipment, that it would be a mass scramble, and there could be a period of difficulty. It might be that a planned, scheduled deregulation, over a reasonable period of time, would permit operators and drillers and so on to plan a schedule knowing where they would be 6 months, 1 year, 18 months, 2 years down the road. And perhaps would slow that down some.

Walker, would you have something to add to that?

Mr. WINTER. No. Our experience has been very bad with the excess profits tax. Whether you call it windfall profits, it is still an excess profit tax. We have opposed it. But I would certainly agree that perhaps a form of decontrol of the old oil, over a period of time, might accomplish this. And as Mr. Richey said in his statement, if there must be some sort of a tax in the interim to achieve equity, that is not otherwise considered proper, we would hope that there would be a plowback provision so that the additional revenues that were generated would go to the companies and would increase exploration.

I would like to pick up one other point, too, on capital formation. We have testified repeatedly in the hope that provisions can be added in the code to assist in capital formation. As you know, Secretary Simon testified before the Ways and Means Committee—I guess it was Monday or Tuesday of this week—urging that this be done. He has agreed with the Ways and Means Committee to come back with specific administration proposals on this area of capital formation by the end of July. And if possible, I would hope that this committee, with the primary jurisdiction over the taxes, could pick up on that and give us some of our capital recovery changes, such as the investment credit, increased depreciation, and so forth, so that we could assist in this conversion from gas and petroleum to the use of coal and so forth.

Senator HARRY F. BYRD, Jr. Well, do I understand you accurately, that while you oppose an excess profits tax in principle, that you think that such a tax is needed, or would be needed, for a period of time if all petroleum were decontrolled?

Mr. WINTER. I think if you have decontrol over a period of time, and not instantaneously, you will not need any form of excess profits tax.

Senator HARRY F. BYRD, Jr. What do you mean by over a period of time?

Mr. WINTER. I do not know. What it would be, whether it would be over a 3-year period—but in any event, if there is some judgment in Congress of the need for a tax such as an excess profits tax, then we would certainly urge that there be a plowback provision. We are totally opposed to the imposition of any excess profits tax. We think it leads to inefficiency. I do not know whether it would be extended from the petroleum industry to the steel industry or to the housing industry.

Senator HARRY F. BYRD, Jr. I agree with you. I am trying to understand just exactly what your view is on it. I thought that you in your statement indicated that there would need to be a windfall profits tax.

Mr. WINTER. If one is proposed, then we want a plowback provision. We do not want a windfall profits tax, no, sir.

Senator HARRY F. BYRD, Jr. Well, let me see if I can—

Mr. RICHEY. Senator, if I could perhaps—we are opposed to a so-called excess profits tax or a windfall tax. We need in the energy industry the capital to put back into that industry, to expand. We agree on that. If, however, Congress, over and above the people in this room, decide that they want to put an excess profits tax on it, we say if we have to swallow that, please give us a plowback provision so we can still take the capital that would be normally taxed away to an excess profits or windfall tax, and let us put it back in the wells and mines and so on.

A specific example. I am fortunate; I am an independent coal company operator. I am not owned by an oil company or a copper company or anybody. I am the Valley Camp Coal Co. We are not a big company, but our net worth is now about \$45 million. Our spending program for the next 4 or 5 years is \$128 million, all going into coal mines to produce coal. So anybody that would take capital away from us, which we desperately need, is going to do but one thing; restrict the output of coal from our company. And this would apply to all of the others.

Senator Long said earlier that in speaking with him before the meeting began, that I was for "let us get going on coal production." The specific example—and this is one I can cite, and you can remember—there was a great to-do about impact statements being made. I think impact statements, properly made, are a good thing. They should cover environmental considerations, they should cover economic situations, and they should cover sociological situations. My company is about to build a mine in Utah, \$35 million to produce 2 million tons a year. Our mine would be developed on private fee land, but within some of our coal reserves are Federal leases. Because of that, it is now becoming apparent—not fully decided, but becoming fully apparent—that we will have to have an impact study made, which will take 3 years.

Now, I cannot sit around with that money. I do not have to be in the coal business. I am an investor of other people's capital. If I cannot put it where I want it, I have to put it someplace else, and this is the big, serious delay. Our industry has close to doubled coal production in 10 years, and here is 3 years taken away to start.

Senator HARRY F. BYRD, Jr. I think you are quite right. As a matter of information, if a business—or an individual, for that matter—was putting up a new facility and trying to determine whether

to heat it by coal or by petroleum, or one or the other means, how would the cost of coal compare?

Mr. RICHEY. Today, I believe, in most situations, the cost of coal is cheaper than imported oil, unregulated oil; and is cheaper than intrastate gas, which operates in a free market. Now, for example, my company ships coal to the east coast, to an east coast utility. Our coal delivers to them—I am not counting burning costs, because I do not know those—but our coal delivers to them about \$12 to \$14 a ton equivalent less than the imported oil.

Now, if I could say one thing about the impact studies, to my knowledge, from the impact studies that have been made, they have never, after the impact studies have been completed, stopped a project. They have delayed a project; and my feeling is that the development of a project and the impact study can go together simultaneously, because I do want to know what effect our development will have on a community. How many homes should we provide? How about schools? What taxation do we need to provide for sewage plants, growth, and so on? This is valuable information, and it helps the producer. But let us not delay the digging of the coal.

Senator HARRY F. BYRD, Jr. Yes, I think so, and I think the Congress has not given adequate consideration to the points you develop there, and has not given adequate consideration to the need for capital formation. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Bentsen?

Senator Bentsen. I very much sympathize with Mr. Richey's comments concerning the impact statement. But let me say, Congress has given consideration to that specific point. We held hearings earlier this year and witnesses assured us they were going to cut out about one-third of the time. We will wait and see if they do it. They also said that they would try to cooperate and work with the State agencies in developing this instead of letting the State agency do its job, and then the Federal Government agency do its; and then say the State did not do it satisfactorily, and you have to start through the cycle again. So hopefully, we are making some headway in the very thing you are talking about. You cannot hold up \$45 million worth of capital, for example, while this kind of study is being made.

Now, the other point is, you are talking about the leasing of Federal lands. Is it not also true that much of this Federal land is a checkerboard situation so that one has a difficult time; because if you are talking about your private lands you get a lease off, then you run into the problem that the Federal lands, in effect, negate what you can do a lot of times. I was in a mine 2 weeks ago. I went back 7 miles from the entrance underground and that mine covered a geographical area larger than Manhattan Island.

Mr. RICHEY. What mine was that?

Senator BENTSEN. That was Consolidated Coal, outside of Pittsburgh.

Mr. RICHEY. We have some mines that go back 14 miles.

Senator BENTSEN. I certainly agree with the chairman on this question of stopping quantity discounts for big electricity users. A small businessman has enough trouble competing with larger companies. Major quantity discounts put smaller firms in a pretty tough

spot trying to compete. So we have that competitive problem, plus the objectives of the Nation in trying to get better utilization of energy.

I have seen a Bureau of Standards Study that estimates that industry today can save about 30 percent of the energy it uses; and you cited some examples of some of the energy savings that had occurred.

We have also had some major engineering firms testify about potential energy savings before the Public Works Committee.

Mr. RICHEY. Senator, energy has been so cheap we threw it away.

Senator BENTSEN. Why can we not put in something like a 5-year write-off on new machinery, that would save energy? We do that for pollution control machinery today.

Mr. RICHEY. That is correct.

Senator BENTSEN. We give them a 5-year write-off if they will put machinery in that will control pollution.

Mr. RICHEY. Anything that provides commerce, business, entrepreneurs, with more capital to invest, the better off the country is going to be.

Senator BENTSEN. I would like to see us use the carrot and the stick approach. We should get away from quantity discounts for big industry's use of electricity and provide them perhaps with a five-year write-off for energy saving machinery. And at the same time, we would improve technology in this country, which we are in need of to remain competitive in world markets. We invest the smallest percentage of our disposable income back in manufacturing capacity of any major nation in the world. England is the one next to us, and they are in real trouble.

Let me ask you another question. We talk about moving on energy and trying to develop a Manhattan project approach. We did this when natural rubber was cut off in World War II and we developed synthetic rubber in this country. Yet I look at the cost of a coal gasification plant, for example, and I am talking about a major one. Coal gasification is not a new process. They were doing it in Germany during World War II. That is the way they stayed in the war as long as they did. We are talking about trying some new technological processes, and we are also talking about doing it on a magnitude that has never been done before. That can lead to problems and there is some risk involved. First industry was talking about building a coal gasification plant for \$500 million, and then I heard \$700 million, and then I heard \$1 billion. And then, the other day, somebody said, well, yes, but maybe \$2 billion.

Now, I would be concerned if I were on the board of directors of one of those companies, and was told it was going to cost \$1 billion, and might get as high as \$2 billion and that synthetic gas would equate to \$13 or \$15 in the price per barrel of oil. If I were to build that plant, and I had a capital surplus of \$500 million, and then suppose the Middle East countries, in a capricious way, decided to drop the price of oil for a couple of years, and put these alternative energy sources out of business, the capital surplus of that company gets wiped out. So it does not get built. And yet, it is in the national interest to build these plants to determine their economic and environmental feasibility. I do not want the Government to have to build them and operate them. How do we get it done, then? How about this kind of an approach?

Suppose we had an energy bank. And suppose we would say to

private industry that has a plant they think is feasible for a major alternative source of energy like coal gasification or one of the others. If private capital put in the top 25 percent or 20 percent of the risk capital, the first dollars lost, and then they have to run it, and you have the discipline of the bottom line, then Government through this energy bank, if they also think it is feasible and in the national purpose, would guarantee the bottom 75 percent of that loan for investors, or 80 percent, and look to the property itself as the only liability. Do you think that would be an incentive that would bring some of these things on, and get them built?

Mr. RICHEY. That is one I would like to study, because, Senator, I feel it is our national interest. We would be derelict in our duties as citizens if we did not build some of those plants. I do not expect to see the country covered with them, but if we do not get some of those plants built and operated, and get the experience in running them and producing a profit for feed stock, I think we should be ashamed of ourselves.

Senator BENTSEN. We are not short of energy in this country if we will develop it.

Mr. RICHEY. This is correct. Now, as to your plan, as I said, I think we ought to study it. I think we ought to study it very carefully.

Senator BENTSEN. We can sit around and talk about these things.

Mr. RICHEY. We have got to build some of these plants, Senator. If such a plant were in effect today, and a contract was signed to build that plant, I firmly believe that—well, this is 1975; it would be 1985 before you saw any synthetic fuel come out of it. That is what our leadtime is.

Senator BENTSEN. I agree.

Mr. RICHEY. And 10 years from now, we could be in pretty bad shape for energy in this country.

Senator BENTSEN. We had better start now to take care of it. The trouble is that sometimes we have the attention span of a 5-year-old in this country. We wait until the next crisis before we move, and then it is too late.

Mr. RICHEY. To give you an example, I was in Mexico 2 years ago, and I met a salesman for atomic energy plants. And I asked him how long it would take to build a plant in Mexico. And he said 5 years. I think we all know in this country, it takes 12 to 15 years, and the difference is—

Senator BENTSEN. Do not believe all of that from Mexico, either.

Mr. RICHEY. Well, I was just making a point. We seem to have a lot of delays in this country on large projects.

Senator BENTSEN. If you think we have redtape here, try Mexico.

Mr. RICHEY. No, thank you. I am used to this redtape. I do not want to learn redtape in Spanish.

Senator BENTSEN. Thank you. I have no further questions.

The CHAIRMAN. Senator Nelson?

Senator NELSON. Well, on the matter of this general assault that is made, day in and day out, on environmental impact statements—there is a recent FEA report, I wish I had it here. This is a report on the delays in nuclear powerplant construction. The amount of delay caused by environmental impact statements and environmental litigation was the smallest single, cause of delay they had. That's what they

found in this FEA study—the figures were 1.7 percent of the total construction delay in nuclear powerplants—all 28 nuclear plants being built last year—were on account of environmental delays of one kind or another. It averaged out just 4 months for environmental delays. Strikes by labor unions accounted for about 18 months' holdup on construction in all these plants, labor shortages about 18 months, some other problems in labor fields a number of months. One of the largest causes of delay was equipment availability, 68 months. Mr. Chairman, I would appreciate these FEA study results being made part of the record for this morning's meeting—that nuclear power is being delayed by the environmental issues is just not true according to the FEA statistics. It only amounted to 1.73 percent of the total delay found by the FEA.

[Senator Nelson subsequently submitted the following letter for the record:]

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C., July 11, 1975.

Hon. RUSSELL LONG,
Chairman, Senate Finance Committee,
Washington, D.C.

DEAR MR. CHAIRMAN: Pursuant to our conversation this morning during the meeting of the Finance Committee listed below are the results of the Federal Energy Administration's (FEA) power plant construction delay report.

I would appreciate the study results being made part of the record for this morning's meeting. In addition, I am informed the FEA is currently undertaking a study to update this 1974 report. I will keep you informed of the results of the FEA update.

The results of the FEA study are as follows:

Of the 28 atomic power plants that were scheduled to go into operation last year, environmental action was one of the least significant causes of delay.

CONSTRUCTION

- (1) 4 months were lost due to environmental litigation (1.73% of total loss),
- (2) 18 months lost due to labor shortages,
- (3) 18 months lost due to labor strikes,
- (4) 12 months lost due to rescheduling of associated facilities,
- (5) 23 months lost due to changes in regulatory requirements,
- (6) 68 months lost due to major equipment delivery delays,
- (7) 84 months lost due to poor labor productivity.

Sincerely,

GAYLORD NELSON, U.S. Senator.

Senator NELSON. In other words, the whole assault that has been going on across this country.

Now, here, we get the same thing about coal. Now the FEA says—you are in the coal business, so maybe you can correct them if they are wrong—that to start out and put a strip mine in business takes 3 years, to get the equipment, to get everything started and going. Now, you are saying the environmental impact statement takes 3 years. Well, you could not go any faster than that anyway. A deep mine, they say, takes about 4 to 5 years. Are they correct in that?

Mr. RICHEY. I cannot make an investment and place orders for equipment pending the results of a report about which I know nothing. If I have to have an impact statement made, when that is finished and then I get the go ahead then I can do everything else.

Now as to the strip mines I might also comment, my company is more than 98 percent deep mining so we are not strip mine people.

But a strip mine, under certain circumstances, can probably go it in 3 years and following the study could go in a matter of months.

We figure it would take us to build this deep mine, I mention if we could start now, it would be 1978; so that is 3, 4 years before we would get our production up.

I was not picking on the environmentalists at all on impact statements or on delays in nuclear plants. I just make a statement that in this country it seems to take 12 to 15 years from the conception until the operation of a nuclear plant. Now, there are some 62 agencies, I believe, in Washington alone, not counting the States, that you have got to go through for clearances on it.

Senator NELSON. Well, if there are unnecessary delays in any of these we would all be interested in it. What troubles me is that there is the flat assertion, time after time, and the general acceptance all over the country that the environmental movement somehow or another is keeping us from getting automobiles going because of pollution controls, or coal mines going, or nuclear powerplants, but nobody really gives us any evidence. And when the FEA, which is under a Republican administration, comes out and says that only 1.73 percent of the delay in all 28 nuclear plants being built last year was environmental delays it seems to me that that ought to finish it for the nuclear powerplant argument.

Now, let us go to coal. Now, what we need if we are going to deal with this intelligently is for the coal people to submit, in detail, the documentation of what the delay is and let us have a look at it. I suspect, given what has been said in the past, that there is not much more validity to the coal argument than there is to the nuclear, and the automobile one turns out to be a total fraud anyway.

They engaged in a conspiracy for 15 years, and a consent decree was entered against the automobile industry in the Federal Court in Los Angeles, for a conspiracy not to develop pollution control devices.

So, they engaged in a conspiracy for which they could have gone to jail. Then they attack the Congress for passing some laws saying you have got to set some standards. So, there is just a whole lot of phony baloney in all of these attacks.

Now, what I would like to see is the coal industry submit, in detail, documentation, point by point, month by month, what happened. Then we would have something to deal with.

Mr. RICHEY. May I speak to that as a coal man?

Senator NELSON. Certainly.

Mr. RICHEY. I believe it was last week or the week before our industry put together a detailed study, company by company, summarized it and delivered it to FEA as to what the growth rate in the industry will be; the number of tons—this is over 10 years—the number of tons of deep mined coal, the number of tons of strip mined coal, the number of tons of coal west of the Mississippi, east of the Mississippi, metallurgical coal, high sulfur, low sulfur, and that information is available from the Natural Coal Association and certainly FEA has it now.

In my own case, it is very simple. We have the personnel to develop so much at a time. We cannot develop any faster than our personnel will let us, including the hiring and training of coal miners which is a very serious thing and difficult thing to do. I do not disagree with the way it has to be done now but it has to be done a certain way.

So I think, speaking for coal, you can have that information and I believe the figure in the next 10 years is an increase in production of some 956 million tons scheduled now, provided certain things will take place. And those are itemized, one, two, three, four, five, and six.

Senator NELSON. Now, you have testified that you agreed that it is necessary to have environmental impact statements. I think any rational person would agree to that.

Mr. RICHEY. Not necessarily, I said I think they serve a purpose.

Senator NELSON. Well, a good or a bad purpose?

Mr. RICHEY. I think they can serve a good purpose used in the proper way. As I said, I think in answer to Senator Long or Senator Byrd, that I think that the development of a coal mine can go on at the same time that the impact statement is going on, that the findings of the impact statement will be beneficial to the community and to the mine operating company. Because we have to know how to provide good places and the proper places with adequate facilities for our employees.

If you move into a desolate area in the mountains with 500 or 600 people over 5, 6, or 7 years, you have got social problems. And I think an impact study would be most helpful to us. But I do not want to hold up a whole project on a yes or no basis of whether such a study is made.

Senator NELSON. Well, I would like to let you explain it. Now, I would assume that it is the consensus in this country, at least a majority consensus, that we are not going to move into the west and strip the whole west and pollute every water course in the west and destroy vast areas of the west. And that in order to avoid that you have got to make a study of the water courses, the pollution problems, the availability of water, the drainage problems, the restoration of the surface of the land, all of these things. So, a study has to be done.

Now, of course, that is going to cause some delay but I do not think the country is prepared to say, we are just going to forget all about that and create a disaster area out in the west on account of strip mining.

So, if it is agreed to, it has to be done. Sure, it takes some time. What I would like to see is what is your evaluation of the unnecessary delay, of course there is some necessary delay if we are going to plan the proper utilization of our resources. Then tell us what is the unnecessary delay? Does the study that you are talking about address itself to that precise question?

Mr. RICHEY. Senator Nelson, I think we are both painting with very broad brushes here. I do not think that the coal industry or the U.S. Chamber of Commerce expects to go out and tear up the west or tear up any other place.

Senator NELSON. I said I have assumed that is the case. I said I assumed it is the consensus that we have to do some planning of resource utilization, and in order to do some planning it takes some time.

What I am saying to you is, why does not the coal industry tell us what is the unnecessary delay precisely delineated? You are in the business. Now, the assertions are made by the coal industry, they come here and fight the strip mining bill, we spent 4 years on it, it has been before the Congress 10 years, we pass it, it gets vetoed, we pass it again,

it gets vetoed. The President makes assertions it will cost 30,000 jobs.

And when they get to hearings before the House side, they cannot prove it at all. Actually it probably will create jobs. And the coal industry was on the side of the President on it. Now, all I am saying is it is about time the coal industry came up and said, all right, we agree that we are not going to destroy the west, that is the consensus of the country. We agree there has to be impact statements and studies on what the environmental impact is. But we do not want unnecessary delay and gentlemen, here is one, two, three, four, or five, the unnecessary delays, specific, exact, not general assertions. Now where is that?

Mr. RICHEY. As I said a few minutes ago, we have prepared a report, which I believe will answer the question, which was given to the FEA last week or the week before.

Senator NELSON. Does it delineate precisely where?

Mr. RICHEY. I think there are specific points on there that this can be done if that is done. I cannot itemize in my mind what they all are but the report has been made and we certainly can get one from the Coal Association over to you.

Senator NELSON. I would like to see it because with all of the talk that has been going on over this issue since 1964—I think I introduced the first legislation on this, in recent years anyway, in 1964—in all these years of talk and hearings these assertions are made. But, to this day I have never seen any documentation.

So, I think it is time the coal industry came up with some documentation. If it is there, we want to see it.

Mr. RICHEY. I think we can provide it for you, Senator.

[Mr. Richey subsequently submitted the following information:]

This report summarizes expansion plans of the bituminous coal industry through 1985. Mines already under development in 1974 will, when completed, have a productive capacity of 43.79 million tons. The additional capacity under construction, announced or planned by 1985 amounts to 534.01 million tons, making a total of 577.8 million tons of added capacity available by the end of 1985.

(The cumulative figures for eastern mines should be discounted to allow for about 3 per cent annual depletion of existing mines or 15 million tons per year; no such factor need be applied in the West, where nearly all operations will be new.)

The figures are subject to the following assumptions which would remove obstacles to industry expansion:

1. The Clean Air Act amendments proposed by the Administration will be enacted.
2. Capital will be available for the projected expansion.
3. No unreasonable surface mining legislation will be enacted.
4. A viable federal coal leasing program will allow development of Western coal.
5. Realistic means of complying with the National Environmental Policy Act (NEPA) will allow energy development without undue delay or restraint.
6. Adequate transportation will be available.

If the expansion indicated in this report is actually to take place, these assumptions must be transformed into accomplishments as soon as possible. Each assumption concerns a present major obstacle to coal production. Each week that they persist means a week's slippage—even complete loss—in attaining future production goals.

With stretched-out timetables in developing new production, inflation increases the cost of materials, capital becomes inadequate, and the whole intricate timetable is thrown askew.

NEW COAL MINES AND MAJOR EXPANSIONS OF EXISTING MINES—PLANNED, ANNOUNCED OR UNDER CONSTRUCTION IN THE UNITED STATES, 1975-85

[Millions of tons]

Region and State	Ultimate capacity of additions †	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Western United States:												
Washington:												
Incremental.....		1.30	0.30	0.60	0.40	0.30	0.10					
Cumulative.....	3.00	1.30	1.60	2.20	2.60	2.90	3.00	3.00	3.00	3.00	3.30	3.00
Wyoming:												
Incremental.....		5.40	17.70	21.20	22.20	21.80	15.50	5.50	3.50	3.00	2.00	2.00
Cumulative.....	123.40	5.40	23.10	44.30	66.50	88.30	103.80	109.30	112.80	115.80	117.80	119.80
Subtotal, Western:												
Incremental.....		21.65	33.35	34.10	43.60	57.80	41.20	20.20	17.90	8.00	4.00	2.00
Cumulative.....	302.40	21.65	55.00	89.10	132.70	190.50	231.70	251.90	269.80	277.80	281.80	283.80
Eastern United States:												
Alabama:												
Incremental.....		3.55	3.45	2.95	4.60	1.50	0.50					
Cumulative.....	19.55	3.55	7.00	9.95	14.55	16.05	16.55	16.55	16.55	16.55	16.55	16.55
Illinois:												
Incremental.....		1.75	7.75	7.70	7.70	5.10	2.90	2.20	1.90	1.80		
Cumulative.....	40.60	1.75	9.50	17.20	24.90	30.00	32.90	35.10	37.00	38.80	38.80	38.80
Indiana:												
Incremental.....		2.80	2.70			1.00	1.00	1.00	1.00			
Cumulative.....	11.00	2.80	5.50	5.50	5.50	6.50	7.50	8.50	9.50	9.50	9.50	9.50
Kentucky, Eastern:												
Incremental.....		3.80	6.80	5.10	3.40	3.20	1.00					
Cumulative.....	24.60	3.80	10.60	15.70	19.10	22.30	23.30	23.30	23.30	23.30	23.30	23.30
Kentucky, Western:												
Incremental.....		3.10	2.80	3.00	4.30	6.00	5.40	6.00	2.60	3.60	4.20	1.00
Cumulative.....	44.40	3.10	5.90	8.90	13.20	19.20	24.60	30.60	33.20	36.80	41.00	42.00

Kentucky, total:												
Incremental	6.90	9.60	8.10	7.70	9.20	6.40	6.00	2.60	3.60	4.20	1.00	
Cumulative	69.00	6.90	16.50	24.60	32.30	41.50	47.90	53.90	56.50	60.10	64.30	65.30
Ohio:												
Incremental	2.00	2.60	3.00	2.60	1.20	1.10						
Cumulative	14.20	2.00	4.60	7.60	10.20	11.40	12.50	12.50	12.50	12.50	12.50	12.50
Pennsylvania:												
Incremental	4.40	7.70	7.80	6.00	2.90	2.20	.10					
Cumulative	31.50	4.40	12.10	19.90	25.90	28.80	31.00	31.10	31.10	31.10	31.10	31.10
Tennessee:												
Incremental		1.00	1.10	1.25	1.00	.50						
Cumulative	4.85	1.00	2.10	3.35	4.35	4.85	4.85	4.85	4.85	4.85	4.85	4.85
Virginia:												
Incremental	.30	1.70	1.90	3.00	1.30	1.10	1.60	1.20	.60			
Cumulative	13.70	.30	2.00	3.90	6.90	8.20	9.30	10.90	12.10	12.70	12.70	12.70
West Virginia, Northern:												
Incremental	2.60	2.10	1.40	1.40	3.00	1.60						
Cumulative	13.20	2.60	4.70	6.10	7.50	10.50	12.10	12.10	12.10	12.10	12.10	12.10
West Virginia, Southern:												
Incremental	5.45	7.80	8.26	8.60	6.70	4.10	1.30	1.60		1.50	1.50	
Cumulative	57.80	5.45	13.25	21.51	30.11	36.81	40.91	42.21	43.81	43.81	45.31	46.81
West Virginia, total:												
Incremental	8.05	9.90	9.66	10.00	9.70	5.70	1.30	1.60		1.50	1.50	
Cumulative	71.00	8.05	17.95	27.61	37.61	47.31	53.01	54.31	55.91	55.91	57.41	58.91
Subtotal, Eastern:												
Incremental	29.75	46.40	42.21	42.85	32.90	21.40	12.20	8.30	6.00	5.70	2.50	
Cumulative	275.40	29.75	76.15	118.36	161.21	215.51	194.11	227.71	236.01	242.01	247.71	250.21
Total, United States:												
Incremental	51.40	79.75	76.31	86.45	90.70	62.60	32.40	26.20	14.00	9.70	4.50	
Cumulative	577.80	51.40	131.15	207.46	293.91	384.61	447.21	479.61	505.81	519.81	529.51	534.01

¹ Ultimate capacity of new mines and expansions, including capacity that was added before 1975.

The CHAIRMAN. If the Senator would yield; I just hope if we can come to terms with Senator Nelson, whom I admire, on this environmental problem then the environmentalists and the Congress will go along with his judgment; because he is a reasonable man.

And I think there is great trust of him as an environmentalist.

Mr. RICHEY. Well, Senator Long, I have a business philosophy, when you have a problem, go to the guy who can either do the most against you or for you and sell him.

Senator NELSON. If there is truly unnecessary delay. I do not care what any environmentalist says, I will oppose the unnecessary delays.

Mr. RICHEY. I appreciate that.

The CHAIRMAN. I wish the Senator from Wisconsin would give his reaction to the situation off the Atlantic coast and when thus so far they have not even drilled a single hole. In fact they have not even let lease. I would be curious to know how much of that you would attribute to environmental considerations?

Senator NELSON. I do not know but I will look into it and give you my opinion.

The CHAIRMAN. Well, the Atlantic has been out there a long time and there has not even been a dry hole out there.

Mr. RICHEY. I just hope that if a hole is drilled out here that there is some oil because this thing in Florida was just shot.

The CHAIRMAN. I think there would be progress if they just drilled the dry hole. They have not even done that.

Senator Hansen?

Senator HANSEN. Thank you very much, Mr. Chairman.

Mr. Richey, I would like to compliment you on the perception and excellence of your testimony. I was interested in many of the facets of the energy picture that you discussed and I think that you very properly and accurately note that there is a relationship between the price of one form of energy and the rate and development of other forms.

I have heard the coal industry maligned, as I am certain that you have for a long period of time. They have been criticized for not plowing money back into research, for not getting on with coal gasification, and one thing or another. And yet it is perfectly obvious to me with the Federal Power Commission controlling the price of natural gas for a long period of time and keeping that price at about 18 cents per 1,000 cubic feet when, in the last 2 or 3 years, the figures are that it would cost at least one-third more to go out and find new gas than you could sell it for previously, the previous 3 years.

Something has to be radically wrong and yet this concept was sold to the American public on the idea that their interests were being protected and I suspect a lot of people went along with that concept until the energy crunch took place here less than 2 years ago. Then for the first time, I think, America had a look at its hole card and said, maybe we are building up a dependency on unstable, foreign supplies to the degree that was not in the public interest.

So, I compliment you on the way you have laid it on the line, as I like to characterize it, and say what you have. Now, there has been talk and I am pleased that my very dear friend, and one of the persons I admire most in the Senate, Senator Byrd is here because I think he expresses a concern that is widely held. And that is that

if we decontrol oil now, is it not true that we are going to have exorbitant profits reaped by the oil companies and that there must either be some way to plow back part of those obscene profits as one member of our club of 99 describes them, we are not yet up to a 100 you know, we are about that.

Senator HASKELL. We are trying.

Senator HANSEN. We are still rankling you mean?

Anyway, there are some who characterize these profits as obscene. I have read a lot of statistics on the financial needs of the oil industry and I note that a few things impressed me.

Most people, most of the witnesses, not all, but most of the witnesses we have had, have said that we must go in the direction of decontrol. But there is not agreement on how quickly decontrol ought to come about, nor is there agreement on what should be an interim course of action by the Government either to guarantee a plow back of the escalating profits that are anticipated if we decontrol automatically on the one hand, or what sort of a windfall profits tax on the other ought to be put into place.

Let me point out that the testimony we have heard, and I think it has been pretty well corroborated by a group of experts, talking about discovered oil supplies now. I am talking about oil that we know is in place. There is no doubt about the amount of it. We have historically recovered around 30 percent or less maybe of the oil that is in place.

Now, if we were to take off the cap on oil, if we let the price rise as high as it would go, and of course everybody says, well, it will go clear up to where the OPEC nations put it and if they raise it higher, it will go higher. That does not quite conform with my understanding of economics which says that there is a little elasticity to demand that reflects on the price of oil. And if it gets high enough there may be a few people buying a little bit less oil than they may otherwise have bought.

So, let us talk about the 40 billion barrels of reserves we now have. This is the amount of oil that I understand is in place now. We know all about it. The USGS has confirmed it. The industry knows it is there and it is the amount of oil that will be pumped with costs where they are now and prices where they are now.

If you want to pump more of it, if you want to induce secondary and tertiary recovery efforts to get more of it above ground, let the price rise so that you can afford to spend more money to get more out of the ground and you will get more out.

The stripper well is a good example, I think, of the point I am trying to make; 13 percent—and your testimony, I believe, includes these figures—13 percent of all the oil we have today comes from stripper wells. We would not be getting very much of that if it had not been for Dewey Bartlett and some other Members of the Senate who recognized that as quickly as it costs as much to pump oil as that oil sells for, that is the day you shut the well down, simple economics.

And I am delighted you are here because somehow the basic common-sense logic that Senator Long has oftentimes stressed about the grocery man who was selling tomatoes, and the gal comes into the store and says, how much are your tomatoes? Well, they are 40 cents a dozen.

So, she comes back in a little bit and she says I can buy them for 20 cents a dozen down the street. He said, why did not you buy them? Well, they are out of tomatoes. He says, if I were out of tomatoes here I would sell mine for 10 cents a dozen.

But, somehow, we do not seem to understand that message.

Mr. RICHEY. Senator Hansen, I cannot give you absolute figures, only relative figures. But, my understanding, and let us take the old oil price of \$5.25, that we can recover out of a well, on an average, some 30 percent of the oil down that hole.

If we go up to \$7, \$7.50 a barrel, we might get 45 percent. If we go to \$10 a barrel, we may get a higher figure, and so on. And I think the real fact and people have overlooked this, but, by increasing the price we may be doubling or tripling this Nation's oil reserves.

Senator HANSEN. Well, as a matter of fact, I am not particularly—

Mr. RICHEY. And putting us in a better economic position in the world for oil—people forget the first embargo was in 1967 but it fell apart because we had surplus oil to sell.

Senator HANSEN. Every bit of competent testimony we have had here, Mr. Richey inclines me to believe these are accurate figures. We have 40 billion barrels in reserves now, oil that is in place on American soil that we know about and if we are willing to decontrol prices, to let the price rise by using secondary and tertiary recovery techniques, we will get in addition to those 40 billion barrels another 60 billion barrels—one and a half times as much.

Now, it sure makes great campaign oratory and talking about exclusive clubs around here, the 99 is not an exclusive club. I belong to the exclusive club—there are seven of us, including Senator Byrd, who are not yet candidates for the Presidency. [General laughter.]

Senator HANSEN. Anyway, it is not going to go over very well this winter, if trouble breaks out in the Middle East and we have another oil boycott over there to be able to go around and tell the people, well, we are sure sorry you are out of oil and we are sorry your home is cold, we are sorry that you have lost your job because there is not any natural gas or oil either to run the plant. We are sorry about that but we hope you will remember that we kept the price good and low. We hope you will remember that.

I am glad I am not running next year because if I had to go around and tell that story I am not so sure that people would attribute the intelligence to me that I hope that they might.

Mr. RICHY. Your voters are like my stockholders—it is not what you did for them yesterday, it is what you are going to do for them tomorrow.

Senator HANSEN. Well, you know now, this industry, according to different surveys that have been made and studies that have been made, is going to require between two and a half and three times as much capital, both within the United States and internationally just to try to keep even without any inflation. And the figures are that we will need, worldwide, \$1 trillion, \$200 billion of new capital to put in. That is without any inflation. If inflation continues at the rate of 15 percent worldwide, it is going to take \$3 trillion.

So, I think that maybe, instead of being overly concerned about how much we have to take out of the industry in excess profits taxes or plowback or whatever, we had better start thinking about where we

are going to get the oil. Because here are some facts that people may not know.

In my State of Wyoming, and we happen to be the fifth largest oil and gas producer among the States, we had 136 rigs drilling in Wyoming, last Easter. People do not know that. They think we produce cow chips and mountain scenery, but we do have some oil.

Now, we have got this, we had 136 rigs drilling on Easter. The 20th of June there were 96 rigs drilling. And why did that come about? We passed a tax rebate, tax reform bill and among other things, it reduced the depletion allowance. And when somebody goes around trying to get some money from a banker or a doctor or somebody else and that potential investor looks at the opportunities and sees first what the chances of hitting a dry hole are, and they are pretty good, you know, they are not bad at all. If you want to take a sure bet, bet that you are going to hit a dry hole and that is a winning bet anytime.

But, if you look at that and add to that the take that the Government is going to extract, if you are one of the fortunate ones, about 1 well out of 70 happens to discover a major new field, 1 out of 40 is a commercial producer and I have forgotten precisely what the figures are on dry holes, but that is a darn good bet.

So, I think that if we are going to encourage the people and the capital to take the risk to find the oil, we had better be looking at that and my feeling is that we are watching the wrong rabbit if we are concerned, as some are, with making certain that the oil industry does not have too profitable a business.

Now, how does this relate to coal? I think it relates in this way. So long as we continue price controls on petroleum, so long as we keep the prices down, the opportunity you have to do the job you must do, and coal has the biggest opportunity of any energy source in this country today in the short term to replace what we get from oil and gas, if coal is going to do the job, would not your ability to do that job be enhanced with quick deregulation of both natural gas and oil?

Mr. RICHEY. Yes, I think it would. The big goal in coal is going to be to produce coal for the electric utility industry. And the second big market is going to be to replace industrial heat for plants that have formerly operated on natural gas.

We are finding, in our case, and I think this is applicable to most coal mining companies, that we are making contracts with these people for 25 and 30 years. So, I think coal is more than short term. I think it will help coal. It will make coal become more attractive. It will probably give us a better price which will let us accumulate more capital to put right back into coal mines.

Senator HANSEN. Well, now when you think about coal gasification plants, they cost a lot of money from what I have been told.

Mr. RICHEY. Unbelievable amounts I have been told.

Senator HANSEN. And if you are going to get the kind of investment that you need in order to build those plants, you certainly will find your task easier, will you not, if natural gas is completely deregulated so that it is going to have to become truly competitive in the marketplace as contrasted with the situation now? Is this not true?

Mr. RICHEY. Yes, sir.

Senator HANSEN. One final point, and I would just make this to my good friend from Wisconsin, for whom I have the highest regard,

there was a recent circuit court decision here in the District holding that before any further leasing could take place, as I understand, on Federal lands, before any railroad lines can be built, before any major mines can be opened, or major plants developed in the West, a regional environmental impact statement is required.

Now, some of the people with whom I visited down at the Department of the Interior tell me that if they have to go through all of those steps this may take at least 2 or maybe 3 years. I would ask my good friend from Wisconsin if he could tell me if that estimate is right or would he have any thought about that?

Senator NELSON. No; I saw a note about the decision to which you refer and it may be absolutely sound and necessary. But, I have not looked at the decision.

Senator HANSEN. I just wanted to make that one observation. You probably are not concerned with what goes on in the West except academically, but I know——

Mr. RICHEY. We now have a mine in Utah.

Senator HANSEN. Thank you, Mr. Chairman. I apologize for running over the time.

The CHAIRMAN. Thank you very much.

I would like the witness to know that if we listen to one another long enough we do have a way of agreeing on something eventually in this committee. We did it with regard to runaway fathers. After 5 years of debate we finally reported out a unanimous recommendation. It did not receive plaudits in all areas but we were unanimous by the time we had debated for 5 years.

Are there any further questions, gentlemen?

Thank you very much, sir.

Mr. RICHEY. Thank you very much, it is delightful to be here.

[The prepared statement of Mr. Richey follows. Oral testimony continues on p. 299.]

STATEMENT ON NATIONAL ENERGY POLICY AND ENERGY CONSERVATION AND CONVERSION ACT, H.R. 6860, FOR THE CHAMBER OF COMMERCE OF THE UNITED STATES

(By Herbert S. Richey)

My name is Herbert S. Richey. I am the Vice Chairman of the Board of Directors of the Chamber of Commerce of the United States, and President and Chief Executive Officer of the Valley Camp Coal Company, Cleveland, Ohio.

I am accompanied by Walker Winter, Chairman of the National Chamber's Taxation Committee and a partner in the Chicago law firm of Ross, Hardies, O'Keefe, Babcock and Parsons; David Luken, Acting Director of the Chamber's Natural Resources Section and James Graham, Associate Director for Energy; and Robert R. Statham, Director of the Chamber's Tax and Finance Section.

We are appearing before this Committee on behalf of the Chamber of Commerce of the United States, the largest association of business and professional organizations in the United States, and the principal spokesman for the American business community. The National Chamber represents over 3,500 trade associations and chambers of commerce. It has a direct membership of over 48,000 business firms and an underlying membership of approximately 5 million individuals and firms. Based upon the energy utilized by the commercial and industrial sector of our economy, the National Chamber federation probably represents the largest energy-users bloc in the United States. On behalf of the National Chamber, I wish to thank the Committee for this opportunity to present its opinions on National energy policy and the House Energy Tax Bill, H.R. 6860.

Development of a National Energy Program

Today the United States and the rest of the world face major energy problems that are both short and long term.

Unlike many others, our nation has the energy resource technology and capital to develop a high degree of energy self-sufficiency. But if we are to have any hope whatsoever of achieving this goal, a united national effort will be required that will far surpass any peacetime program in the history of the United States.

The U.S. must implement a positive and comprehensive program for the orderly development of the nation's energy resources, one which will involve the cooperation and participation of all elements of our society.

Two motivating forces are absolutely necessary if such an effort is to succeed: (1) a widespread public understanding of the program and its aims, and (2) a national dedication to the program.

It is imperative that the public understand that the U.S. must develop all viable sources of domestic energy. There will be no single best solution to achieve energy self-reliance in a relatively short time. All technologically feasible energy resources will be needed to satisfy the continually growing energy requirements, even given modified growth rates, and provision should be made for their simultaneous development.

Energy will cost more in the future. New resources are becoming more difficult to find and construction costs have increased due to more complex technology, safety, environmental concerns, and inflation. To have a chance of attaining energy independence, a national energy program must recognize the role of profits; the energy industry must maintain a level of earnings adequate for underwriting the massive expenditures that will be required.

The U.S. will have to import significant volumes of oil for the next ten to fifteen years, even while working to gain its self sufficiency.

Energy conservation must be practiced intensively and on a continuing basis. Conservation is of basic importance because of the need to use our finite energy resources more wisely. The focus, however, must be on eliminating wasteful and inefficient energy use. Even these measures may indirectly reduce or shift employment to some extent. But we should avoid imposing reductions in energy use which would lead to production cutbacks, substantially increased unemployment, and deterioration in the economy.

To be effective, the U.S. energy program must have a national dedication and a unified direction.

The Government must provide leadership in establishing a comprehensive national energy program covering a period of at least two decades.

The program must be structured to encourage the effective participation of the public, government, business, industry, labor, education, and the media. It should be based on a philosophy of constructive participation rather than punitive regulation. And it should recognize that the attainment of energy self-sufficiency will be an evolutionary process.

The program should recognize that the energy problems of this nation cannot be solved in isolation from the energy problems of other nations. Our economy is to a considerable degree dependent on the economic welfare of other industrialized countries which generally are oil importing nations. And we and the other importing nations for many years will require oil imports as well as the recycling of capital from the oil exporting nations.

National Chamber Recommendations

The nation's energy problem, serious as it is, can be stated simply: We need to reduce our reliance on foreign energy suppliers. To do that, our prime objectives must be to:

- (1) Increase domestic production of energy supplies, and
- (2) Reduce consumption by curbing wasteful practices.

In our competitive enterprise system there is only one sure way to accomplish both objectives: Remove price controls from oil and natural gas.

This market approach would allow prices to rise. The higher prices would support increased research and development of underdeveloped domestic supplies of oil and natural gas. The higher prices would also spur consumers to conserve fuel, to look for ways of reducing their consumption. In addition

to removing price controls on oil and natural gas, the Congress, in coordination with the Administration, should remove constraints and encourage refinements in four additional major areas.

(1) Facilitate the availability of our natural resources:

Accelerate leasing and development of the Outer Continental Shelf (OCS).

Revise federal lands policy to resume coal leasing on public lands and expand leasing of public lands for oil shale and geothermal development.

Expediently develop the capability to utilize Alaskan natural gas.

Support increased research and development of underdeveloped domestic energy resources such as oil shale and geothermal energy.

(2) Revise existing constraints on energy production and consumption:

Establish realistic standards and procedures for surface coal mining and land reclamation.

Assure a balance between measures for environmental protection and the economic utilization of domestic energy resources.

Amend the Clean Air Act to permit greater use of coal.

Develop procedures to expedite the siting of energy facilities including nuclear power plants, refineries and deep water ports.

Substitute coal fired or nuclear power plants for oil or natural gas fired plants wherever feasible.

(3) Assist in revision of energy demand:

Establish national mandatory heating and cooling efficiency standards for new buildings.

Stimulate development of new technologies for industrial energy conservation.

Maximize resource recovery and energy recovery technology.

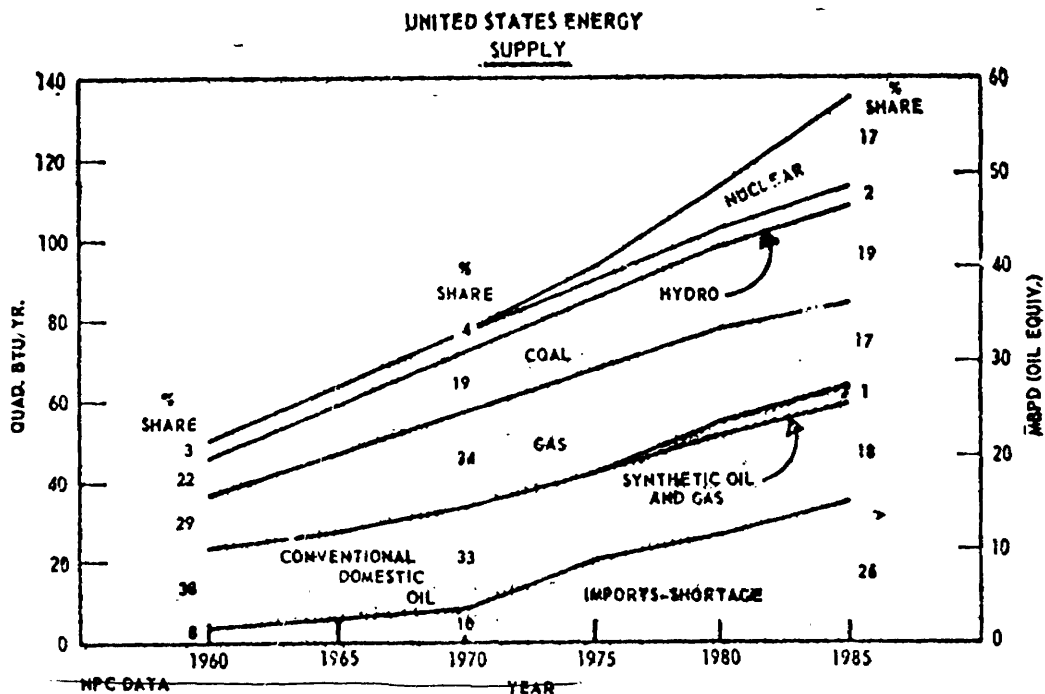
Develop an "ethic of energy conservation" on the part of the American public.

Support active public and private campaigns to conserve energy.

(4) Free the market place to allow the capital formation essential to meet future energy requirements.

Nature of the Energy Crisis

Through 1971, the U.S., for all practical purposes, was able to produce domestic energy supplies adequate for its needs. Imports were held to nominal levels through the Oil Imports Quota System, and the nation enjoyed spare oil production capacity.



In the early 1970's, however, the growth rate for oil consumption accelerated rapidly due to the resurgent economy and the increased energy required to meet newly established environmental standards. In 1972, domestic production of oil reached capacity levels and oil imports were used to satisfy further demand increases, thus making the United States increasingly reliant on foreign energy sources. This fact was recognized by the Arab oil exporting nations, resulting in their use of the oil embargo as a tool of political and military policy in late 1973.

The preceding chart, using National Petroleum Council data, plots historical and projected domestic energy supply to 1985. The 15 million barrel per day (MBPD) projected import level of foreign crude is a significant warning of our impending domestic energy shortfall. The U.S. economy can neither support the resulting financial deficits nor abide the ever present threat of an embargo.

Means to Increase Production

PRICE CONTROLS AND NATURAL GAS

There is no better example of the misguided use of price controls than the history of natural gas production. The Natural Gas Act of 1938 was enacted to protect consumers from the inherently monopolistic operation of natural gas pipelines which basically are regionally non-competitive. However, producers of natural gas, which are highly competitive and regionally mobile, were specifically exempt from the Act.

In 1954, the Supreme Court, in the now famous *Phillips* decision, interpreted the law to include extension of Federal Power Commission (FPC) authority to producers who sold their gas to interstate pipelines. The FPC, believing the Congress would clarify the producer exemption of the 1938 Natural Gas Act, did not commence regulation of interstate gas until the late 1950's. They were immediately buried under an avalanche of individual rate cases which the FPC eventually translated into regional area rates and finally into one national area rate.

Many technical experts and academicians are convinced that our current natural gas shortage, estimated for this winter to be more than three trillion cubic feet (Tcf) short of approximately 23 Tcf of total demand, is the result of FPC cost regulation.

In examining the history of FPC controls on natural gas sold interstate, one finds that a decade-long decline in real energy prices corresponds to a significant decline in supply for that period. Prices for new gas (expressed in 1958 constant dollars) sold interstate declined steadily from a high in 1958 of 18.6 cents per thousand cubic feet (Mcf) to a low in 1969 of 15.4 cents per Mcf. This corresponds to an overall decline in new non-associated discoveries from 13.8 Tcf in 1957 to a low of 1.7 Tcf in 1969.

The cost-based methodology employed by the FPC to determine regional and national area rates has been consistently discredited both within and without the FPC. The laborious computations could, at best, set only average costs for producing gas which, by definition, will prevent half of the available reservoirs taken into computation from being produced. When drilling, a gas producer will continue only as long as he feels he can make money under the price controls rather than according to market conditions. The mandatory ceilings have reduced the incentive to explore areas known to present the potential for high risk and above average cost.

These pricing policies have caused the present natural gas shortage and have contributed to our overall domestic energy shortage in three ways:

(1) Artificially low natural gas prices reduced the economic incentive to locate and develop new supplies of natural gas. As seen above, a reduction in the rate of discovery of new gas accompanied the FPC's price policies of 1958-1970.

(2) Demand for natural gas accelerated sharply in response to the declining real price of natural gas. Many inefficient and inappropriate uses of gas were employed. The clean-burning quality of natural gas also increases its value (though not its price) in these environment-conscious times. Predictably, the rapid rise in demand for natural gas and the drastic reduction in new findings has brought about the present shortage, causing severe curtailments of natural gas deliveries to businesses, hindering production and employment.

(3) Beyond just the present natural gas shortage, artificially low natural gas prices have contributed significantly to our domestic shortages of other fuels.

These low prices had a depressing effect on fuel oil prices since fuel oil competes with natural gas for many uses. As a consequence of the artificially low fuel oil and natural gas prices, the domestic fuel supply situation deteriorated in two ways:

A shift developed away from coal as a fuel and was hastened by rising coal prices, due primarily to increased labor costs and stringent environmental controls.

New exploration and development was forced away from domestic resources to foreign resources. Most of the "easy" domestic oil and gas deposits had already been discovered. Present costs of exploring and developing offshore areas and Alaska are about ten times the cost of typical onshore drilling. The result was expanded development of relatively inexpensive foreign reserves (Venezuela, Indonesia, the Middle East) to meet domestic demands.

Thus, the combined effect of artificially depressed natural gas prices, reduced development and use of domestic supplies of all fossil fuels, and accelerated demand has brought the United States to its present precarious situation. To reverse this trend, new natural gas should be deregulated immediately.

A recent *Business Week* article on the intrastate natural gas market illustrates perfectly what happens when a market is allowed to function freely. In recent years some Texas intrastate gas pipelines have curtailed deliveries just as severely as the interstate lines. Following an almost textbook example, the shortages caused prices to rise in the unregulated Texas gas market, which in turn encouraged new drilling and production. The result has been the production of more gas than Texas can consume, forcing the price down from around \$1.90 to in some cases \$1.20 Mcf, a price which interestingly is below some currently proposed statutory ceilings for gas.

The article points out that the higher prices have made gas users far more frugal. An expert estimated that most plants have cut consumption by about 15 percent simply by using better insulation, recovering waste heat, and taking other gas saving steps. Additional evidence indicates that the higher prices resulted in a 20% net increase in producing gas wells over the previous year. A study by the Texas Wildcatters Association shows that gas production from new discoveries amounted to almost one Tcf in 1974. That was 15% above the 1973 figure and 2½ times the 1970 level.

Assertions that production is more a function of potential supply rather than price are simply unfounded. And the developments in Texas need not be limited to that state. The Energy Research and Development Agency (ERDA) has estimated that there is at least 500 Tcf of natural gas locked in the Devonian shale formation in Ohio, Michigan, Illinois, Indiana, Kentucky, Alabama, Tennessee, West Virginia, Pennsylvania and New York. However, to produce that natural gas, the free market must be permitted to operate.

PRICE CONTROLS AND CRUDE OIL

I. Background

The present system of pricing domestic crude oil is both wasteful and counter-productive. In addition to the complicated and bureaucratically expensive allocation mechanisms needed to enforce the two-tiered pricing system, continued regulation delays investment in secondary and tertiary recovery methods which can be expected to increase oil supply on both a short and long term basis.

Decontrol would permit domestic crude oil prices to rise to the prevailing world price levels so that the demand-dampening effects which have been felt worldwide would be felt to the full extent in the United States. Under the two-tiered price system, the price of a high percentage of domestic oil is held at less than half the world price. The impact the escalation of world market prices has had on demand overseas has been considerably cushioned in the United States. By way of reference, current domestic oil production is 66% "old," 13% "new," 8% "released" and 13% "stripper." Imports account for almost 40% of domestic consumption. The removal of price controls on domestic crude oil is an essential and integral part of the program to reduce energy consumption and curtail dependence on imports.

It is generally agreed that production incentives afforded since the fall of 1973 by the rules permitting "new" and "released" domestic crude oil to be sold at free

market prices are of decreasing effectiveness. Prices for domestic crude oil (other than crude oil produced from a stripper well lease) are determined under Federal Energy Administration (FEA) regulations according to the number of barrels produced and sold each month from each property. If the current month's production from the property concerned is less than in the corresponding month of 1972, all the production must be sold at or below the ceiling price established for "old crude petroleum." The ceiling price now is the May 15, 1973, posted price for the particular crude oil concerned plus \$1.35 per barrel. The national average of such ceiling prices is currently approximately \$5.25 per barrel. However, to encourage increased production, the FEA regulations permit all production in excess of the 1972 base level (less adjustments for production at less than the 1972 base level in prior months) to be sold as "new crude petroleum" at the higher market level prices (currently \$11.50 per barrel and higher).

Another incentive for increased production is the allowance of an amount of the month's production which equals the amount of "new oil" produced to be sold at the higher market level prices, provided that such amounts of crude oil, called "released crude petroleum", do not exceed the production level of the 1972 base month. This means that if production from a property in the 1972 base month was 10,000 barrels and is 13,000 barrels in the current month, 7,000 barrels of the current month's production would be subject to the "old oil" price ceiling while 3,000 barrels could be sold at market level prices as "released crude oil" (assuming no adjustments were needed for past production deficiencies).

As previously indicated, two-thirds of total domestic crude is classified as "old oil" and is therefore subject to the price ceiling. The remaining one-third is either specifically exempt from price controls under the stripper well lease exemption or is permitted to be sold at free market levels under the production-incentive rules governing the sale of "new" and "released" crude oil.

Many producers, especially those whose current production levels are substantially below the 1972 base levels and are further declining under primary recovery techniques, remain unaffected by the incentives which are too remote to outweigh the high cost of the substantial secondary and tertiary recovery programs necessary to bring production up to and above 1972 base levels. The existing incentives are effective only for limited periods of time in any event. The inevitable slackening of output will bring production below base levels to the point where existing incentives will no longer encourage investment in secondary and tertiary recovery and other costly programs designed to increase total output.

An additional benefit of domestic crude decontrol will be the elimination of economic distortions caused by the present two-tiered pricing system. This system inevitably causes cost disparities among refiners and marketers of petroleum products. Moreover, the existing complicated structure of price controls at all levels of distribution, necessitated by the cost disparities resulting from the two-tiered system, tends to be self-defeating over the long run. It reduces normal incentives for increased production and cost control and eliminates industry's ability to engage in long range planning. As effectiveness of price controls wanes, regulations of greater complexity and reach become necessary to maintain the controlled-price structure. Tightening of controls tends to further stifle initiative and contributes to greater economic distortion.

II. Analysis of Oil Decontrol

The two-tiered structure system, with 66 percent of the domestic oil at an arbitrary low price of approximately \$5.25 per barrel and 34 percent at the market price of approximately \$11.50 per barrel, results in an average domestic price of about \$8.29 per barrel. The average price of all crude oil consumed in the United States must then include about 40 percent of the supply at the foreign price of approximately \$13.00 per barrel. This results in an average crude oil cost to the United States consumer of approximately \$10.15.

Companies are allowed to use this average cost figure in setting the price of refined products. For instance, if we can determine that demand responds to price changes, we can estimate that the pricing policy has caused the purchase of about 0.4 million extra barrels of imported oil per day over a short period and about 1.2 million extra barrels per day over a longer period (this assumes a

demand elasticity coefficient of 0.2 on the short run and 0.6 on the long run; demand elasticity has been estimated as high as 0.8).¹ Import of an additional 0.4 million barrels per day at a cost of \$13.00 per barrel equals \$1.89 billion per year that we would not otherwise demand from OPEC sources. The longer term projection is \$5.67 billion per year. An irony here is that the elasticity coefficients which have been used were determined during periods of low prices, indicating that the coefficients could be higher during periods of higher market prices.

The Interstate Oil Compact Commission (IOCC) published a report in March 1975 which stated that lifting of price controls on oil produced through secondary and tertiary procedures would increase daily production by 350,000 barrels and U.S. reserves by 10 billion barrels between 1975 and 1980. The study, prepared at the request of the FEA, is based on data representing over 4,300 enhanced recovery projects and 125,000 producing wells. The 900 operators represented in the study are from 28 states and produce over 98 percent of all U.S. enhanced recovery oil. The report states that the sizable daily production increases would be due to an extended economic life for enhanced projects and increased capital investments. The report concludes that this increased production would reduce oil imports by nearly 8.5 billion, thereby improving the balance of trade. A stronger economy and more jobs will result.

Decontrol of crude oil will also make the development of the OCS a more realistic enterprise. However, the legal impediments that delayed construction of the Alaskan pipeline, which will eventually deliver 2 million barrels of oil per day to the lower 48 states, must not be allowed to recur in the OCS situation.

Preliminary geophysical evidence suggests that we could eventually find billions of barrels of oil and trillions of cubic feet of natural gas off our Atlantic Seaboard. Gulf of Mexico wells already provide a significant portion of domestic production. When foreign oil could be bought for less than \$4.00 per barrel—and was politically safe to depend on—Atlantic offshore oil was not economically attractive. With oil at a world price of more than \$13.00, offshore oil has become an attractive investment. Venture capital is flowing towards OCS development as the Federal Government moves toward leasing. Yet, enormous opposition to OCS leasing is developing in some surprising places, such as those regions most severely affected by cutoffs and price increases by foreign suppliers.

The American outer continental shelves present a great opportunity—perhaps the greatest opportunity—to lessen significantly our dependence upon foreign oil. These offshore areas can be developed economically and with minimal environmental risks. The legal framework to help coastal states cope with the problems presented by offshore drilling and onshore support facilities is embodied in the Coastal Zone Management program, through which Federal funds are provided to help states plan for coastal and offshore development. Accelerated leasing of the OCS is crucial to increasing domestic energy supplies.

Continued Federal price controls on natural gas and "old" domestic crude oil will serve to discourage capital investment and risk taking, thereby discouraging exploration and development of these two vital fuels.

UTILIZATION OF COAL

The U.S. Bureau of Mines has estimated that there are 434 billion tons of coal in the demonstrated coal reserve base of the U.S. It is estimated that 50% of this coal is recoverable. The demonstrated reserve base is coal in relatively thick beds which lie close enough to the surface to be mined by conventional surface or underground methods. Thus, a minimum of 217 billion tons of coal is available for recovery by present technology and within present economics. At current consumption levels, this is enough coal for 300 years. Even at the doubled production rate projected for 1985, this is enough coal for a century and a half.

However, the demonstrated coal reserve base is only a minor fraction of the coal known to exist in the U.S. The U.S. Geological Survey has identified 1.6 trillion tons of coal deposits at depths of less than 5,000 feet, and it is estimated

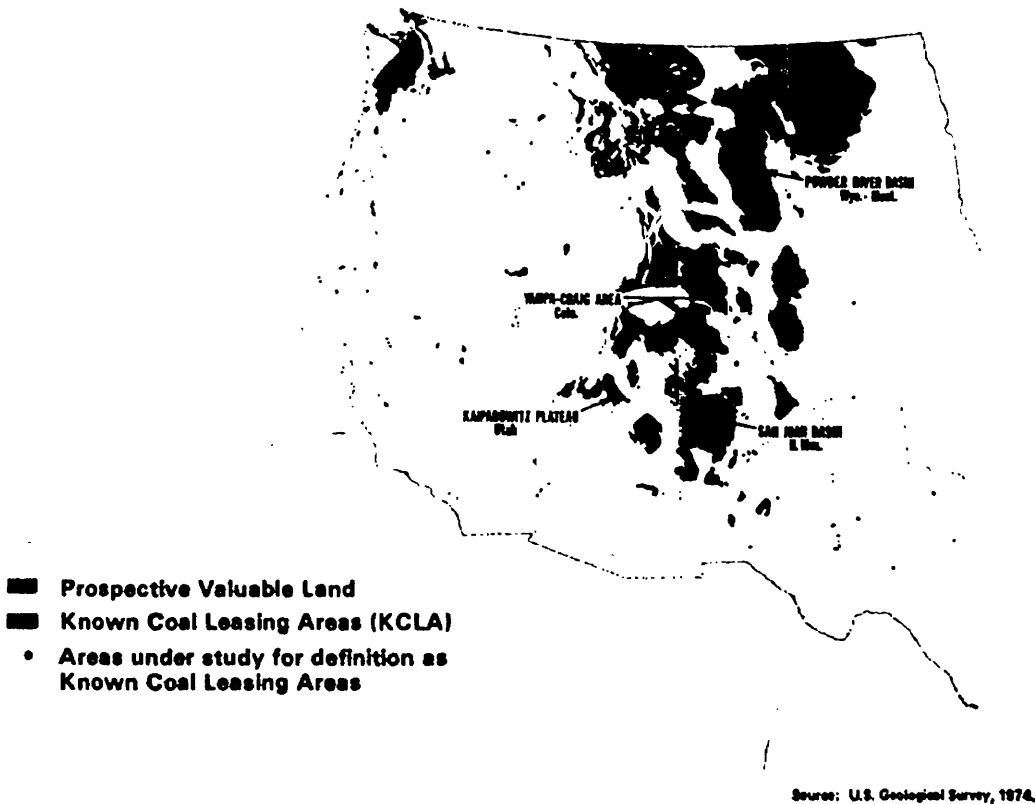
¹ We assume the price of refined products is about \$2.50 per barrel or about \$0.05 per gallon less than would be the case with no control. If petroleum products are selling on average for \$4.00 per gallon instead of \$4.45 per gallon, if the short run elasticity is 0.2 and the long run is 0.6, and if the Nation is consuming 16 million barrels per day of crude oil—then consumption is $(.05/.40) \times (0.2) \times 16 = 0.4$ million barrels per day greater than it would be without price controls; at 0.6 the excess consumption is 1.2 million barrels per day.

that about as much additional coal lies in deeper seams or in unexplored areas. Coal at these depths is mined in other parts of the world, but in the U.S. it has not yet become necessary to go to such depths and expense.

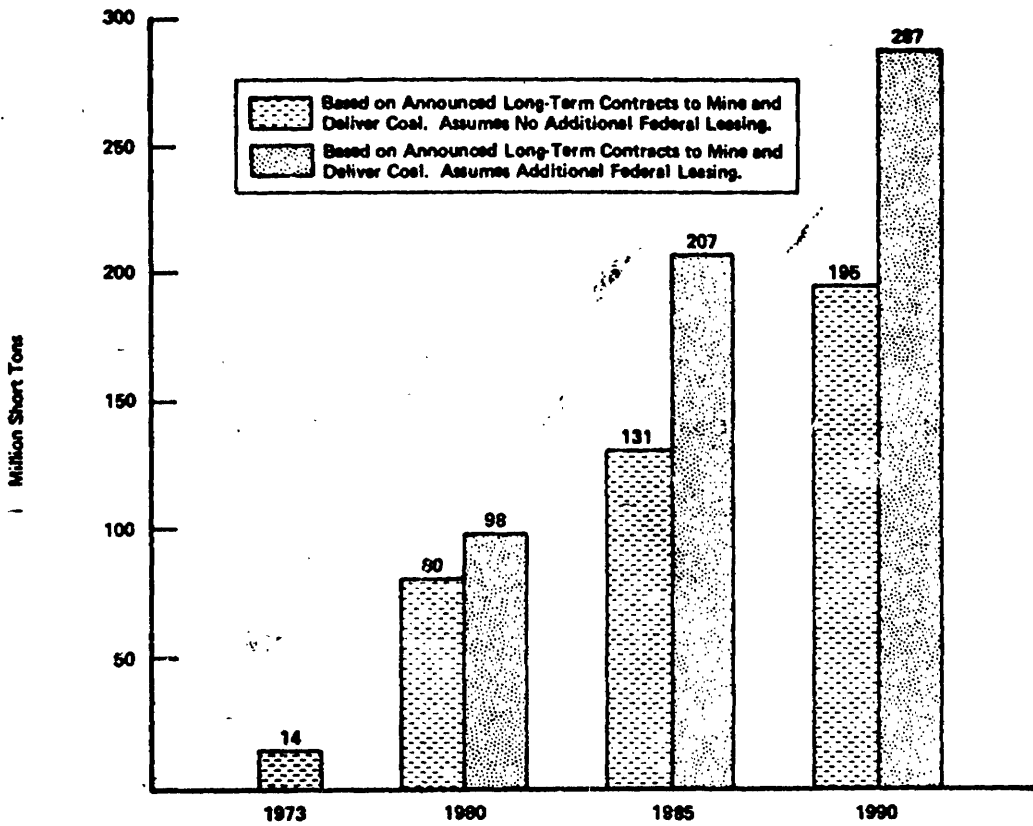
In short, the U.S. has a nearly boundless abundance of coal—enough to last for centuries. What is required is a policy which will encourage the fullest development and use of the available reserves, including the development of technology to mine and transport the coal in the amounts needed in the future, and a commitment to assure full use of this most abundant domestic resource. Such a policy should also consider that synthetic fuels from coal can make a timely contribution to dwindling supplies of natural gas.

An important government action would be to resume coal leasing on federal lands, which has been frozen for more than three years. The requirement for an environmental impact statement on most federal actions has evolved into a paper bludgeon to thwart most expansion plans of the mining industry involving federal lands or federal actions. The following charts indicate existing and potential coal leasing areas as well as potential production from federal leases.

Known Federal Coal Leasing Areas for Competitive Bidding



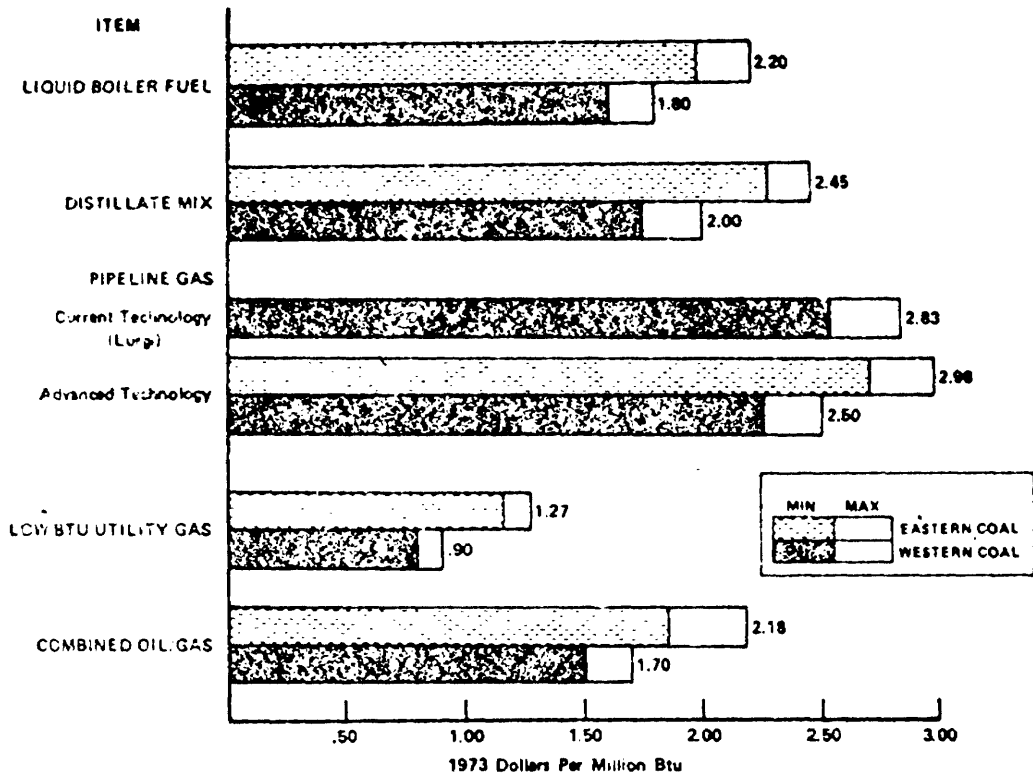
U.S. Potential Production of Coal on Federal Leases, 1973-90



Source: Interagency Coal Task Force Report,
U.S. Department of the Interior, 1974.

Synthetic gas (SNG) produced from coal can also contribute significantly to future energy demand. SNG will have a similar clean burning quality as natural gas and will also be very efficient in terms of BTU's for the dollar as some of our current coal conversion loss problems will be avoided. Once again, however, it is a problem of competition between regulated, artificially low priced energy forms in competition with unregulated forms of energy. A free market in energy will make SNG a viable product. The following chart indicates the dollar-cost relationships of different qualities of synthetic fuels. The chart is expressed in "million Btu," allowing comparison with current unregulated natural gas ranging from \$1.20 to \$1.90 per million Btu (1974 dollars).

Costs of Synthetic Fuels from Coal, 1973



Source: Interagency Task Force Report on Synthetic Fuels from Coal, Federal Energy Administration, September 1974.

Another difficulty is that a variety of legal and economic constraints now militate against the full development of coal as an energy source. Implementation of the Clean Air Act Amendments of 1970, for example, forbid burning of coal under many conditions. This affects coal production by decreasing the market for coal and discouraging capital investment in coal production.

Despite recent action by Congress amending the Clean Air Act to facilitate the conversion of some large fossil fuel-burning stationary sources to coal from oil, much more needs to be done. This legislation allows a number of plants (100 plants at 32 locations) to convert to the use of coal, but the major problem (plants *now* burning coal) has been ignored. It is estimated that full implementation of the air quality standards, scheduled to go into effect in mid-1975, could effectively "outlaw" 200 million tons of coal annually ($\frac{1}{3}$ of all coal production) which is now utilized by electric utilities. With emerging sulfur dioxide (SO_2) removal technology, about 100 million tons of this coal could continue to be burned—but the necessary removal equipment cannot be manufactured and installed before the scheduled deadlines and probably not until 1979 or later. The other 100 million tons cannot be utilized under present air quality standards using known SO_2 control methods such as intermittent control techniques. Serious electric power shortages could occur and many localities could be thrown into chaos if large quantities of coal are burned after the applicable deadlines have passed. For these reasons, it is imperative that further amendments to the Clean Air Act to facilitate the conversion of more power plants to coal be passed by Congress as quickly as possible.

Continued delay in amending the Clean Air Act also has indirect energy impacts. Coal producers and investors are reluctant to invest capital in coal production so long as the possibility exists that the coal cannot be sold.

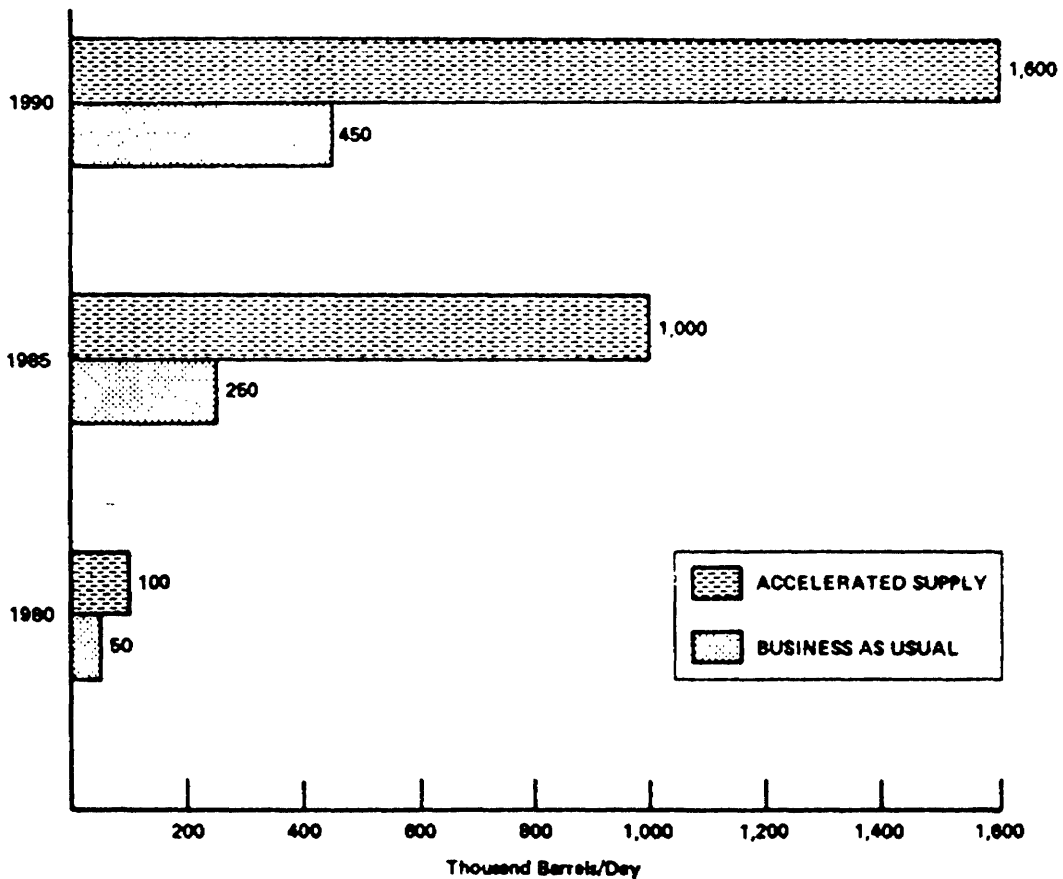
UTILIZATION OF SHALE OIL

Another important source of energy is shale oil. U.S. shale oil reserve base of the known higher grade is approximately 418 billion barrels with roughly 84% located in Colorado, 12% in Utah and 3% in Wyoming. The oil shale is contained within a 25,000 square-mile area, largely on federal lands. Although Colorado has the smallest deposits, they are the richest, thickest, and best defined.

Given accelerated supply, production of shale oil is projected to reach a million barrels a day in 1985, or approximately 9% of 1974 U.S. petroleum production. Between 1985 and 1990, the annual rate of growth in shale oil production is projected at 9.9 percent.

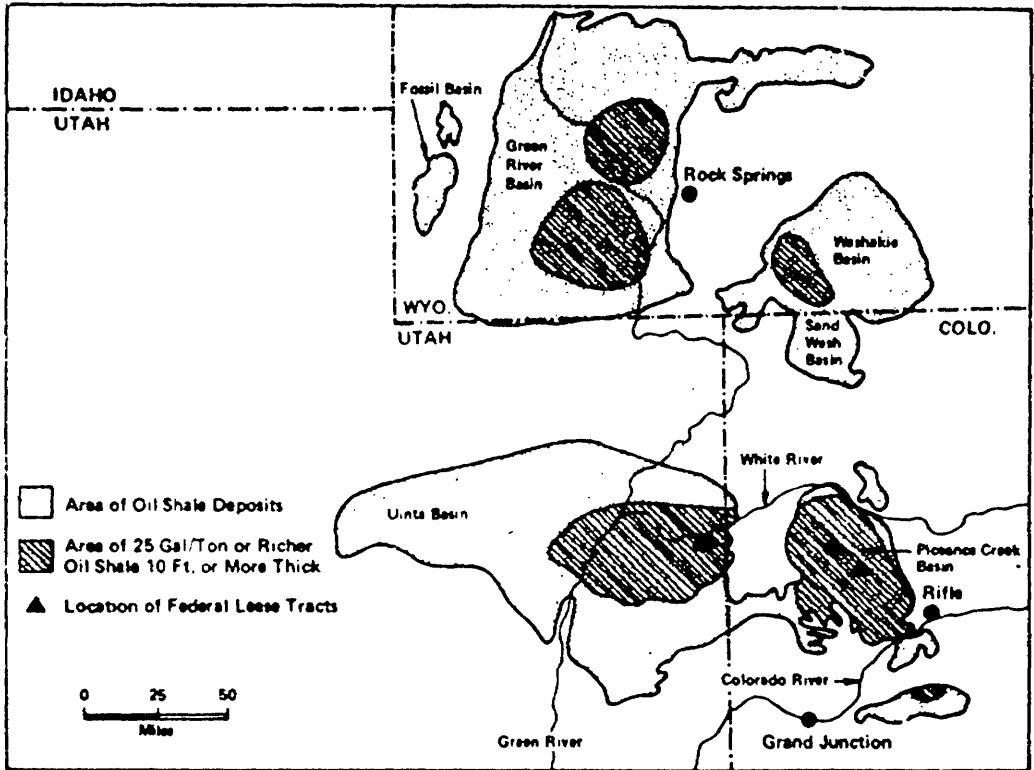
The federal government should, as quickly as possible, make this land available for development and assist in that development wherever feasible.

U.S. Shale Oil Production Potential, 1980-90



Source: Potential Future Role of Oil Shale: Prospects and Constraints, Project Independence Report, 1974, page 38.

U.S. Oil Shale Deposits, Green River Formation

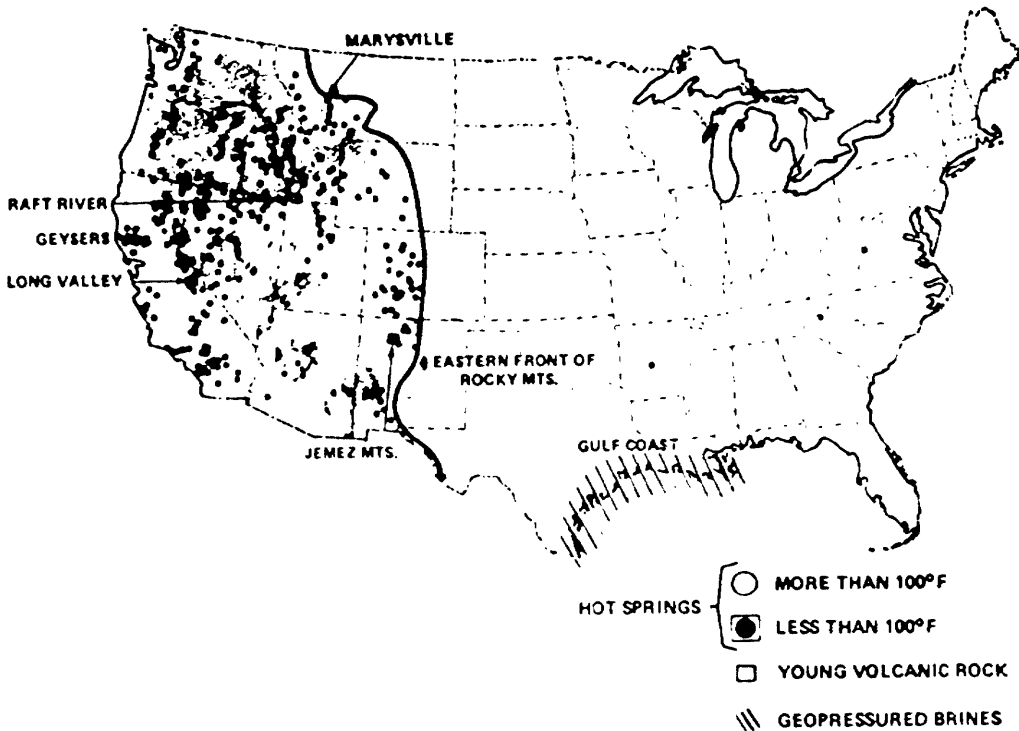


Source: U.S. Department of the Interior, 1973.

UTILIZATION OF GEOTHERMAL ENERGY

Geothermal energy is a resource whose time has come. A private utility has already developed an enormously productive geothermal field in the mountains of Northern California near Santa Rosa. Several years ago, Congress authorized the Secretary of the Interior to lease federal lands for geothermal development. Though the technology is reliable, the government has been painfully slow in identifying and leasing potential geothermal lands. The chart below identifies prospective and potential areas for geothermal development. Every reasonable effort must be made to bring geothermal energy on line.

U.S. Geothermal Resources, Areas of Promise



Source: U.S. Geological Survey, 1974.

OTHER SOURCES OF DOMESTIC ENERGY

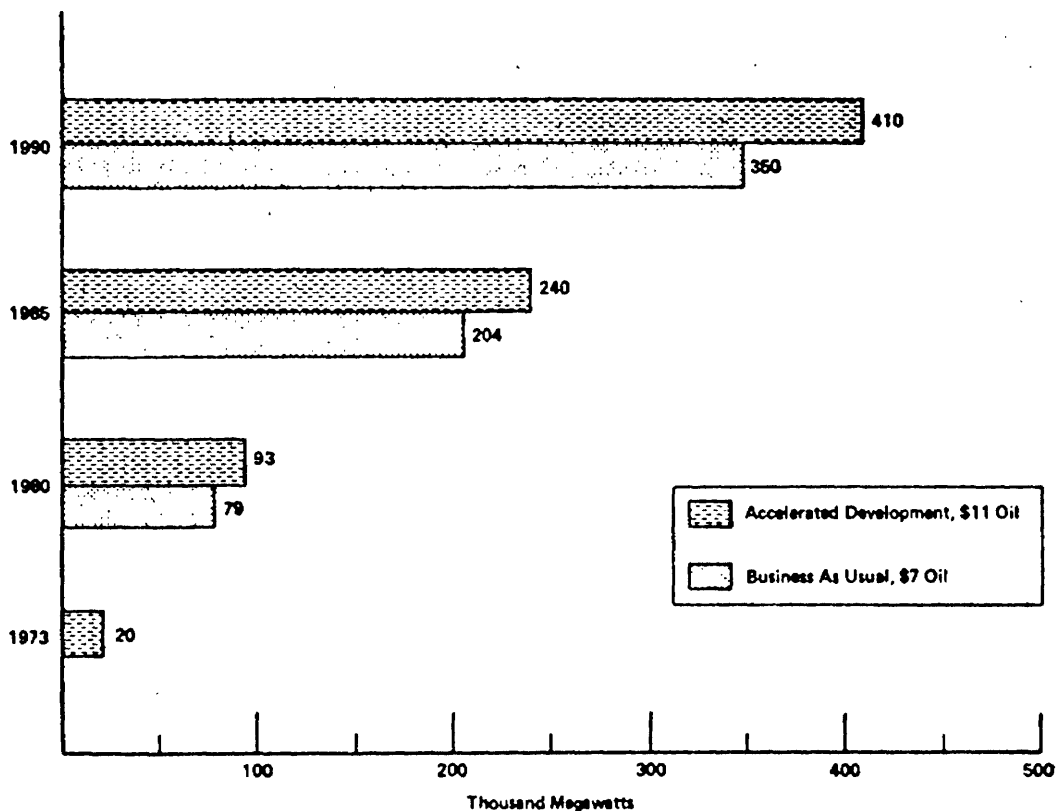
Coal, oil and natural gas are proven resources that can help us to reestablish energy independence in the next five to ten years. While these are the most reliable sources of energy available at this time, they will not be the major sources which we must utilize in the years ahead. Another set of technologies exist that are not yet fully developed, but which are our greatest long-term hope and are deserving of more study and development.

The most developed of these emerging energy technologies is nuclear power. The fission reactor is already a proven, reliable energy source. The breeder reactor, while showing enormous potential, probably needs several more years of research before reaching pilot plant stage. Nuclear fusion is still a highly theoretical energy source that will need several decades of study before full realization.

The federal government should encourage the installation of fission plants wherever feasible. We must, however, perfect all phases of nuclear development, such as improving reactor safety and efficiency, and provide for equitable siting procedures for nuclear power plants. The costs of alternate sources of fuel will play an important role in nuclear development. Continued private controls on oil will have a detrimental effect on nuclear capacity, as illustrated in the chart below.

We further recommend that adequate financing be provided ERDA for the continued development of nuclear breeder and fusion reactors.

Projected U.S. Nuclear Power Plant Capacity, 1973-90



Source: Project Independence Report, 1974, page 113; Nuclear Power Growth, 1974-2000, Atomic Energy Commission, 1974, page 48; The Nuclear Industry, 1974, Atomic Energy Commission, 1975, page 7; 1985-90 extrapolated.

The creation of ERDA was a giant step in our national effort to promote new and better energy sources. We hope that ERDA will catalyze and concentrate advanced research in such diverse areas as solar, wind and tidal power, advanced engine cycles, magnetohydrodynamics and the like.

MAXIMIZE RESOURCE RECOVERY

Another means of producing energy from readily accessible resources is available through the emerging technology of resource recovery. Resource recovery and its attendant technology of energy conversion can, in the long run, not only reduce the cost of municipal waste disposal, but also can lower energy costs through energy conversion techniques. Refuse-derived fuel burns at approximately one-half the Btu value of an equivalent amount of coal. The largest power producer in the country, Tennessee Valley Authority, is seriously studying the possibility of converting a number of its electric power facilities from fossil fuel to refuse-derived fuel.

Resource recovery refers to the extraction and utilization of materials from mixed solid waste; energy recovery refers to the utilization of the caloric value of refuse in energy systems. In application, they offer the most positive approach to present and future municipal refuse management.

Resource recovery is not new. It has been a standard tool of industry for many years. However, it has not been applied to the problem of municipal solid waste until recently because of its inability to compete economically with conventional

disposal techniques and with the development and increased effectiveness of resource recovery systems. In fact, total resource recovery systems have increased six-fold in the past three years and more and more major corporations are entering this growing new field.

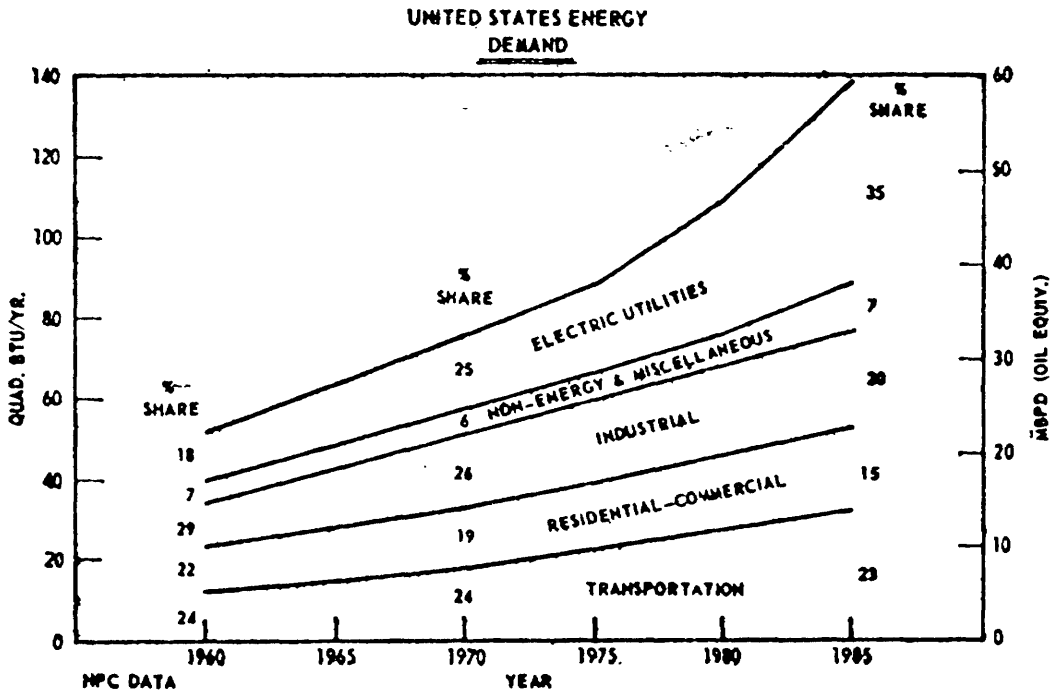
Technology is now being developed, and in some cases is already available, to mechanically process refuse to recover resources. The significance of such systems is that materials can be reclaimed for reuse in predictable quality and quantity to meet manufacturer's specifications.

A recent study by Franklin Associates, Ltd., sponsored by the Aluminum Company of America, indicates that if resource recovery were "fully developed," i.e., put in 150 metropolitan areas in this country, 62% of the population would be served. 57.6% of our solid waste problem would be solved and 25,700 more people would be employed in this industry. Furthermore, if only 25% development takes place, a more realistic figure, 5.3 million tons of combustible waste could be recovered. The latter would be the equivalent of saving 32.4 million barrels of oil per year. This works out to almost a hundred thousand barrels of oil a day, which is one-tenth the energy conservation goal expressed by the President.

Conservation

As has already been indicated, considerable conservation would be achieved under decontrol of crude oil. Although projections are difficult, similar, if not greater, results would be achieved with deregulation of new natural gas. Because the price for gas has been held at such an artificially low level for so long, any rise is likely to have a significant conservation impact.

The market place, through the interaction of demand and higher prices, will promote the highest degree of energy conservation. At the same time the government should continue to develop, through ERDA, technology which will improve the efficiency of energy related operations and facilities in the transportation, residential-commercial, industrial and electric utility segments. The chart below, using National Petroleum Council data, plots the historical and projected demand in the energy consuming sector.



While conservation is critical to our national energy program, we must firmly keep in mind that conservation *alone* cannot provide the solution to our energy needs. Even at a minimal growth rate of two percent a year, domestic energy production will have to increase 26 percent through 1985. At a 3 percent growth

rate, domestic energy production will have to increase 42 percent. At the current rate of oil consumption, all of the presently proven U.S. reserves would be consumed by 1985. Thus, an amount of oil will have to be found during this period equivalent to 114 percent (or 123 percent for the higher growth case) of our present reserves if we are to maintain this reserve position. This will, indeed, be an enormous task and can be achieved primarily by the efficient functioning of the market place.

Specific Objections to H.R. 6860

Quotas, Rationing and Other Allocation Devices

For years the National Chamber has advocated allowing the market mechanism rather than the government to make the adjustments necessary to the efficient functioning of our economic system. Current energy problems clearly demonstrate the market mechanism's superiority.

Quotas, for example, have been proposed to rapidly reduce U. S. dependence on foreign oil. No one questions the need to reduce our vulnerability to foreign suppliers, but let us examine the impact quotas will have. Those levels currently being discussed—6.0 MBPD in 1975 and 1976, 6.5 MBPD in 1977, 6.0 MBPD in 1978 and 1979, and 6.5 MBPD in 1980 and thereafter—would constitute a substantial cutback in projected import levels. Both the National Petroleum Council and the Federal Energy Administration's Project Independence projections indicate that we can expect a level of imports over 11 MBPD in 1980. This would face the U.S. economy with a minimum shortfall of 3.5 MBPD. Yet, the U.S. has no prospect of developing any surplus producing capacity. Even when Alaskan production is on stream this will increase domestic production by only 2-2.5 MBPD. Thus the proposed quota system could potentially cripple the U.S. economy. Even at less restrictive levels, quotas would put pressure on the overall price level, rekindling inflation, while dashing hopes of a full-fledged economic recovery by denying industry the raw materials for production.

Quotas do not address our more basic need, to encourage domestic energy development. In fact, both quotas and import fees may have the opposite effect. Energy shortages lead to shortages of energy-intensive products some of which, notably steel, are in turn necessary in energy development. And, even if materials are available, large amounts of capital are also essential. The implementation of quotas will further hike the scarcity value of oil, but the resulting economic rent will not go to domestic producers who need the capital.

Quotas have an additional, overwhelming liability. They will require the imposition of allocation and rationing systems. There is no indication that Americans recognize the seriousness of our energy situation and, without their cooperation, there is no way in which any such system would work. Even if this credibility problem could be overcome, however, it is virtually impossible to devise a fair system? How does the government allocate: by climate, by geography, by population, by occupation, by product? The problems are endless. And neither rationing nor allocation has any direct effect on reducing wasteful uses of energy, encouraging the development of more energy efficient production processes, or developing alternative energy resources. It is on these areas which we must concentrate if we are to reduce our energy import dependence, and it is on these that the market system will force us to focus if it is allowed to do so.

What of an import license system? If competitive bidding were instituted as part of such a system, it would increase the ease with which the producing countries could gang up against us. In addition, it would bid the price of petroleum up, not because of costs of production, but because companies would be bidding for a commodity in artificially short supply. Even if an import licensing system were imposed without import limitations, the problems created and exceptions granted—of which there are a sampling in currently proposed legislation—would create vast bureaucratic bottlenecks. Most damaging of all, the uncertainty generated by such a system would greatly hamper the long-term planning essential to the viability of our economy. And there is no assurance that the producers would bid at all.

A related proposal, that for an import purchasing agency, is subject to many of the criticisms cited above. In addition it would damage an important segment of the U.S. economy, the oil industry, by interfering with its integrated operations. It would, at considerable expense to taxpayers, attempt to achieve a secure supply of oil at a reasonable price, an approach tried by a variety of other countries

without significant sources. In fact, it would provide the producing countries with an easy means of cutting off our imports entirely.

BUSINESS USE TAX ON OIL AND NATURAL GAS

The proposal to tax the business use of oil and natural gas is ill conceived and misplaced on several counts. When fully effective, the excise tax on the business use of oil and natural gas will be \$1 per barrel for oil and 18 cents per Mcf for gas. This is a negative approach to the stated purpose of the provision: "Encouraging Business Conversion for Greater Energy Saving." The answer to encouraging greater energy saving is not to put a penalty tax on business but to let the market system produce more efficient energy supplies and new sources of energy.

If the tax is designed to encourage industrial conservation of oil and gas, this has been, and will continue to be, accomplished more efficiently in the marketplace by interaction with higher energy prices. A recent Department of Commerce survey of industrial consumers shows that industry in 1974 cut energy consumption on a per unit of output basis by a median 7.6% which then Secretary of Commerce, Frederick Dent, called "very substantial." The majority of the energy reductions were in the 6% to 8% range. However, ten reporting industries recorded savings of over 30%. As technology responds to higher costs, efficiency will continue to improve.

If the tax is designed to encourage industrial conversion to coal, this can also be better accomplished through the market place where industry can determine what energy source is most desirable based on cost and availability. Industries unable to convert to coal, either because of poor transportation facilities or because of air quality constraints, would be unjustly penalized. Those industries desiring to convert to coal should be assisted through a prompt capital cost recovery system, which is considered in a later section rather than by "prodding" through penalty taxation. Penalty taxes drain needed capital for companies to invest in energy efficiency equipment.

Additionally, because natural gas is so underpriced, a tax on it would have little effect on conservation or conversion, since its price would continue to remain below the price of coal or crude oil.

An excise tax on oil and gas will raise revenue, but do nothing to increase production of gas or oil which should be the thrust of national energy policy. The most efficient conservation, as we have seen, will result from higher energy costs which will also encourage exploration and production of new sources of energy.

Capital Formation and Energy Development

Capital is an important factor in energy exploration and development. Estimates of the capital needs of the energy industry over the next decade have reached \$1 trillion. Existing and anticipated tax policies greatly influence investment decisions by the energy companies. Additional tax burdens or threats of additional taxes can discourage investment and impede the development of essential energy supplies. Thus, there exists a correlation between taxes and the energy crisis.

Facing a capital shortage, the energy industry was dealt a severe blow by the tax laws should provide that all non-renewable natural resource industries industry by almost \$2 billion. The severe limitation placed on the percentage depletion allowance alone could reduce available capital in 1975 by \$1.7 billion. These adverse changes in the tax laws with regard to natural resources could seriously impair the search for new energy.

To meet national needs and to assure replacement of exhausted mineral assets, the tax laws should provide that all non-renewable natural resource industries have adequate depletion allowances. The need for the percentage depletion allowance is as great today as it has been in the past if America is ever to return to an affordable level of self-sufficiency in its oil and gas supplies.

There have been numerous proposals to impose an excess profits tax on energy producing companies. We oppose excess profits taxes. They run counter to the competitive enterprise system, are economically unsound, and difficult to administer, and are not a solution to the current energy crisis. A tax on excess profits suggests that the government can decide how much profits should be and which profits are excessive and which are not. If this is possible with the energy producing segment of the economy, then why is it not possible with other segments

of the economy? Where do we stop? What will be the shortages next year and the next, and which businesses will be subjected to government regulation and control of their profits?

Excess profits taxes discourage capital investment for the development of new energy resources. There is a definite psychological effect on investors who know that any success will be subject to a tax that could consume most or all the profit. In addition, an excess profits tax could have the effect of causing companies to delay capital investment actions until such time as the tax expires—resulting in a definite postponement of the development of productive facilities.

We are opposed to any form of excess profits tax. If one is imposed, however, it must contain a "plowback" provision. Without a "plowback" provision, the capital vital to the solution of America's energy needs may not be available.

Conservation and efficiency can be as important in dealing with the energy crisis as the discovery of sources of new energy supplies. According to a McGraw-Hill survey released in November of 1974, 17 percent of the plant and equipment of American business is at least 20 years old. United States tax policy should encourage the replacement of obsolete plant and equipment. To provide energy-efficient plant and equipment, the concept of prompt capital recovery allowances should take the place of outmoded concepts of useful lives which have been used unsuccessfully as a measure of depreciation and obsolescence. Replacing obsolete, energy-wasting plant and equipment with modern, energy-efficient plant and equipment would help the United States solve the energy crisis.

The President's Labor-Management Committee has recently recommended that the investment tax credit be increased to 12 percent for electric utilities. The Congress should take action on this report. We favor a full 12 percent credit, not only for electric utilities—but for all business.

Tax policy toward energy companies could determine the outcome of the energy crisis. If taxes are increased, the sources of capital can certainly be expected to diminish. We urge that tax measures be adopted to encourage energy exploration, energy production, and capital investment in energy-efficient equipment.

Conclusion

In conclusion, I thank the committee for allowing the Chamber of Commerce of the United States to comment on this most critical national issue.

The CHAIRMAN. Next we will call Mr. Frederic B. Ingram, chairman of the Energy Corporation of Louisiana.

All right, Mr. Ingram, we would be very pleased to hear your statement, sir.

STATEMENT OF MR. FREDERIC B. INGRAM, CHAIRMAN OF THE BOARD, ENERGY CORPORATION OF LOUISIANA, LTD. ACCOMPANIED BY: MR. JOHN G. BUCKLEY, VICE PRESIDENT AND DIRECTOR OF NORTHEAST PETROLEUM INDUSTRIES, INC. OF BOSTON AND VICE PRESIDENT AND DIRECTOR OF ECOL

Mr. INGRAM. Mr. Chairman, thank you very much for the opportunity of appearing before this committee today.

My name is Frederic B. Ingram. I am chairman of the board of Ingram Corp., of New Orleans, La. Our company is an independent firm principally engaged in ocean transportation, shipbuilding, inland waterway transportation of petroleum, chemicals, rock, sand and gravel, international petroleum and chemical trading, and construction of oil and gas pipelines. I am also chairman of the board of Energy Corp. of Louisiana, Ltd.

ECOL is a petroleum refining company, 50 percent owned by Ingram and 50 percent by Northeast Petroleum Industries, Inc. of Boston, Mass.

With me today is Mr. John Buckley, vice president of Northeast and a director of ECOL.

ECOL is currently constructing a 200,000-barrel-per day refinery in St. John the Baptist Parish about 35 miles up the Mississippi River from New Orleans.

This new facility will be the largest refinery ever built in a single construction phase in the continental United States, and upon its completion in the latter months of 1976, will be the largest independent refinery in the continental United States.

The ECOL refinery will also be the first refinery ever built in the United States designed to maximize the production of heavy industrial fuel oils—a product this Nation now imports in substantial volumes.

I will limit my comments today to title I of H.R. 6860 and to the impact of the import quota, auction and duty systems established by that title on new independent refineries.

The CHAIRMAN. Would you mind suspending just a moment because I want Senator Haskell to hear what you are about to say?

Mr. INGRAM. If sections 111, 112, and 121 are enacted in their present form, it will be nearly impossible for an independent company such as ours to build a new refinery in the future. In fact, if these provisions become law, it is unlikely that very much capacity will be built by any company, anywhere in the United States, and we will continue to be dependent on foreign refineries for a substantial volume of our products, particularly in the case of residual fuel oil.

A review of recent history will underscore my concern. As the committee knows, in April 1973, the President announced abandonment of the import quota system that had been in existence since 1959. In place of the quantitative limitations of a quota, he established an import license system under which any person who wished to import could do so upon payment of a license fee.

The licensee fee on crude oil was set at 21 cents per barrel and the fee on products, at 63 cents per barrel. This is very similar, I might note, to the ad valorem duty schedule of 2 percent on crude and 5 percent on products established by section 121 of H.R. 6860.

However, in order to stimulate and encourage the construction of new refining capacity, particularly by independent companies, the President created a special incentive—for the first 5 years of operation, a new refinery would be forgiven the obligation to pay the license fee on 75 percent of the crude oil it used. In effect, for the first 5 years a new refinery would pay an import fee of 5.25 cents per barrel, instead of 21 cents per barrel.

In April 1973, upon announcement of the new program, the Federal Government made two commitments: first, the new program would be a stable, long-term one, upon which the industry could rely; and second, it was particularly designed to encourage the construction of new, independent refineries.

I note that Secretary Simon will be testifying on Monday and I would just quote from a statement he made on April 18:

Our objective was to design a program that would assure the oil industry flexibility to import oil to satisfy the short-term needs of U.S. refiners and consumers while, at the same time, provide longer term stability and additional incentive for increased domestic exploration and production and new refinery construction and expansion.

I realize that this may seem like a small amount of money—the waiver of about 16 cents per barrel, but several facts may underscore its significance. First, as the committee is aware, an independent project must be financed by borrowing from outside sources, usually large banks in contrast, when a major oil company builds a refinery it need only rely on its internal cash sources or the borrowing strength of its entire operation.

Since an independent project must borrow heavily, its interest and principal payments are heavy, particularly during the early years of operation. That is why the 5 year waiver provides an incentive.

Another fact: With the declining level of U.S. domestic production, a new refinery must rely on imported crude oil more heavily than existing refineries. Although this factor has been mitigated somewhat by the mandatory allocation program, that program is temporary and in the long run a new refinery must count on processing a large proportion of foreign crude.

In fact, as you will note from the background material submitted to the committee, our refinery was specifically designed to run on foreign crudes: it was specifically designed to move residual fuel capacity into the United States while being able to run crudes from anywhere in the world, thus minimizing the risk of supply interruption from foreign refineries upon which we now rely so heavily.

Thus, with the prospect of running a high proportion of high-cost foreign crude, the waiver of import fees becomes a critical factor.

In summary, we simply could not and would not have embarked upon our refinery project without the 5-year waiver granted by the Federal Government. It is essential to our operation; it is essential to the operation of any independent refinery project.

Unfortunately, H.R. 6860 changes all this. In one stroke, it wipes out the existing fee-free system and the 5-year waiver for new refineries. It breaks a firm commitment of the Federal Government, on which a number of significant investment decisions were made.

As persons who relied on that commitment we are deeply disturbed. If H.R. 6860 becomes law in its present form, we believe it will raise serious legal and equitable questions regarding that commitment. Perhaps worse, by removing the waiver the Congress will be saying two things to independent companies, who, like ourselves, wish to build new refineries: You cannot rely on our firm promises and we do not care about new capacity in any case.

As a private citizen with substantial experience in the building of refineries, I can assure this committee that without any incentives, no new independent capacity will be built in the United States. And that would be bad for our Nation and contrary to the goal of energy independence.

In addition to abolishing the 5-year waiver, the quota and auction systems established by H.R. 6860 have three other features which are certain to discourage new independent refineries: First, the establishment of a strict quantitative limit on imports is a disincentive in and of itself. Since a quota means that someone will have to go without oil, this usually means new refineries; thus potential investors will be scared away from a project by the prospect of being without oil, even when there is no embargo or foreign supply interruption.

Second, H.R. 6860 raises serious uncertainty about the cost of imports. Under section 112, companies must bid at auction for the right to import. Thus an importer—and, more important, a prospective borrower or lender—has no idea what it will cost to bring crude oil into the United States.

Further, for one company the cost could be different than for another, depending on the date of the auction and the volume of crude oil licenses he must bid for. This uncertainty will be death to new projects. No one will be able to make firm financial projections; no one will be able to determine his crude costs vis-a-vis his competitors.

Third, while the auction system provides a limited set-aside for independent importers and small refiners, it does nothing for independent refiners such as ourselves. As a result, we will be forced to enter the auction and bid for crude oil import licenses against the major oil companies, whose financial resources far exceed our own.

In addition, such majors own substantial quantities of foreign crude oil and thus would be able to set the price of the crude to be bid upon by themselves and by us. Obviously, this is totally unfair and anticompetitive.

In summary, H.R. 6860, if enacted in its present form, will end any hopes for expansion of independent refining capacity in the United States. It will end any chance of increasing the share of the refining industry owned by independents. It will mean that major oil company dominance and control of refining is assured for decades to come.

Fortunately, this committee can prevent this from happening. And I should like to conclude my testimony with five specific recommendations relating to title I of H.R. 6860:

First, the quota and auction systems in sections 111 and 112 should be deleted. As I have indicated, they will create a massive new set of bureaucratic controls, result in uncertainty and confusion, and will effectively discourage the construction of new, independent refineries.

Second, if the committee decides to retain some sort of import quota system, the auction must be completely eliminated and replaced by an allocation system for quota rights. And such an allocation system must provide a specific set-aside, a guaranteed allocation for new, independent refineries. I would urge that this allocation be of at least 5 years' duration.

Third, the ad valorem duty system in section 121 should be retained. This, as I have indicated, is essentially the same as the current license fee system and, by establishing a higher duty on imports of products than crude, provides encouragement to the construction of domestic refining capacity.

Fourth, if this ad valorem system is retained, it must carry forward the 5-year waiver commitment made to new refineries by the Federal Government in April 1973. This could be done simply by providing that new refineries were required to pay only 25 percent of the ad valorem duty, that is, a duty of one-half of 1 percent, on crude oil imports for the first 5 years of operation.

Fifth, section 121(f), which eliminates the current supplemental fee program, should be maintained. An important and positive fea-

ture of H.R. 6860 is the ending of the complicated supplemental fees imposed by the President on February 1 and June 1 of this year. Those fees, which place more of a burden on crude oil than products, are a clear disincentive to new domestic capacity and should be eliminated as soon as possible. I commend the House for its action in this regard.

Mr. Chairman, in conclusion, I wish to thank the committee for the opportunity of appearing today. The bill before you is of the greatest importance to our refinery project and to the future of independent projects throughout the country. The action taken by the committee and the Congress on H.R. 6860 will establish energy policies for years to come and will determine whether new, independent refineries can be built and survive.

Your action will also determine whether our Nation will continue to depend on uncertain overseas sources for the major volume of its residual fuel oil imports. I am confident that you will act wisely.

Thank you very much.

The CHAIRMAN. I want to suggest that there may be some better way to solve your problem and I think we ought to explore that with the Secretary of the Treasury and with others to see just how we could do this.

But, I am fully in sympathy with you and I think this committee will be in sympathy. We agree that we should not do anything to prevent the building of new, independent refineries.

I wish to ask this question: Does it not tend to work out that when we find oil and products in scarce supply, such as was the case of a year ago, that the major companies tend to use every device available to them to favor their own company, own station, and to extend their control of marketing over other independent outlets when they can in these times of short supply?

Mr. INGRAM. I think that is certainly fair to say. I would say it perhaps might not be intentional on their part due to the size of their operations and the way they have trained all of their people.

The CHAIRMAN. I was here at that time. The independent filling station operators were screaming to high heaven that the major companies were taking advantage of that shortage to expand their control and extend their control over the retail outlets both in terms of converting stations to company owned stations where previously they had been individually owned and terminating leases, tightening their control over their retail outlets.

And in addition to that, the completely independent retail outlets were finding it difficult to obtain gas up until they eventually found some ways to impress them to treat these independent retailers more fairly.

An independent refinery such as yours has every interest and finds it very much to its advantage to try to keep these independent retailers alive, does he not?

Mr. INGRAM. Yes, sir.

The CHAIRMAN. Because those are the people that you hope to sell your product to?

Mr. INGRAM. That is right.

The CHAIRMAN. And I know that sometime ago the retail independents stressed to me the fact that everything that could be done should be done to try to promote one or more independent refineries that would try to keep them alive because they would have an interest in doing so; contrary to those other major companies who had no such interest. I guess you are aware of that?

Mr. INGRAM. Yes, sir.

The CHAIRMAN. Thank you very much.

Senator HASKELL?

Senator HASKELL. Thank you very much, Mr. Chairman.

Mr. Ingram, it is nice to see you again.

I met Mr. Ingram with the chairman's colleague from Louisiana. I must say I am not impressed with either a quota or a tariff. I may have some other ideas, vis-a-vis the industry that you and I might not see eye to eye on; but I certainly see the dislocating effects of both the tariff and the quota.

I really have no questions.

I would like to say this, Mr. Chairman. Mr. Buckley is here. There has been talk of the United States being the sole purchasing agent for overseas oil. I do not know if that is going to come up in connection with H.R. 6860. But I heard Mr. Buckley on another occasion discuss that proposition which has considerable surface appeal. He seems to put a lot of holes in it, it makes it look like a swiss cheese. So, if that proposition is going to come up before our Committee, I would like to recommend at that time, that we might want to hear from Mr. Buckley.

I do not think I should ask any questions about the proposal now because I do not think it is a matter before the committee. But, if it does come up before the committee, Mr. Chairman, I would like to recommend that Mr. Buckley be called as a witness.

Thank you very much, Mr. Ingram, I appreciate your statement, it is nice to see you again.

The CHAIRMAN. Senator Packwood?

Senator PACKWOOD. I think you have been dealt unfairly with and I sympathize with what the chairman said. I think we can find a way out of the predicament.

I am curious generally, do you think we should be trying to restrict our imports? Should we have an energy policy pointing in that direction or not?

Mr. INGRAM. I do not think we should have a policy that tends to restrict imports just as I do not think we ought to have a policy that tends to control the price of domestic crude oil or natural gas. I think we are going to have to come to a situation where free market practices dominate the energy business or we are going to end up in worse trouble than we are today.

Mr. BUCKLEY. Could I add to that answer, Senator?

Senator PACKWOOD. Yes.

Mr. BUCKLEY. I think the problem here, as you know on the side of the House, and they had a difficult struggle there, is they came up with a bill that addresses really one side of the problem, and that is the supply side. If we are going to deal effectively with energy we have to deal with demand. If we are going to cut imports automatically, and

if we put no restraints on demand and simply try to deal with it by cutting supply, then obviously we end up with shortages; we end up with higher costs because of these shortages. We end up with an anti-competitive impact on independent marketers and refiners and enormous new bureaucracy.

And, overriding all of that, a system that simply will not work. You only can have a quota system that is effective and works if you have spare capacity in your own country; if you have reserves you can draw on when the shortages hit.

We no longer have that kind of spare. We did back when the quota system worked earlier. We no longer have that kind of spare capacity so what we are doing is imposing upon ourselves a self-imposed embargo. I do not think there is anybody in this industry that has looked at supply and demand that does see, looking at the numbers that have been suggested, pretty massive shortages over the next 5 years.

And who is going to be cut out? Which industries are going to be shut down? Which homeowners are going to go without oil? And when you get to those questions, the whole thing will fall apart.

Senator PACKWOOD. I do not think you and I seriously disagree and when I posed my question to Mr. Ingram it was in the context of an entire energy policy. I realize if you cut your imports back 3 million barrels a day without decreasing demand, you are going to have to ration, or the price will go up because of the shortage.

But fundamentally, I am curious, with your answer, Mr. Ingram, because even in the context of an entire energy policy, you say, no, do not make any restrictions on imports and let the market take care of it. But, in purchasing our supply, we are not dealing with market economies. I would be with you 1,000 percent if I could be guaranteed that the market would be allowed to operate and we would have access to purchase.

Mr. INGRAM. Well, I think that it will in the final analysis. There is a price at which we will not be buying Middle East crude oil or other crude oils that are priced too high.

Senator PACKWOOD. I suppose at some stage it will be priced where we will not buy but we will have no alternative if we have no reserves. If we have no energy policy, what will we do?

Mr. INGRAM. I think the only way we are going to have reserves in this country is to spell out a positive energy policy so the people can start making the kind of investments that it would take to get us to the next energy plateau.

We have got to stop all of this worry about whether there are going to be windfall profits if they deregulate oil. That is not the problem. The problem is that there is no program for phasing to that. It would be just as bad not to deregulate oil, to deregulate the price of old oil. As of this morning, the windfall profit is the least of the reasons.

There are many practical reasons in the business. There could be a tremendous amount of waste, confusion, black market—everything you can think of would go on.

Senator PACKWOOD. I agree with you. I hope we do deregulate but you have no hesitancy being 40, 50 percent dependent on imports, the risk that entails?

Mr. INGRAM. No, I do not. We are going to be that way no matter what so there is no sense in worrying about it. You might just as well deal with it as a reality.

Senator PACKWOOD. I have no other questions, Mr. Chairman.

The CHAIRMAN. Are there any further questions? Senator Hansen?

Senator HANSEN. Let me yield. I took more time than I deserve. I would be happy to yield to Senator Fannin or Senator Curtis.

Senator CURTIS. I have no questions.

Senator FANNIN. Thank you, Mr. Chairman.

Mr. Ingram, I just hope your projection that 50 percent of any oil requirements will be imported is wrong because I think that would be disastrous, not only from the standpoint of what it would do to our economy, but also from the standpoint of that dependency. Being cut off from that foreign supply would be a catastrophe. Do you feel that there is valid reasoning behind that?

Mr. BUCKLEY. The 50-percent suggestion? That is really Senator Packwood's figure. I do not believe we suggested that.

Senator FANNIN. Oh, I see. I thought you agreed upon it.

Mr. BUCKLEY. No, I think there are a lot of projections that do show import dependency in the petroleum sector running up to 50 percent by 1985 and 1990.

Senator FANNIN. If we do not take certain actions?

Mr. BUCKLEY. That is true.

Senator FANNIN. Well, that is the point I wanted to make. That projection was being made. I apologize; I was not here to hear the testimony I just heard that one statement. But the 50 percent, as you now agree, is based upon the assumption that we do not take proper actions in the near future to alleviate that happening. So on that basis, of course, I agree with you. And I understand in your statement here, you talk about quotas; and certainly, I oppose quotas. If we institute quotas, would we not have to institute price controls?

Mr. BUCKLEY. If you institute quotas, you may not institute—

Senator FANNIN. No, no. If we institute quotas, would it necessitate price controls?

Mr. BUCKLEY. Well, you have price controls now, as you know, on old crude; and so long as there is some kind of domestic price control on domestic crude production, and foreign crude is priced much higher, then I agree you have some inequities and some difficulties. And it almost compels continuation of a price control system.

Senator FANNIN. I agree that we should decontrol. I just read part of your statement, with which I am in agreement. The problems that we have with the shortages and all—the first thing they say, is let us have some price controls. And then they talk about rationing, and, of course, then you have more serious maladjustments. I think that would be disastrous.

I assume from your statement that you agree with that.

Mr. BUCKLEY. That is correct.

Senator FANNIN. Then, of course, we talk about the bureaucracy. It was estimated it would cost as much as \$2 million a year to have a bureaucracy that would handle rationing and all. I think you are in agreement with that from your statement.

Mr. INGRAM. Yes, sir.

Senator FANNIN. Now, the one item that I think perhaps has not been covered—is that if we establish a Federal purchasing agency, how

could we insure that we would get the optimum mix of oil for this country, the proper gravity crude from the appropriate refineries, and so forth that is brought about by our present competition?

Mr. INGRAM. Well, a national purchasing agency is possibly the least workable of any idea that has been put forward in my memory in the oil business. Every refinery is an entirely different piece of machinery. A barrel of crude is worth \$10 a barrel running in one refinery. I do not think it would be worth \$9.25 in another refinery. And in order to have a national purchasing agency, every barrel of refining capacity in this country, and every crude oil available in the world, would have to be put into some mammoth computer. And, in effect, the Government would be trying to equitably program the economics of every oil company in the country. It just could not be done.

Senator FANNIN. It is unworkable, you feel; completely illogical?

Mr. INGRAM. It is an awfully hard thing to do on a company-by-company basis, and probably the thing that the oil companies do the poorest job of. And if you threw them all together, and tried to take care of everybody, it would be categorically impossible.

Senator FANNIN. Would it not remove any possibility of a competitive factor operating, too?

Mr. INGRAM. It would, in effect, be nationalization of the business, because the Government would have to run the whole business. They could not just run that part of it.

Senator FANNIN. Thank you.

The CHAIRMAN. Senator Hansen?

Senator HANSEN. Possibly you may have answered the question. I apologize for not having caught every word you said. What percentage of our petroleum supply do you think we could import without undue risk to our national security?

Mr. INGRAM. I think after you import any sizable percentage, you run pretty much the same risk; and I am not convinced in my own mind that we will not be importing 50 percent of our requirements by 1985, even if we go ahead and do everything as expeditiously in the energy business as possible. I do not see much difference in the risk between importing 50 percent and importing 35 percent. If it gets cut off, you are going to have exactly the same problems.

Senator HANSEN. Would you see much difference in importing 50 percent and importing 15 percent?

Mr. INGRAM. Yes. I think that is a significant difference.

Senator HANSEN. Would you agree that as our dependency upon petroleum is lessened, assuming that we bring other forms of energy into the stream of energy supply in this country, such as nuclear power and coal, to mention two that are on the immediate horizon, and solar energy possibly, that then we could safely run the risk of increasing the percentage of our petroleum supply that would have to come from abroad? I am saying, if we can have more of our total amount of energy produced by domestically owned resources, then I would assume you would agree with me that the risk that we would run in importing more of our petroleum would not pose as serious a threat to the country as is now proposed. Does that make sense?

Mr. INGRAM. Yes. I think it does make sense. I think one other thing ought to be pointed out, and it goes more to what we were saying in our statement. The type of refining capacity in the United

States today is to a very large percentage the type of refining capacity that can run U.S. domestic oil, and cannot run foreign oil, because of the quality of it. And I feel, notwithstanding our project here or anything else, that one of the serious shortcomings in our dependence on foreign energy sources is the fact that we do not have the refining capacity to run crude oils that are in large supply in the world today.

When we let refining capacity be built outside of this country, in the Caribbean, in Canada, and South America, and Central America, we are just adding additional people who can twist our tail. And the Middle East countries might be very willing to sell us the oil, but you cannot burn Arabian heavy in a powerplant or anything else. It has got to be run through a specific type of refinery which we do not have.

Senator HANSEN. Several of the committees of Congress have gotten into the energy business, or into a study of the energy situation, and on recalling testimony that I have listened to, addressed to the specific point of new refineries coming on, being built and coming on-stream, I have gathered the impression that the biggest single drawback to capital formation and the building of new refineries seems to be the lack of adequate assurance of crude oil supply. Is that an opinion you share?

Mr. INGRAM. No, sir, that is not. I do not think anybody who is considering building a refinery is terribly worried about the physical supply of crude oil. What they are worried about are the rules and regulations covering the economics of the business, and on our project, for instance, we are spending \$400 million. And we borrowed close to \$300 million of that from banks; we did not have a barrel of crude oil committed, and we are halfway to being onstream. And if you had to ask me, we still do not have very much crude oil tied up, by our own choice. The only risks that we are concerned about, really, are the risks right here in Washington.

Senator HANSEN. Well, I must assure you that your fears are not unfounded.

Mr. BUCKLEY. Senator, I think the point is that we can see rules change, such as the ones that would be changed by this bill, where we have been told, in a statement by Secretary Simon which was made on the same day that President Nixon put out his Executive order of April 18, 1973; and I would like to submit this for the record. If you read Secretary Simon's statement on that day, April 18, 1973, at least a dozen times in there, he said the reason we are going to this new system is to provide long-term, assured policies that you can count on, and go out and build those refineries. Well, we made the investment, and we are half-built, and all of a sudden comes along a new H.R. 6860, which in 1 day eliminates all of those incentives that were built into that program. It eliminates the tariff differential between crude and products, the forgiveness, the waivers that new refineries get, and establishes a quota system. So suddenly, if we are able to do the best deal in the world with three or four different producing countries, we cannot bring that oil in ourselves. We have got to go through an auction system, and bid against the majors, and you know, it is just a disaster for us. And that means that, since

we are the only new refinery being built in this country today, if our experience goes badly, who else in the world is ever going to build one? And we need 20 or 30 of these things.

Our big vulnerability right now is not an Arab embargo. It is the threat that any embargo poses on residual fuel, because we import over two-thirds of our total needs for that, and that runs factories, it runs utilities. We have got to build some of that capacity here, and under this bill it will not be built. One way to limit our risk here is to get the kind of refining capacity that we need in the country, and that means the kind that replaces product imports. That is what ours is designed to do. We are going to make 68 percent residual fuel. In the United States, the average refinery produces 7 or 8 percent. Every barrel we produce will back out a barrel of imported product, and yet this bill simply ignores all of that, and creates disincentives. And we are hoping that this committee will recognize those facts, and will take the steps needed to rectify that situation.

Senator HANSEN. I have no further questions, Mr. Chairman.

[The April 18, 1973, statement of Secretary Simon, referred to previously, follows:]

STATEMENT BY WILLIAM E. SIMON, DEPUTY SECRETARY OF THE TREASURY ON THE OIL IMPORT PROGRAM, APRIL 18, 1973

President Nixon today signed a Proclamation which terminates volumetric quotas on oil imports beginning May 1, 1973. The Proclamation substitutes a system of license fees on imports of petroleum and petroleum products into the United States.

Today's action follows an intensive study of the nation's oil import policies relative to current domestic supplies of crude oil and petroleum refinery capacity and the national security interest of the nation. The study was conducted by an inter-agency task force under my direction as Chairman of the Oil Policy Committee.

LICENSE FEE PROGRAM

An explanation of the new license fee program is attached. In essence, however, as of May 1, 1973, there no longer are any volumetric controls on oil imports, and the existing duties on crude oil and refinery product imports are suspended. Any person or company wanting to import crude oil and/or refinery products may do so after obtaining an import license from the Office of Oil and Gas at the Department of the Interior and after paying the license fees in force at the time.

In order to provide an equitable transition from the current program to the new license fee system, certain crude oil and product imports will be exempt from license fees for a limited period after May 1, 1973. These exemptions, however, will be phased out over a seven year period.

DEMAND AND SUPPLY

In recent years, the United States has seen its surplus supply of crude oil and refinery capacity rapidly dwindle into a deepening deficit, as demand for petroleum products has spiraled upward and discoveries of new reserves and construction of new refineries in this country have failed to keep pace. Increasing reliance on imports of foreign supplies has raised serious questions with regard to the nation's balance of payments position and national security requirements. In addition, the difficulty in satisfying the nation's home heating oil requirements this past winter and the threat of a gasoline shortage this summer underscored the imminent need to reconsider national oil policy, and an investigation of current policies was begun in February by the oil import task force under my direction.

MANDATORY OIL IMPORT PROGRAM

The task force found that the Mandatory Oil Import Program no longer provided the proper climate to support a vigorous domestic petroleum industry, which is essential to the national security and the economic welfare of the nation. It found that the program was neither adequate to alleviate the threat of near-term crude oil and product shortages, nor adequate to provide longer-term incentives for increased investment in domestic exploration and production and new refinery construction and expansion.

The task force found that the program was not so much a failure as it was obsolete. It was established at a time when domestic production was in excess of demand and it was found on the premise that it was necessary to restrict imports of cheap foreign oil to encourage the domestic petroleum industry in the interest of national security. The conditions which gave rise to this policy no longer exist.

Further, the original purpose of quotas was to provide reasonable self-sufficiency by encouraging the development of domestic production and refining capacity. This clearly has not happened.

Companies were induced to explore and produce abroad in order to benefit both from lower foreign producing costs and the assurance of a large higher-priced market at home. Imports now account for 30 percent of production and are expected to climb to the 50 percent level in a few years.

The task force found that these unintended developments are inherent in the quota system, and have not been corrected by the stop-gap measures used to shore up the program over the past years.

Lately refinery capacity has also begun to move abroad. Although other factors have contributed to this development, including environmental restrictions which have blocked refinery plant sitings, the uncertainties of the quota system have had an adverse effect on long-range investments for new refinery construction as well as investments for additional exploration and production in this country. This uncertainty developed because:

1. Import allocations are subject to annual realignment;
2. In recent years, the program has been altered frequently, making it a patchwork of special provisions and exceptions; and
3. General dissatisfaction with the program both in industry and the government has fostered the expectation that it would be abandoned shortly.

BASIS FOR POLICY RECOMMENDATION

Based on this assessment of the Mandatory Oil Import Program, we launched a full scale effort to develop recommendations to restructure import policies. We recognized the need to get the federal government out of the business of regulating oil imports, since the government does not have the forecasting capability to predict exactly what import levels will be each year. Our objective was to design a program that would assure the oil industry flexibility to import oil to satisfy the short-term needs of U.S. refiners and consumers while, at the same time, provide longer-term stability and additional incentives for increased domestic exploration and production and new refinery construction and expansion.

We knew that in designing this new program the special provisions, exceptions and subsidies in the MOIP would have to be ended. We realized that this could not be done abruptly, but would have to be done gradually to avoid putting an unfair economic hardship on the numerous persons and companies that together have invested many millions of dollars in the domestic oil industry based on the policies under the MOIP.

We also realized that our new policy recommendations would have to satisfy consumer interests in reasonable prices and sufficient supplies without straining or disrupting the complex mechanism known as the oil industry. We knew that each segment of the industry must continue to be viable in order to meet the supply needs of the nation both in the near and longer term. The formidability of this task is obvious when you realize that the oil industry is composed of companies that vary in size from global to local and from integrated majors to independent producers, refiners, marketers and jobbers.

We further recognized that our policy recommendations would have to be compatible with other government policies and programs, in particular the Economic Stabilization Program.

We knew that in order to be more attractive for oil companies—or for that matter anyone—to build new refineries and explore for more oil in this country, prices in this country for foreign petroleum products would have to be higher than the prices for domestic products. Only in this situation, would it be more profitable to manufacture those products here than to make them somewhere else and import them into this country. There had to be clear advantages to producing crude oil in this country rather than producing it somewhere else and in turn selling it in this country. Therefore, we have set a license fee on imports of crude oil and even higher license fees on imports of residual fuel oil, distillates, gasoline, unfinished oils and other products. Various changes in these incentives are spelled out in advance so that the oil industry will have a reasonable degree of certainty under which to make major new investments in U.S. exploration and development and refinery construction.

INDEPENDENT REFINERS

Implementation of the new license fees on May 1, 1973 will give value to unused 1973 import licenses, providing landlocked independent refiners with some additional leverage to bargain for domestic "sweet"—low sulfur—crude oil.

Import licenses, in general, now have no exchange value because the landed prices of foreign crudes—especially "sweet" crudes—are roughly equivalent to or above domestic crude prices. An increase in the value of independents' licenses by the differential of 10½ cents per barrel initially should help independent refiners bargain for additional "sweet" crude supplies. Moreover, the ability of the independent refiner to obtain license fee-exempt tickets from the Oil Imports Appeals Board will, hopefully, enable them to obtain a sufficient number of tickets to allow them to bargain for adequate crude oil supplies under present-day price relationships.

Under the new license fee program, the exemption of 1973 allocations for all refiners will be phased out over 7 years. The intent is to provide refiners both the time and the incentive to adapt their refineries to run available "sour" crudes or to develop or contract for adequate "sweet" crude supplies for the long-term.

INDEPENDENT MARKETERS AND JOBBERS

Today's action also gives value to the 1973 import allocations issued by the Oil Import Appeals Board to independent marketers and jobbers, enhancing their ability to bargain for products. The OIAB will continue to hear appeals from this sector of the industry to make certain that no undue hardships occur as a result of tight product supplies. In the long-run, the license fee program will further benefit independent jobbers and marketers by encouraging additional refinery capacity, which will make products more readily accessible.

PRICES

The impact of today's action on oil prices is expected to be gradual over the long-term and minimal in 1973. Imports subject to the new license fees during 1973 are expected to be such a small percentage of the nation's total oil requirements as to have little, if any, impact on consumer prices. The Cost of Living Council has advised us that there is adequate flexibility under the current oil price controls to allow such price movements should they be necessary to meet the supply needs of the nation.

Today's action also gives all importers the opportunity to negotiate long-term contracts, and thereby lower prices, for their crude oil and product supplies. This should be especially beneficial to deepwater terminal operators in PAD District I.

CONCLUSION

The program announced today by the President deals equitably with the many and varied aspects of oil import policy, while satisfying the national security interest by assuring the oil industry the flexibility, certainty and incentives to meet the growing petroleum needs of the nation through domestic expansion at all levels of the production and distribution system.

Today's action suspends oil import quota restrictions without abandoning the Mandatory Oil Import Program. It opens the way for foreign imports to alleviate potential shortages of crude oil and finished products, without foreclosing the

option of reimposing mandatory controls at any time in the future, should that ever again become necessary or desirable. The intent is to maintain import control and accountability without restricting the flow of essential oil into the United States.

The license fee approach gives the President the flexibility to satisfy short-term needs of consumers without destroying long-term incentive, namely, domestic exploration and production of crude oil, and construction and expansion of domestic refineries.

The CHAIRMAN. Let me see if I understand this situation now. If I understand it, you are not here to advocate that we rely upon foreign oil. You are here simply to say that this Nation is going to be importing a lot of foreign oil for a long time to come, regardless of how you look at it. That is a fact of life. We are importing about 6 million barrels a day, and you would hope, by the time you get your refinery completed, that you would be refining about 1 barrel out of 30, and that 1 barrel out of 30 would be the kind of oil that most of the other refineries are not built to handle. Is that correct?

Mr. INGRAM. Correct, sir.

The CHAIRMAN. All right.

So that, assuming that we are going to import some foreign oil, it is better to bring it in as crude than it is to bring it in as a product. And that has been national policy for a long time, I take it?

Mr. INGRAM. Correct.

The CHAIRMAN. If you bring it in as a product, and you have to go to a third party country in order to get it refined, you increase your injury in the event of an embargo. So that it is more to this Nation's advantage to maintain your independent refining capacity.

I see you nodding yes. And then, that being the case, the Nation made it to your advantage to build a refinery, and then having done so, you now are confronted with a bill where it would no longer be an economic proposition.

Mr. INGRAM. Right. It would be even less so for somebody else to build one.

The CHAIRMAN. I did not hear you.

Mr. INGRAM. It would be even less reasonable for somebody to start today on a new refinery, because their cost would be considerably more than ours.

The CHAIRMAN. If I were you, I would worry about myself. I would not worry about the next guy.

Mr. BUCKLEY. We are worried.

The CHAIRMAN. What you are saying is that this Nation adopted policies which make it feasible to refine that oil here, and now you are confronted with a bill that would remove that incentive.

Mr. INGRAM. That is exactly right.

The CHAIRMAN. And if that is to be done, you are saying that that threatens your investment, and you have borrowed \$300 million. How much did you say you borrowed?

Mr. INGRAM. Just under \$300 million.

The CHAIRMAN. So you have raised \$100 million, and you have borrowed \$300 million to build this refinery. And you do not think it would be a very good investment if they do what they are talking about doing to you?

Mr. INGRAM. It would be a terrible investment.

Mr. BUCKLEY. It would be a disaster.

The CHAIRMAN. I think I understand the occasion, and I think we should remove the confusion. You are not here saying we should rely on foreign imports. All you are saying is, so long as we bring them in, they should not change the rules in the middle of the game.

Mr. INGRAM. They should not change the rules on us in the middle of the game, and this committee, and a lot of people up here, should realize where our real vulnerability is, and it is in the fuel oil imports where we depend on third parties; where we depend on a producing country to send it to a refinery, and for that country to be reasonable about how it marks it up, and then send it to us. And then they do not have to if they do not want to.

The CHAIRMAN. The point is, your argument then is, it is bad enough to be vulnerable for the crude, but it is doubly bad to be vulnerable both for the crude and the refining.

Mr. INGRAM. Correct.

Mr. BUCKLEY. We would hope we, as a Nation, could limit our vulnerability by promoting the kind of refinery that we are building, and lessening our imports of products by promoting an intelligent and comprehensive storage program for crude oil, which would be a national program, and actions along those lines. And quite apart from those steps, that when we come to grips with how we are going to lessen overall dependence on petroleum imports, let us look at how you can restrict demand, increase conservation, use energy more efficiently—all those things that reduce demand automatically, back out the highest cost oil, and that is the imported barrel. Whereas, if you just say, well, we do not care about demand, we are not going to put any taxes on demand, we are not going to have conservation, we are not going to use energy efficiently; the only thing we are going to do is slap on a quota and limit supply, then you just create shortages, and that is going to create great confusion—cripple the economy, quite apart from what it does to us. And we just think that that is the problem of this bill. It deals with some long-term conservation and some long-term measures to promote conservation, but short term and immediately it puts the clamps on supply. And we just think that is going to be extremely bad for the Nation and the Nation's economy, at a time when it is trying to struggle to get out of the recession.

The CHAIRMAN. Senator Haskell?

Senator HASKELL. Mr. Chairman, I just have one question. Mr. Ingram, did I hear you correctly? You borrowed roughly 75 percent of a new facility without any assured source of supply?

Mr. INGRAM. That is correct; without one barrel of crude oil committed under contract.

Senator HASKELL. I had always understood that, to build a refinery, you had to have assured sources of supply to borrow the funds. I guess I am wrong, in your case anyway.

Mr. INGRAM. Well, I think that that was probably a prevalent rumor, and a lot of people thought that if they got and insured their crude oil under contract, they could go to a bank and borrow money. But as it turned out—

Senator HASKELL. It is not so?

Mr. INGRAM. Not necessarily.

Mr. BUCKLEY. I think, Senator, there are 12 million barrels a day of crude oil shut in around the world. Almost every major producing

country who has gained ownership rights from the majors of part of their production wants to deal with independent refiners. The reason we do not have crude is, it is really our own choice. We wanted to wait, because we felt that the market for crude and the price for crude and the credit terms we could get would be better now than they were a year ago or a year and a half ago. So we were pursuing a conscious policy of not trying to tie up long term at a time when supplies were tight and prices were high, and there was no credit available, and wait for what we saw developing, which has now developed—being a major surplus of crude in every producing country, on much better terms to us when we now consummate our crude contracts. And we were able to convince our banks that was the right strategy.

Senator HASKELL. Thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Now that you bring that subject up, it is relevant to an experience I have had. I have run across a number of people, promoters, who have contended that they could assure oil from Nigeria or someplace, various and sundry places. And my impression from the information that came my way was that anybody who could obtain the assurance of a supply of oil would have no difficulty building a refinery. But every time someone wanted to take him up on the other end, the answer was they found out, no; there was no way they could guarantee that oil. I take it that that is why you are smiling, because those guarantees were not there, anyway. Some fellow found some politician over there in Nigeria or Algeria or somewhere who wants to talk about it, but when you really get down to facts, there is no way they can guarantee it.

In the last analysis, about all you have got when you think you have got a guarantee from some of these countries is just a promise from some politician in governments that are not as stable as this one.

Mr. INGRAM. That is correct.

Mr. BUCKLEY. Even if you have a contract, all of the contracts you sign today, whether with a major international company or a country, they all have quarterly outs. They tell you, each quarter, what the price is, and if you do not like it, you can walk away from it; and if they do not like you, they can walk away from you. So there is no such thing as a long-term, secure, crude oil supply contract today with anyone, and that is whether you deal with the major international—because they are dealing with the same governments, and they have no assurance either. So, you know, you basically have to rely on the fact that you build that new plant, you are going to get crude somewhere, with surpluses all around the world and crude oil production—we will get it from somewhere.

The CHAIRMAN. Even those major companies have been “persuaded” to sell what they have to the Government of Saudi Arabia on very “reasonable” terms, have they not?

Mr. INGRAM. That is correct.

The CHAIRMAN. So that, in the last analysis, you are not really in as bad a situation—do not have any “firm” commitments—as it might sound, when you look at how the other fellow has made out when, theoretically, he owned the oil.

Mr. INGRAM. That is correct.

The CHAIRMAN. He thought he may have set it on the other fellow's terms. So, in the last analysis, it is not all that bad again to have a refinery, and go out in the world market, looking for oil.

Mr. BUCKLEY. We are willing to take those risks. We are willing to take the marketing risks. We think we can make this project move. But the one thing we do not have now that we thought we did have is U.S. Government policy which is going to be stable—which was announced as going to be stable, and suddenly it is going to be changed. And that, we feel, is some kind of a risk that we simply cannot absorb, because the money is too big.

The CHAIRMAN. I think that most of us here probably feel that, since you started out on this endeavor under policies encouraged by this Government, and since we need the refining capacity, you should not have the rules changed on you to keep you from going into it. Now, it may be that what you are suggesting here is not the best way to do it. Mr. Simon was the former Energy Administrator himself. I suspect he set some of these policies upon which your investment was predicated. He may be able to suggest a more feasible way, consistent with the other objectives of this bill, to meet your problem. But I would be the first to say—particularly because you are trying to build an investment in Louisiana—that we should not change the law in any way that would put you out of business. I hope that we can discuss it with Secretary Simon and Mr. Zarb and others, and we can find an answer to your problem. Thank you.

Mr. BUCKLEY. We certainly would appreciate your discussing it with him, Mr. Chairman.

Senator HASKELL. I would merely like to observe—I think in view of the fact that Mr. Buckley is here, I think it is of importance to New England as well as Louisiana.

Mr. BUCKLEY. Well, New England imports all that residual fuel, 100 percent of its requirements, so any refinery that makes residual fuel has to be helpful to New England.

The CHAIRMAN. Would it not have been more desirable if you could have gained permission to build that refinery in New England?

Mr. BUCKLEY. It would have been better for New England, but not as good for Louisiana.

The CHAIRMAN. I understand that. But it should also be said that the people in New England, for various environmental reasons, have not been willing to encourage the building of refineries in their area.

Mr. BUCKLEY. That is absolutely correct, Senator. And we, in fact—our company did try, made several efforts to get refining capacity in New England, and were frustrated for a number of years. And I think it was a very short-sighted policy by those in New England responsible for delaying, postponing, or killing the projects. And we, however, have been most gratified by the not only gracious but very warm welcome we have had from political leadership in Louisiana, and I am very pleased to be there.

The CHAIRMAN. Well, if there is anything wrong with refineries, we have so many of them in Louisiana that one more will not do anything but provide a few more jobs, and we can use the employment opportunities.

Thank you very much, gentlemen.

Mr. INGRAM. Thank you, sir.

[The prepared statement of Mr. Ingram follows:]

STATEMENT OF FREDERIC B. INGRAHAM, CHAIRMAN OF THE BOARD, ENERGY CORP.
OF LOUISIANA, LTD.

Mr. Chairman: Thank you very much for the opportunity of appearing before this Committee today. My name is Frederic B. Ingram. I am Chairman of the Board of Ingram Corporation of New Orleans, Louisiana. Our company is an independent firm principally engaged in ocean transportation, ship building, inland water way transportation of petroleum, chemicals, rock, sand and gravel, international petroleum and chemical trading, and construction of oil and gas pipelines. I am also Chairman of the Board of Energy Corporation of Louisiana, Ltd. (ECOL). ECOL is a petroleum refining company, 50% owned by Ingram and 50% by Northeast Petroleum Industries, Inc. of Boston, Massachusetts. ECOL is currently constructing a 200,000 barrels per day refinery in St. John the Baptist Parish about 35 miles up the Mississippi River from New Orleans.

This new facility will be the largest refinery ever built in a single construction phase in the continental United States, and upon its completion in the latter months of 1976, will be the largest independent refinery in the continental United States.

The ECOL refinery will also be the first refinery ever built in the United States designed to maximize the production of heavy industrial fuel oils—a product this nation now imports in substantial volumes.

TITLE I OF H.R. 6860

I will limit my comments today to Title I of H.R. 6860 and to the impact of the import quota, auction and duty systems established by that title on new independent refineries.

In brief, the impact will be disastrous. If Sections 111, 112 and 121 are enacted in their present form, it will be nearly impossible for an independent company such as ours to build a new refinery in the future. In fact, if these provisions become law, it is unlikely that very much capacity will be built by any company, anywhere in the United States, and we will continue to be dependent on foreign refineries for a substantial volume of our products, particularly in the case of residual fuel oil.

A review of recent history will underscore my concern. As the Committee knows, in April 1973 the President announced abandonment of the import quota system that had been in existence since 1959. In place of the quantitative limitations of a quota, he established an import license system under which any person who wished to import could do so upon payment of a license fee.¹

The license fee on crude oil was set at 21 cents per barrel and the fee on products, at 63 cents per barrel.² This is very similar. I might note, to the ad valorem duty schedule of 2% on crude and 5% on products established by Section 121 of H.R. 6860.

INCENTIVES FOR NEW REFINING CAPACITY

However, in order to stimulate and encourage the construction of new refining capacity, particularly by independent companies, the President created a special incentive—for the first five years of operation, a new refinery would be forgiven the obligation to pay the license fee on 75% of the crude oil it used.³ In effect, for the first five years a new refinery would pay an import fee of 5.25 cents per barrel, instead of 21 cents per barrel.

In April 1973, upon announcement of the new program, the Federal Government made two commitments: first, the new program would be a stable, long-

¹ Presidential Proclamation 4210, April 18, 1973 and President's Energy Message, April 18, 1973.

² The fees were phased in on a gradual basis over two years, moving from 10½ cents per bbl on May 1, 1973 to 21 cents on May 1, 1975 on crude oil, from 52 cents to 63 cents on gasoline and from 15 to 63 cents on other products.

³ Section 4(b)(1) of Proclamation 4210.

term one, upon which the industry could rely; and second, it was particularly designed to encourage the construction of new, independent refineries.⁴

Based on these commitments and upon a number of discussions with Federal officials, we decided to embark upon the ECOL project. An essential element in our financing was obviously the 5-year waiver of import fees.

I realize that this may seem like a small amount of money—the waiver of about 16 cents per barrel, but several facts may underscore its significance. First, as the Committee is aware, an independent project must be financed by borrowing from outside sources, usually large banks; in contrast, when a major oil company builds a refinery it need only rely on its internal cash sources or the borrowing strength of its entire operation. Since an independent project must borrow heavily, its interest and principal payments are heavy, particularly during the early years of operation. That is why the five-year waiver provides an incentive.

Another fact: with the declining level of U.S. domestic production, a new refinery must rely on imported crude oil more heavily than existing refineries. Although this factor has been mitigated somewhat by the mandatory allocation program,⁵ that program is temporary and in the long-run a new refinery must count on processing a large proportion of foreign crude. In fact, as you will note from the background material submitted to the Committee, our refinery was specifically designed to run on foreign crudes; it was specifically designed to move residual fuel capacity into the United States while being able to run crudes from anywhere in the world, thus minimizing the risk of supply interruption from foreign refineries upon which we now rely so heavily.

Thus, with the prospect of running a high proportion of high-cost foreign crude, the waiver of import fees becomes a critical factor.

In summary, we simply could not and would not have embarked upon our refinery project without the five-year waiver granted by the Federal Government. It is essential to our operation; it is essential to the operation of any independent refinery project.

Unfortunately, H.R. 6860 changes all this. In one stroke, it wipes out the existing fee-free system and the five-year waiver for new refineries. It breaks a firm commitment of the Federal Government, on which a number of significant investment decisions were made.

As persons who relied on that commitment we are deeply disturbed. If H.R. 6860 becomes law in its present form, we believe it will raise serious legal and equitable questions regarding that commitment. Perhaps worse, by removing the waiver the Congress will be saying two things to independent companies, who, like ourselves, wish to build new refineries: you can't rely on our "firm" promises and we don't care about new capacity in any case.

As a private citizen with substantial experience in the building of refineries, I can assure this Committee that without any incentives, no new independent capacity will be built in the United States. And that would be bad for our Nation and contrary to the goal of energy independence.

QUOTA AND AUCTION SYSTEMS

In addition to abolishing the five-year waiver, the quota and auction systems established by H.R. 6860 have three other features which are certain to discourage new independent refineries:

First, the establishment of a strict quantitative limit on imports is a disincentive in and of itself. Since a quota means that someone will have to go without oil, this usually means new refineries; thus potential investors will be scared away from a project by the prospect of being without oil, even when there is no embargo or foreign supply interruption.

⁴On April 18, Secretary Simon stated: "Our objective was to design a program that would assure the oil industry flexibility to import oil to satisfy the short-term needs of U.S. refiners and consumers while, at the same time, provide longer-term stability and additional incentives for increased domestic exploration and production and new refinery construction and expansion."

⁵See Section 211.65 of the Mandatory Petroleum Allocation Regulations, the "buy/sell" program and Section 211.67, the old oil allocation (or "entitlements") program.

Second, H.R. 6860 raises serious uncertainty about the cost of imports. Under Section 112, companies must bid at auction for the right to import. Thus an importer—and, more important, a prospective borrower or lender—has no idea what it will cost to bring crude oil into the United States. Further, for one company the cost could be different than for another, depending on the date of the auction and the volume of crude oil licenses he must bid for. This uncertainty will be death to new projects. No one will be able to make firm financial projections; no one will be able to determine his crude costs vis-a-vis his competitors.

Third, while the auction system provides a limited set-aside for independent importers and small refiners, it does nothing for independent refiners such as ourselves.⁹ As a result, we will be forced to enter the auction and bid for crude oil import licenses against the major oil companies, whose financial resources far exceed our own. In addition, such majors own substantial quantities of foreign crude oil and thus would be able to set the price of the crude to be bid upon by themselves and by us. Obviously, this is totally unfair and anti-competitive.

In summary, H.R. 6860, if enacted in its present form, will end any hopes for expansion of independent refining capacity in the United States. It will end any chance of increasing the share of the refining industry owned by independents. It will mean that major oil company dominance and control of refining is assured for decades to come.

RECOMMENDATIONS

Fortunately, this Committee can prevent this from happening. And I should like to conclude my testimony with five specific recommendations relating to Title I of H.R. 6860:

First, the quota and auction systems in Sections 111 and 112 should be deleted. As I have indicated, they will create a massive new set of bureaucratic controls, result in uncertainty and confusion, and will effectively discourage the construction of new, independent refineries.

Second, if the Committee decides to retain some sort of import quota system, the auction must be completely eliminated and replaced by an allocation system for quota rights. And such an allocation system must provide a specific set-aside—a guaranteed allocation—for new, independent refineries. I would urge that this allocation be of at least five years' duration.

Third, the ad valorem duty system in Section 121 should be retained. This, as I have indicated, is essentially the same as the current license fee system and, by establishing a higher duty on imports of products than crude, provides encouragement to the construction of domestic refining capacity.

Fourth, if the ad valorem system is retained, it must carry forward the five-year waiver commitment made to new refineries by the Federal Government in April, 1973. This could be done simply by providing that new refineries were required to pay only 25% of the ad valorem duty (i.e., a duty of ½ of 1%) on crude oil imports for the first five years of operation.

Fifth, Section 121(f), which eliminates the current supplemental fee program, should be maintained. An important and positive feature of H.R. 6860 is the ending of the complicated supplemental fees imposed by the President on February 1 and June 1 of this year. Those fees, which place more of a burden on crude oil than products, are a clear disincentive to new domestic capacity and should be eliminated as soon as possible. I commend the House for its action in this regard.

Mr. Chairman, in conclusion, I wish to thank the Committee for the opportunity of appearing today. The bill before you is of the greatest importance to our refinery project and to the future of independent projects throughout the country. The action taken by the Committee and the Congress on H.R. 6860 will establish energy policies for years to come and will determine whether new, independent refineries can be built and survive. Your action will also determine whether our nation will continue to depend on uncertain overseas sources for the major volume of its residual fuel oil imports. I am confident that you will act wisely. Thank you very much.

The CHAIRMAN. I am going to recess the hearing now, if there is no objection, until 2 this afternoon.

⁹ Section 112(b)(2)(A) defines a "small refiner" as one who operates less than 50,000 b/d of capacity.

[Whereupon, at 12:20 p.m., the committee recessed, to reconvene at 2 p.m. the same day.]

AFTERNOON SESSION

The CHAIRMAN. The committee will come to order. I say the committee will come to order; this group will come to order, because I believe we are meeting without consent of the Senate at this point. As I pointed out in the morning session, there is no power of anybody to require the presence of Senators in the Senate Chambers as long as a quorum is there; and if they cannot get a quorum, they can send for us. Now, until such time as consent can be gained, we will just have to meet as a group of Senators, at the invitation of the chairman of the committee, interested in talking about energy policies.

And so on that basis, I am going to call the next witness—and your statement has already been printed in the record—Mr. Gerard M. Brannon, economist, representing Taxation With Representation.

How are you, Mr. Brannon?

STATEMENT OF GERARD M. BRANNON, CHAIRMAN, DEPARTMENT OF ECONOMICS, GEORGETOWN UNIVERSITY, REPRESENTING TAXATION WITH REPRESENTATION

Mr. BRANNON. Thank you, Mr. Chairman.

The CHAIRMAN. It is good to have you.

Mr. BRANNON. I have submitted a statement, and I would like to summarize it briefly.

The statement makes three points. One, that we should have substantially higher petroleum product prices. Second, it explains how we can have higher petroleum product prices without the bad side effects of high prices. And finally, I argue that the overall situation is such that if you do not find a way to get these higher prices systematically, you will get them chaotically, and we will have a general mess and probably more recession.

This morning you talked a great deal about higher prices, and I doubt that it is really necessary for me to say much about that. My statement makes the point that these higher prices are not so important with respect to oil companies themselves. Very clearly, the price of oil has gone up a very great deal. There are already ample incentives for oil production. The higher prices are necessary to discourage consumption. Basically, at this time, an extra barrel of oil in the United States costs the United States about \$12 real resources. We, in effect, tell the public to buy oil if it is worth \$8 to them: that is about the average price of oil to the public, so we are subsidizing oil consumption.

As long as we are paying \$12 for the marginal oil supply, it helps the United States to produce a substitute energy product that has a cost anywhere up to \$12. But we throw all of those substitutes into competition with \$8 oil, so we discourage the production of substitute energy sources.

Now, these are not just technical economic arguments. A way of looking at this is that we are being patsies for the cartel. The reason that a cartel does not raise its price indefinitely is that at some high

price it loses sales. In principle, OPEC ought to be losing some sales when it raises its price as high as \$12, but the United States conveniently arranges things so that U.S. consumers only have to pay \$8 for oil, and the OPEC does not have to face the consequences of the loss of sales that would go with more expensive oil. No wonder they talk about raising the price again in September. A cartel could hardly have a better customer than one that protects the cartel market and makes it easier for them to raise prices.

Now, the obvious drawback to higher prices are that these will create very substantial windfalls for oil producers, and they will impose heavy burdens on consumers.

The first point I want to make is essentially a logical one: that we could structure a windfall profits tax which, from the producer's standpoint, was exactly the same as the present price control. I will argue later that we can make a better windfall tax than this; but presently I want to say that we have got a system which is just like a windfall profits tax. We have a law that says for so-called old oil, which a producer could sell on the market for something like \$12, he is required to sell it for \$5.25.

Now, the producer's situation would be no different if we told him he could sell it for \$12, but when he did that, he would have to give Uncle \$5.75 or \$6.75. Just as a matter of pure logic from the producer's standpoint, price control is like a windfall profits tax, rather a windfall excise tax.

Now, if, instead of price control, we impose some kind of a windfall tax such as the Treasury proposed to the Ways and Means Committee, we could go somewhat further and refund the windfall taxes to consumers in a way in which their refund did not increase the more oil they used. The mischief, so to speak, of oil price control is that we think we are giving consumers a benefit by letting them buy oil cheaply. This benefit is a direct function of how much oil they buy. The fellow who drives a Cadillac obviously gets more benefit than the fellow who rides on the bus.

I happen to own a house in the country, so you are subsidizing my excess trips down to the country through this technique of letting me buy gasoline cheap. This is absurd. If I want to pay for my luxuries, you should not be subsidizing them.

The obvious way to deal with the price problem is to let the price go up, impose a tax on oil companies for some of these windfalls, and refund this tax to customers in some way in which no customer gets more refund the more oil he uses.

I had earlier proposed a simple way of doing this: that you give every man, woman and child \$75, which he could take as a credit against income tax, or as a refund. In the Treasury proposal, there was a considerably more complicated refund arrangement. I do not argue strongly between these two, but it is important to get the money back. This is why we have the political pressure for price control. And also, it is important to avoid the very great recessionary impact that would occur from a large increase in the oil price, which would take purchasing power away from consumers.

I am saying, in effect, you can give the purchasing power back to consumers, but we do not have to do this in this present form which

attaches the refund to buying oil. That price control makes it harder to sell oil substitutes and encourages people to use more oil. And the whole, then, price control is socially undesirable because you are financing these inefficient uses of oil.

In the paper I talk about some of the specifics of this alternative structure, windfall tax, higher prices and refund. I have already said I thought the Treasury windfall tax reasonable. I do think the Treasury moved too far from the structure of the present price control. Our present price control has a very great incentive for new oil—essentially uncontrolled prices—and a very great burden on old oil. The Treasury's windfall profits tax would have applied equally to both kinds of oil. I would rather see something in between those two, in which there was a windfall profits tax on new oil and a windfall tax, which was less severe than the present price control, on the old oil. I think the heavy burden on old oil is connected with some of the present discouragement of production.

If you do have a windfall tax, one thing I would urge very strongly is do not have a plowback. Basically, a plowback is a subsidy for investment in the energy industry which is limited to people who have windfall incomes from the energy industry. If you want to subsidize energy investment, subsidize it for everybody; do not say that this subsidy is an exclusive club which is limited to people who already have big investments in oil and are getting windfall incomes in oil. The plowback is absolutely absurd.

I do not favor import taxes, as such, because import taxes raise the price of new oil in the United States, and that part of the price increase does not go to the Government and you have no opportunity to make this kind of adjustment to the higher price that we are talking about.

The whole structure of higher prices would cause some increase in the price of coal. I do not see a necessity for windfall tax there, but I would urge that you repeal percentage depletion of coal. I notice that percentage depletion is a very poor kind of subsidy for increasing output. With the 50 percent of net income limitation, percentage depletion is structured so that it provides the largest benefit for the most profitable producer, the fellow who would have produced even at a low price. At the margin of production where you really want to increase production, the 50 percent of net income limitation cuts depletion down toward zero. Consequently, percentage depletion is structured in such a way that it does not provide an increased incentive for producing coal. You would get that increased incentive by simply letting the oil price go up.

The third part of my argument was that you do not have time to wait. It seems very clear that the President is determined to prevent an extension of price control in August, and this Congress has not shown the ability to pass legislation over the President's veto; so that we could very well come out of this year with higher prices for petroleum products and no adjustment for the windfall profits that they would create, no adjustment for the hard burden that they would impose on consumers, and no adjustment for the reduction in consumer purchasing power that they would involve.

This is the kind of thing that would not only be burdensome on consumers, but would push us back into recession. And this is the kind of thing that I foresee if the Congress insists on going along with kind of a stalemate, with no effort to systematically deal with the price problem, but simply lets prices go up as a consequence of being unable to agree on any kind of legislation about the extension of controls.

Thank you.

The CHAIRMAN. Senator Gravel.

SENATOR GRAVEL. It is nice to see you again Mr. Brannon. You testified before, and I was just going over with Mr. Best some of your testimony at that time.

I am encouraged that you take a very strong and aggressive view toward higher prices. I think that if we can begin talking that rhetoric, it will make a lot more sense to the American people, because prices are going to rise regardless of what we do. So I think we can begin to condition them to that.

I do want to focus on, though, what you call windfall profits, because I think that is another part of our rhetoric that we pay attention to. I have not been able to find a windwall profit. I know a lot of people talk about them. Maybe you can help this committee and tell us how much profits, who is getting them and what they are.

MR. BRANNON. You have got to separate this problem of windfall profits on crude oil from this total picture of an oil company. An oil company, as such, does a lot of things. It refines oil, it sells oil in gas stations; it may operate in the Mideast and may really be losing over there because the local countries are taking away their profit.

Very specifically, what I talk about as excess profits is the receipts from the continued operation of an oil well. Now, an oil well has ordinarily a life of something like 20 years. In 1973, there were a lot of oil wells producing in the United States, and a lot under construction. At that time, the market situation was that this oil would probably be sold for \$3.50 a barrel. Then the well was drilled, and from then on, for, say, something like 10 years the well would probably be free flowing. For the other years, there may be some secondary recovery, which was more or less anticipated, when the well was drilled. You knew you would get so much free flow and so much yield from other methods to increase operation.

Now, what is happening here is that already that oil that is coming out of wells that were drilled when the expected price was around \$3.50 is producing \$5.25. That is the old oil price. And it will be producing \$13 a barrel—almost four times the expected price—if we have decontrol, and higher if the OPEC raises the price as seems to be the universal expectation.

Now, this particular company then goes ahead to sell the oil in gas stations and so forth, and the final profit will be confused with a lot of other things. But on this production of old oil, there is substantial windfall gains.

SENATOR GRAVEL. Fine. So we can begin to isolate.

Now, do you know of any other windfalls in any other part of the industry that are taking place right now?

MR. BRANNON. No. A great deal of the oil that is coming onstream now, which is involved in the Treasury proposal to extend the windfall tax to new oil, ought to be recognized as oil that people planned

to produce back in 1973. We recognize it takes a long time to get an oil well into production. The Alaskan fields are a pretty good case. We were arguing about building that Alaskan pipeline long before the price went up. A lot of companies thought that an Alaskan pipeline was a good investment when they would pump the oil down here to sell it on the market at \$3.50. Now it is going to be pumped down here and sold on a very different market, and under the FEA rules it will be called new oil; but it has been planned for a long time.

Senator GRAVEL. I think, then, you are not facing up to some of the facts. The Alaskan pipeline, when it was first talked of, at that time, was supposed to cost \$900 million; now it is going to cost \$6 billion plus, and they have not even finished building. So obviously, those costs are changing quite rapidly. So how can you just pull out and talk about—well, I do not want to focus on that.

If, as an economist when you want to look for excess profits, would you not normally look at their financial statement at the end of the year?

Mr. BRANNON. No.

Senator GRAVEL. Where would the profit go, then, if they are not reflected in their financial statements?

Mr. BRANNON. Well, you see, the word was reflected. There is a reflection in the mirror, and if I had a chance to look at something directly, I would rather look at that than the mirror. I would rather look at this oil production—

Senator GRAVEL. They have got tanker operations, they have got refinery operations, they have got all these operations. Now, if they are getting excess profits somewhere, will it not show?

Mr. BRANNON. If you look at it carefully, and separate out all of the other elements that go into it, yes; it will show, but it is very hard to sort it out.

Senator GRAVEL. Fine, so it does show, and we have got a lot of people on Wall Street that make their living at sorting out. Why is it that energy stocks, oil stocks do not enjoy a premium in the marketplace. If they are the recipients of excess profits, the investor would perceive this and therefore, react accordingly.

Mr. BRANNON. Well, the investors are anticipating that there are to be restrictions on the excess profits. In effect, one reason that you do not have excess profits now is the fact that you have the price controls.

Senator GRAVEL. Oh, so there are no excess profits, then—is that what you are telling me?

Mr. BRANNON. Price control is one way of dealing with excess profits, and I suggested this logical argument that there was a certain kind of a windfall tax which was exactly the same as price control.

Senator GRAVEL. OK, so we already have something that stops windfalls. We have not had any windfalls.

Mr. BRANNON. It stopped some windfalls in old oil.

Senator GRAVEL. Have we, or have we not had windfall profits?

Mr. BRANNON. We have had a device for restraining windfall profits on old oil; yes, sir.

Senator GRAVEL. OK, and since we had that device on, have we had any excess profits?

Mr. BRANNON. Yes.

Senator GRAVEL. Where?

Mr. BRANNON. On new oil.

Senator GRAVEL. Where on new oil? What companies?

Mr. BRANNON. I do not really spend much time analyzing company statistics, but there is a great deal of oil that was in the planned pipeline at a time when the expected price was \$3.50.

Senator GRAVEL. Sir, you are dealing in theories. I want to know specifically. Show me what figures you have that show that the industry has an excess profit, not theory. Here I will dispute your theory on your windfall. For \$5.25, if I have a million barrels of oil that cost me \$1 to discover and I sell that right now, in today's market, and I get \$12 for it, I have a windfall profit.

Mr. BRANNON. Yes.

Senator GRAVEL. But, if, the day after tomorrow, I still want to stay in business, to use my rigs, to use my refineries, to use all of that, I now have to acquire oil at \$12, so that means, to replace the inventory I have, I have to expend \$12. So I got no windfall. It was a paper windfall. It only becomes a real windfall, if I go out of business. Now, do you buy that logic?

Mr. BRANNON. No.

Senator GRAVEL. Why?

Mr. BRANNON. Because I have a great deal of confidence in the American business system, and if there is a market for oil, sufficiently strong to make investment sensible at these high prices that you talk about, I am confident that one or another company will invest in it.

In effect, your proposition was that you should make specially favorable provisions for you to make this investment in the new oil.

Senator GRAVEL. I did not offer any proposals.

Mr. BRANNON. Because if you do that, you still have windfall profits.

Senator GRAVEL. I was not offering a proposal. I was asking you a very specific question.

Mr. BRANNON. You were kind of suggesting that reinvestment purges the fact that it is a windfall.

Senator GRAVEL. No; I was not suggesting that. I will say it again. I have got a million barrels of oil. It costs me \$1 to discover that oil. Now, I sell it at \$10. I make \$9 profit. That is windfall?

Mr. BRANNON. Yes.

Senator GRAVEL. But the day after tomorrow, I have got to fill my tanks up again, so I can sell some more oil to stay in business. It now costs me \$10, so therefore, the money that I supposedly made for windfall, I have now got to use to stay in business.

Mr. BRANNON. Let me try to explain it in a different way. In that last operation, where you speak about making new investments that cost \$10—

Senator GRAVEL. I am not making new investments; I am just trying to fill up my tanks that I emptied out.

Mr. BRANNON. Making investments that produce replacement oil.

Senator GRAVEL. OK.

Mr. BRANNON. That costs \$10. In a market sense, those investments should not be made, unless the investments are worth \$10 after you have made them.

Senator GRAVEL. Well, the new oil now is permitting me to sell it. Obviously, if we regulated new oil, I would take my money and go

away, because I could not even replace. But at least the Government is going to let me stay in business, to go look for some new oil. Now, where have I ripped it off?

Mr. BRANNON. When you make this investment in new resources to produce replacement oil, for this to be an economic investment, it has to produce things which, on the average, expected value is worth \$10. So you have not sacrificed anything; you have transferred your cash assets to new assets. A steel company could have gone out and done this as well as you.

Senator GRAVEL. Have I made any excess profits?

Mr. BRANNON. I do not see why you should get the kind of a tax break for doing it, unless you want to say any investor gets it.

Senator GRAVEL. Wait a second. There is no tax break. I am in business, like anybody else. If I could just finish this point, Mr. Chairman—I am in business, like anybody else. I ask no tax break. All I want to do is sell the product that I have, so that I can stay in business the next day. Now, you are implying a tax break. I have not put a tax break into this.

Mr. BRANNON. I was implying a tax break in this sense, sir. You said that, if you took this profit and went out and spent it on consumption goods, it would have been a windfall.

Senator GRAVEL. Now, I did not say it was a windfall.

Mr. BRANNON. I thought you said, if you spent it without buying new oil, it would have been a windfall.

Senator GRAVEL. I could take it home and buy a Cadillac if I want. All I am saying, I am in the oil business. If I were in the cotton business, and I had in the storehouse 1,000 bales of cotton that cost me \$1 a bale to produce; the market went up; now, I could turn around and sell my cotton at that higher value. But if I want to go replace my warehouse, to keep my warehouse an effective economic unit, I have now got to buy at the higher rate. So I take the money that people say was a windfall, but I do not get any benefit from it. I am just staying in business.

Mr. BRANNON. I was trying to ask you to look at this as two separate stages. That is, I think you are saying something about what the situation would be if this fellow took his profit and went out of the business. That is some kind of a—

Senator GRAVEL. Most oil companies are still in business—Texaco—

Mr. BRANNON. I want you to look at this as two separate stages. You seem to be saying something about what if he goes out of business.

Senator GRAVEL. But can the oil company look at it in two separate stages?

Mr. BRANNON. Yes.

Senator GRAVEL. How can they?

Mr. BRANNON. They can talk about not making a new investment.

Senator GRAVEL. No; they cannot. Well, then, what they have got to do is write off all of the refineries, write off their service stations.

Mr. BRANNON. They can get crude oil. They can buy crude oil from other people.

Senator GRAVEL. At \$13 a barrel.

Mr. BRANNON. Yes; so it is only worthwhile building their own resources, unless they get oil that is worth everything—

Senator GRAVEL. Doctor. I think we have made our point. I am not going to monopolize your time.

The record is probably going to be open for more than a week, and I would be happy, as one Member, if you could come forward with any excess profit documentation of any American oil company, or the industry. And I think it would be very edifying to us.

Mr. BRANNON. All right.

Senator GRAVEL. Thank you.

[The following material was subsequently supplied by Mr. Brannon:]

WINDFALL PROFITS IN OIL

I have 3 comments in response to Senator Gravel's request.

(a) My statement argued that it was more efficient to deal with windfalls by producer taxes and consumer payments than by price controls. This argument stands even if we cannot agree on any precise definition of windfalls. I submit that the fact of current price controls on oil and the widespread belief that they should be continued is evidence that the Congress believes that uncontrolled prices would create windfalls. So long as the belief exists it is relevant to discuss how to deal with it.

(2) Further I agree with the implicit Congressional judgement on windfalls on the basis of comparing base profits from oil with the potentials for added profit from further price increase.

BASE PROFITS

The 1972 Preliminary Corporate Statistics of Income reports the following net income for petroleum and natural gas companies: \$3.0 billion for petroleum and gas "mining" companies and \$5.8 for petroleum and gas manufacturing companies. I add to this three quarters of the \$4.6 billion depletion deduction as an estimate of the excess of percentage over cost depletion. This yield \$12.3 billion as approximate book income before tax. The allowed foreign tax credit was \$3.0 while the income tax before foreign tax credit was about \$3.8 billion. This suggests that about three quarters of the profit was from foreign operations and thus we could roughly estimate that U.S. petroleum companies made profit of about \$3.5 billion from producing about 3.5 billion barrels of oil in the U.S.

PRICE INCREASES

In 1974 U.S. oil production had dropped to about 3.2 billion barrels but the average price had risen to \$7.25. Of this about 2.1 billion barrels were old oil selling at \$5.25. I assume that in 1972 without controls the old oil price would have risen to \$11.00, and in 1975 it would be \$12.00. Several added profit calculations are plausible:

	<i>Increased profit in billions</i>
Increase from \$5.25 to \$11.00 on 1974 production of old oil (2.1 billion) -----	\$12.1
Increase from \$5.25 to \$12.00 on 1974 production of old oil (2.1 billion) -----	14.2
Increase from \$3.60 to \$11.00 on 1974 production of old oil -----	15.5
Increase from 3.60 to 11.00 on all 1974 production -----	23.7

CONCLUSION

If price controls were removed the oil companies would be selling oil for \$7.40 per barrel more than they received in January 1973 and almost all current oil production is from fields already under development in 1973, i.e., fields that were planned investments when the oil price was \$3.60. This would represent an increase in the profit of petroleum companies of 200% over their profit from all sources foreign and domestic in 1972. It would represent an increase of about 800% over the profit on U.S. operations (and the increase was calculated from U.S. operations only.)

Even if we confine attention to old oil, an increase in price from \$3.60 to \$11.00 would represent a 440% increase in profit on oil that was simply a continuation of production from fields producing in 1972. I regard these increases as windfalls.

(c) An examination of the unedited transcript may permit a sharpening of our respective ideas of windfall profits. On p. 311 the stenographer recorded you as referring to a calculation similar to the ones I made above and asserting that "It was a paper windfall. It only becomes a real windfall if I go out of business." My assertion is that reinvestment does not change the character of a "paper windfall" into "no windfall" because reinvestment is a rational business activity which should be undertaken only if the firm expects the assets to be acquired by reinvestment will be worth more than the cash. Reinvestment in a profit motivated economy should only occur when it is profitable to reinvest. For this reason, I don't see reinvestment changing a paper windfall into no windfall. If you think that a paper windfall which is not reinvested deserves a windfall tax I would say that a paper windfall which is reinvested also deserves a windfall tax. As I said in my statement, if you want to subsidize new investment in energy, you should do this for all investors not merely those who make such investments out of "paper windfalls."

The CHAIRMAN. Senator Haskell.

Senator HASKELL. Thank you, Mr. Chairman.

Mr. Brannon, I think the scenario you present has considerable logic; that is, that, come August—the Congress, in the context of whether we keep the lid on old oil—the Executive comes out ahead. And I think your suggestion is very ingenious, as to how to deal with the substantial economic consequences.

However, my question to you really is, given your druthers, and forgetting the scenario ahead, from an economic viewpoint solely, would you prefer to have the scenario set forth in your paper take place, or would you prefer to see the oil situation dealt with as it is being dealt with today? My question is meant to be looked at strictly from an economic viewpoint.

Mr. BRANNON. I would certainly want to go in the direction of the scenario that is written out here in the paper.

Senator HASKELL. I grant you a rebate to consumers. You feel that way despite the fact that certain people will be impacted more heavily than certain other people by the increased price of fuel products?

Mr. BRANNON. Yes.

Senator HASKELL. Thank you very much. I have no further questions.

Mr. BRANNON. If I could say one general thing about that, sir, it does seem to me in our society, that we continuously fall into this problem of confusing prices and incomes. In our farm policy, for example, we have for a long time talked about wanting to help farmers by increasing the price of their products. Now this is a peculiar way to help farmers. It says, the bigger the farm is, the more massive it is, the more it benefits from price support. There is very little help for low income farmers here, very little encouragement to increase farm production here. Looking back over our experience, this is why we have made agricultural labor so unprofitable and caused such mass migrations in the cities. If you really are concerned with the fact that some farmers have inadequate incomes, the Government has the ability to change their incomes, and increasingly, our farm programs have gone in the direction of dealing with incomes.

Now, in this oil situation, a lot of people are concerned that some low-income consumers would be badly off, if oil prices went up and gasoline prices went up; yes, they would. And you ought to deal with their incomes, their being too badly off. And it is silly to tell them, well,

we will let you have gasoline for half price, because then, the more gasoline you use, the more benefit you get. You are paying for my trips to my place in the mountains, and that is silly.

Senator HASKELL. I see your point. I just think that the impact will fall unequally on different people. I see your point; I think it is very ingenious; and I think there may be a great deal of merit to it; and I appreciate it.

Mr. BRANNON. You might structure it to make the refunds higher in colder climates. You have a lot of staff resources to look at different—

Senator HASKELL. How about higher altitude?

Mr. BRANNON. Higher altitude; that is all right.

Mr. HASKELL. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Byrd.

Senator HARRY F. BYRD, Jr. Thank you, Mr. Chairman.

I just have one question, Dr. Brannon. You say that it is madness to hold down the price of oil. From the point of view of the consumer, why is it madness to hold down the price of oil?

Mr. BRANNON. Notice the approach of the President's proposal on energy last January. It was to find out what is the average increase in cost the consumers would pay if you let the price of oil go up. And he found this average at different levels of income. And he said, let's give each of these families that much money, so that on average, they would be just as well off as they would be with lower prices. Once you have done that, each consumer faces the choice that if he drives another mile, it is going to be more expensive by the real cost of gasoline. If he keeps his house two degrees warmer, it is going to be considerably more expensive. He would be facing the full marginal cost for using that oil.

When you help him, by keeping the price down to \$8 instead of \$12, each consumer gets a benefit of \$4 for every barrel of oil he uses. If he uses 100 barrels, this benefit of lower prices is \$400. If he really sacrifices and goes without using oil, he gets no benefit at all.

It is rather conspicuous in the whole business of conservation, a fellow really does save the United States—a business firm that figures up some way to reduce oil consumption really saves the United States \$12 by not using a barrel of oil. But when the price is \$8, he saves himself only \$8. He loses this \$4 that you thought you were giving him. In effect, you are paying him to use oil. That has to be madness.

Senator HARRY F. BYRD, Jr. Thank you, sir.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

[The prepared statement of Mr. Brannon follows:]

STATEMENT OF GERARD M. BRANNON, DEPARTMENT OF ECONOMICS,
GEORGETOWN UNIVERSITY

Mr. Chairman and Members of the Committee, I appreciate this opportunity to testify on energy legislation. I am appearing both as a representative of Taxation With Representation and as a student of the subject who has written books and articles on energy prices and taxes.

Energy policy has been an uncommonly tough political issue. I will address the central political problem which is the price of petroleum products. This is the hard nut that the United States has refused to crack. Specifically I will:

Argue that we need substantially higher prices for petroleum products;
Show how the undesirable side effects of higher oil prices can be controlled; and

Argue that if the Congress does not deal systematically with these price issues, fate will deal with them chaotically.

THE NEED FOR HIGHER OIL PRICES

The need for higher oil prices can be seen most clearly by considering separately the demand and supply aspect of price.

On the demand side, the hard fact is that it costs the United States about \$11 to import another barrel of oil. More oil use means more imports, since imports are the variable, i.e., the marginal supply. In this situation, it is inefficient to use oil in ways that are not worth \$11 to the user.

This is why we talk so interminably about conservation, but talk is a stupid way to conserve. Should we add more insulation to our homes? Certainly we should *not* when an extra \$100 worth of insulation saves only \$1 of oil a year. This is wasting insulation and the labor and material that goes into it. But we *should* put in more insulation than just pays for itself at the present low controlled price of oil. The efficient answer is that we should insulate as much as would pay for itself if oil cost \$11 a barrel. At present, how are we finding out how much that is? We rely on a bunch of bureaucrats in FEA and on stupid proposals to grant tax credits for insulation.

Our business system is a remarkable means of getting the most out of resources if it knows the true resource prices for commodities such as oil. But when prices are distorted, the system is going to operate inefficiently. It will overuse cheap resources and we will in a futile way rely on bureaucracies like FEA to cope with the resulting problems.

The other side of the price process is that when the U.S. must pay \$11 at the margin for imported oil, it is efficient to use substitute fuels that have an oil equivalent cost up to \$11. When we artificially hold the average oil price to something like \$8, then we make it uneconomic to utilize liquified coal or solar energy with oil equivalent prices of \$10.

This nonsense is of course, the excuse for more bureaucracy and tax benefits. Since we won't pay, in the market place, the cost of marginal efficient oil substitutes, we concoct alternative incentives which are less efficient.

These points that I have made may sound like a pesky economist carping at esoteric points of technical efficiency. But they are far more than that. These points show that present energy policy adds up to continued high demand for imported oil. Imports will stay high because we refuse to rely on price to cut demand, and are equally reluctant to rely on price to stimulate development of substitutes. This is disastrous public policy, because the high demand for imports is a continuing drain in our balance of payments. Even more importantly, it is an invitation to OPEC to raise the price of oil even further.

OPEC is a business operation. In business the only reason for not raising prices still more is loss of business. In the oil case we are protecting the American consumer from the OPEC price and we are preventing potential substitute fuels from competing with the OPEC product.

Fatuous customers like this are a cartel's dream. Of course, OPEC will raise the price for oil. A thousand Fords and Kissingers will make no difference. The only reason for a cartel not to raise price is loss of business, and we are doing little to cause OPEC to lose business.

HOW TO MEET THE DRAWBACKS OF HIGHER PRICES

Why does the United States persist in this madness of holding down the oil price? We think that higher prices provide windfalls to producers who were ready to do business at the old price, and we think that higher prices impose burdens on consumers.

As to the windfalls, this can be dealt with very easily. Notice that from the standpoint of the producer a price control law is just like a tax. A producer is indifferent between a rule that says he must sell an \$11 barrel of oil for \$5.25 and a rule that says he can sell it for \$11 but must pay a windfall tax of \$5.75 per barrel.

Very clearly there are a variety of ways that we could impose a windfall tax. I will say more about specifics later. At this point I will limit myself to the logical argument that the present system of price control could be converted to the lock, stock and barrel, into a tax with no different impact on producers of oil than the present price control system.

With this point about the identity, so far as producers are concerned, between a windfall tax and price control, let us turn to the other bad side effect of higher prices, the burden on consumers.

If we used a windfall tax instead of price control, government receipts would rise as much as consumer payments for oil at the higher prices. Government could then use the tax proceeds to make payments to consumers which in aggregate would offset the price increases.

The crucial words are "in aggregate." Controlled low prices offer a benefit to consumers which is available in proportion to their purchase of oil products. The more low price gasoline the consumer burns, the more benefit he gets. The Cadillac owner gets more benefit than the bus rider.

This is madness. Because I own a house in the mountains I drive more than average. It is absurd for the government to subsidize my luxury.

If you raised the price of oil products, taxed the windfall, and used the proceeds to make payments to the public that didn't increase with their use of oil products, we would have the basic structure of a rational energy policy:

Consumers at the margin would be confronted with the real price of oil in deciding whether or not to make marginal purchases.

Consumers on the whole would find the cash rebates offset the added cost of oil.

Producers of oil substitutes would be encouraged to press forward with production because the competitive product, oil, would not be selling at an artificially low price, thus driving substitutes off the market.

SOME SPECIFICS

If you adopt this way of looking at the energy price problem, most of the problem will be solved. You must get away from the madness of thinking that the way to help consumers is with lower prices. You can help consumers with money. Prices need to serve their economic functions of indicating the relative cost of the resources we consume.

Obviously, within the broad strategy of higher prices, windfall taxes, and consumer rebates unrelated to oil consumption, there are many alternatives. Your staffs and the Treasury staff can give you much help. I will offer only a few comments here.

WINDFALL TAXES

The Treasury's windfall tax proposal drew no distinction between receipts from old oil and from new oil. I think price control provides too much difference in the treatment of those receipts, but I would keep some distinction between the tax on new and old oil. In my view, the windfall tax should be a little higher on old oil. Furthermore, the definition of old oil could be improved. I call your attention to suggestions by Charles Schultze, Arthur Okun, and myself in testimony before the Ways and Means Committee.

In no case should any consideration be given to "plowback" rebates of a windfall tax. With higher market prices for oil, I see no need for energy investment subsidies. If you think they are needed, then it is insane to structure them so that they are only available to companies that already get windfall profits from oil. This only encourages oligopoly in oil. The only reason to suggest plowback is to solicit campaign contributions from oil companies. If you want energy investment subsidies, give the subsidies to all investors, not just people with windfall profits in oil.

Import Taxes

Taxes on imports are not sensible. Since imports are the marginal supply, a higher price for imports due to an import tax raises the price of uncontrolled U.S. oil. This creates more producer windfalls. The total increased price to consumers is more than the government's tax revenue, so an import tax can't finance compensation to consumers hit with higher prices.

Coal Prices and Incentives

You should recognize that higher oil prices will cause some increase in coal prices. A minimum response to this would be to repeal percentage depletion for coal. Percentage depletion is a completely insane producer incentive. With the net income limitation, it provides the biggest incentive for the most profitable coal property, the one that would have been worked even without the incentive.

Percentage depletion is useless for marginal production, and to increase coal output we need marginal production. Higher prices will help to increase production from marginal mines; percentage depletion will not.

Higher Prices

We have already wasted almost two years since the dramatic increase in world oil prices. Nevertheless, a very sudden further increase in the oil price has a potential for unexpected ramifications that could upset the very tentative signs of the end of the current recession. One can make a plausible argument for moving with some moderation to decontrol with appropriately modified windfall taxes and rebates.

The Ways and Means Committee believed that it would be wise to structure this moderate move to higher prices by concentrating the increase on gasoline prices. This strategy is not to my taste, but it is plausible.

Rebates

The administration proposal of last winter had an intricate structure of rebates, partly cash payments to non-taxpayers, partly tax reductions for taxpayers. I think that the strategy will be more easily understood by the public if the rebate system is simpler than what the Administration proposed at that time.

I would suggest that the law should require the Bureau of Labor Statistics to publish two cost-of-living indexes: one as constructed now and one without those price increases for which consumers have been directly compensated through rebates. The law should also state that all contracts providing income adjustments for cost-of-living increases should be interpreted as relating to the index that excludes compensated price increases.

Tax Benefits in the House Bill

I would drop all the nonsense in the House bill that creates new tax benefits, such as the insulation and solar energy credits, to offset defects in the price system.

THERE IS NO TIME TO WAIT

You may decide that all my testimony to this point sounds pretty good, but that it offers a complicated plan that will be hard for the public to understand. You may therefore prefer to bumble along as we are doing now.

I submit you don't have that option.

It is widely anticipated that OPEC will raise the oil price in the fall. I predict it will keep on raising the oil price until the higher prices cause them to lose too much business. As long as we insulate the U.S. market from those prices, we are being patsies for the cartel, because we are refusing to take effective steps to reduce the U.S. business done by the cartel.

There is also a more immediate problem. The oil price control law expires this summer. There is no evidence that this Congress can pass an extension over an expected Presidential veto. We could therefore get the worst of all possible worlds: A large oil price increase, with no windfall tax and no effort to compensate consumers for lost purchasing power. That result will plunge us back into recession.

I urge this Committee to act in a responsible way. In lieu of the irresponsible House bill, you should write a bill that provides:

1. Higher oil prices,
2. Windfall taxes, and
3. Consumer rebates unrelated to oil consumption.

The CHAIRMAN. Next, we will call Mr. Richard Scudder, chairman of Garden State Paper Co.

STATEMENT OF RICHARD B. SCUDDER, CHAIRMAN OF THE BOARD, GARDEN STATE PAPER CO., INC.

Mr. SCUDDER. I appreciate this opportunity, Mr. Chairman.

My name is Richard Scudder. I am chairman of the board of the Garden State Paper Co., Inc., of Garfield, N.J., a firm which I founded in 1961, after participating in the invention of a process by which old

newspapers could be deinked and recycled for the manufacture of newsprint. We presently operate mills near New York, Chicago, and Los Angeles and are building a mill in Mexico in partnership with an agency of the Mexican Government.

It may seem like a considerable jump from oil and its attendant problems, to newsprint and tax incentives, until you realize that our newspapers are more dependent on imports than users of oil will ever be, under the pessimistic forecast that you have heard here today. And until you realize the adverse balance of payment for newsprint is \$2 billion a year.

Garden State makes newsprint entirely from waste newspapers, and together with its associate FSC Paper Corp., produces some 450,000 tons of newsprint per year, which is about 11 percent of the newsprint production in the United States, and which accounts for the consumption of about half a million tons of wastepaper a year.

We would like to produce double that amount and retrieve from the municipal solid waste stream additional thousands of tons of wastepaper. To achieve this objective, three new mills would be constructed. Each mill would be capable of producing 150,000 tons of newsprint per year. Each of these mills would cost in the neighborhood of \$75 million, for a total capital expenditure of \$225 million.

I will explain briefly why the foregoing objective has national significance; how this objective may be achieved; and how our proposal for accomplishing the objective resolves questions that were raised against a different recycling tax credit proposal in the house.

The United States is dependent upon foreign sources for nearly 70 percent of its newsprint supply. This means that this great, sensitive, and vital industry, the newspaper business, is totally dependent for its survival on foreign sources. The adverse impact upon the U.S. balance of international payments at \$260 a ton, up from \$165 in 1972, is nearly \$2 billion. The Commerce Department forecast a 5-percent per year increase in U.S. newsprint requirements, and this rate of increase, which was halted in the present recession, will probably have validity when the economy begins its upward turn.

New facilities are needed. Canadian mill executives met last spring, in April, with other foreign producers, to discuss the world price of newsprint. They have forecast increases in prices up to \$300 a ton in 1976. If the threatened strike of Canadian newsprint mill workers occurs, as expected, we may have \$300 per ton newsprint by the end of this year.

We should begin to take steps to protect American newspaper publishers from shortages, rising prices, and the constant threat of strikes by Canadian mill and transportation workers. We should also do what we can to lessen our dependence on foreign sources and to improve our balance of payments.

We must also provide economically viable, stable, permanent markets for substantial amounts of recyclable raw materials. This could mean that communities which supply recycling mills with used paper could reduce the cost and burden of garbage disposal by adopting profitable newspaper recovery programs.

It is vital that the United States stimulate the construction of productive facilities. In no other way can this country pay for the social services it would like to guarantee to all of its citizens.

Our proposal would provide income tax incentives, in the form of a tax credit of \$10 per ton, for increasing recycling of postconsumer solid waste materials in the manufacture of products for which the United States is more than 50-percent dependent on foreign sources. To avoid one criticism voiced in the House, the tax credit would not apply to recycled materials required in the operation of existing facilities. The tax credit would apply only to recycled materials used by a new mill built after the enactment of authorizing legislation. The proposal places a limitation or ceiling upon the aggregate amount of the tax credit which may be claimed. The aggregate of the tax credit would not exceed 15 percent of the total cost of the manufacturing facility. The tax credit, however, would be in addition to the existing investment tax credit of 10 percent and would apply to buildings as well as machinery and equipment.

There were serious and unanswered questions in the House concerning the cost and potential benefits of the former tax credit proposal which was stricken from H.R. 6860.

The cost of our proposal and the benefits which would accrue may be readily computed. For example, in the case of a new newsprint mill costing \$75 million and having a capacity of 150,000 tons of newsprint per year, the tax credit would aggregate \$11,250,000, which is 15 percent of \$75 million, the total cost of the mill.

The tax credit would be earned at the annual rate of approximately \$1,650,000. This is computed on the basis of \$10 per ton for the 165,000 tons of used newspapers per year which is required in the production of 150,000 tons of fresh newsprint. Thus, the total amount of the allowable tax credit could be claimed in 7 years from the date that the mill was fully operational.

This loss of tax revenue would be recaptured by the Treasury in substantial part through increased employment, and the taxes that would be paid from profits of the new facility. Nor should we overlook annual savings of \$45 million in the balance of payments account for each mill's output computed on the basis of \$300 per ton for Canadian newsprint.

Opponents of the recycling tax credit eliminated from the House bill estimated that increased recycling of only 2 or 3 percent would have resulted from its provisions. Our proposal, if carried through, would result in an increase of 22 percent in the recycling of old newspapers nationally. The actual recycled tonnage could be increased from 2,200,000 tons annually to 2,700,000 tons from the efforts of only one company when the three mills it proposes to build are in full operation. Many other mills might be built.

We have no estimates on the total effect upon recycling that would result from the adoption of the recycling tax credit proposal we have discussed in this statement. We do urge, however, that a realistic approach must be taken to make recycling of valuable waste material resources a viable enterprise. We believe that our proposal, if adopted, would be a good start. The details of our proposal are contained in the attachment to my statement.

I will be pleased to answer any questions, and thank you.

The CHAIRMAN. Are there any questions, gentlemen?

Senator GRAVEL. Yes. I just want to go on record that I am very, very strongly in favor of a tax incentive for recycled materials. That

would include paper. And I will be offering amendments within the committee to the bill, to reinstate what the House Ways and Means Committee tried to do.

However, I find myself just having a few questions in the area. I will try not only paper but ferrous metals, glass, anything that can be recycled. We are derelict in our duty not encouraging it to be recycled.

The two exclusions that you have that disturb me are, one, it only qualifies if it were 50 percent dependent upon a foreign source. I would hope you could take a more global view to the problem of energy. If it saves energy to recycle certain products, we ought to do it extraneous to national boundaries. So I would not have that kind of an exception to it. Would you have any comment on my position?

Mr. SCUDDER. Well, almost all recycling efforts do, in fact, save energy. It is true of paper and aluminum, and steel, and rubber, and everything else I know of. The proposal here, at least in part, is to meet objections of the Treasury.

Senator GRAVEL. How does the national 50 percent foreign solve an objection of Treasury?

Mr. SCUDDER. Because of the burden of an adverse balance of payments.

Senator GRAVEL. What about the burden on the environment, cutting an excess number of trees. And I say this as a person who represents a resource State here. We do not have much paper in Alaska to recycle, but I just think it is immoral to waste what nature has given us on this planet. So, why should we put a regional or a national boundary to it? If it is something we should do to be more efficient, why should we not do it on that basis? Why do we have to tie it to a foreign country? If there is going to be benefits of balance of payments, there are also going to be benefits in energy.

Mr. SCUDDER. I agree with that, and with other recycling too. It has seemed that this kind of proposal has been before Congress for some number of years, and there has been no success in getting enactment of such laws. And this is, as we say, a start. This is a section in which there is this additional, to me, very significant plus that you also do reduce the balance-of-payments deficits.

Senator GRAVEL. Maybe your start is much too humble. We will try it at a little higher level.

The other point that I wonder about is, you have this incentive only for existing—for mills that will now be constructed. What about a guy who has been laboring in the vineyards? He really hustled, built this plant, and then has been suffering an economic detriment all of this time, and all of a sudden, now comes the Congress with its beneficence, and it just going to give it to the guys that will now go do it. What about the guy that already is already recycling paper? Do you not think he should have an advantage, if we are going to give an advantage to this industry?

Mr. SCUDDER. Well, I am one of those poor fellows, Senator. We have been doing this for 10 years.

Senator GRAVEL. Do you not think you should begin to get an eco-

conomic advantage to not only do new stuff, but to give what you are doing already an economic advantage, so we will do more recycling?

Mr. SCUDDER. I think it will be very pleasant, but the windfall argument has been raised against it—that here you are, already doing this—

—Senator GRAVEL. What would you do, supposing—you say you have a plant. Now what will you do if we turn around and give an advantage to a ton of paper to be recycled? It is going to have an economic advantage. What are you going to do? You are going to expand the production of your plant; are you not?

Mr. SCUDDER. We might very well.

Senator GRAVEL. OK, would you do that, or would you go out and buy yourself another Cadillac? What would you do?

Mr. SCUDDER. No Cadillacs.

Senator GRAVEL. Well, you would now, for the first time, begin to enjoy standing in the sun in the marketplace. So are we to assume that everybody now is going to go out and deal conspicuous consumption? Or are they going to do what they have been doing for 10 years and do it better?

Mr. SCUDDER. Once again, with the experience that the Treasury Department has objected strenuously to—

Senator GRAVEL. Sir, you are not testifying before the Treasury Department; you are testifying before the Congress. Maybe they will have hearings down there, but—

Mr. SCUDDER. What we are trying to do is to combine an incentive to build new productive facilities, because without productive facilities, nobody can live.

Senator GRAVEL. The other point—this \$10 a ton that you have—the House had a figure of 10 percent, which probably amounts to paper for about \$2 a ton. And that \$2 is not sufficient incentive to do the job, at least for the paper that does get mixed up in the trash. Computer paper and newspapers, they are easy to collect. But would the \$2 be sufficient to at least handle the easy collection of paper, or do we have to go more than \$2 a ton?

Mr. SCUDDER. I do not think \$2 would be sufficient, sir. We avoided the percentage simply because it is an extremely volatile market, and waste paper can be bought for \$6 a ton now. It was \$70 a year ago.

Senator GRAVEL. Have you figured out what the competitive advantage is for capital gains treatment on virgin timber? What level, or what does that translate to in dollars per ton?

Mr. SCUDDER. I do not know, sir.

Senator GRAVEL. Could you secure that for the committee?

Mr. SCUDDER. I believe it is available, yes, sir.

Senator GRAVEL. All right. Will you get it for the committee, and then communicate with my office personally, since we are drafting legislation in this regard. I think if we went right to that, we could rationalize a difference from other advantages to other recycling material.

Mr. SCUDDER. Yes, sir.

Senator GRAVEL. Thank you very much.

Thank you, Mr. Chairman.

[Mr. Scudder subsequently submitted the following material:]

COMPETITIVE IMPACT OF TAX BENEFIT FOR VIRGIN WOODPULP ON WASTE PAPER RECYCLING INDUSTRIES—JULY 16, 1975

This statement is prepared in response to the request of Senator Gravel for information on the competitive advantage of present capital gains tax treatment of virgin timber.

The Environmental Protection Agency's Second Report to the Congress (March 26, 1974), includes a discussion of the subject of tax benefits for the virgin material industries.

The following statement is found on page 30 of the report :

"Capital Gains Treatment. For most corporations, property held and then sold in the ordinary course of doing business is subject to ordinary income taxes at the time of sale at the maximum rate of 48 percent. But income received from the sale of timber is subject instead to capital gains tax treatment. This special allowance for the sale of timber reduces tax payments from the ordinary 48 percent rate to the 30 percent capital gains tax rate."

The capital gains tax treatment of virgin timber is not the issue in pursuing objectives for increasing paper recycling capacity. The basic problem is to raise substantial sums of money to build necessary productive capacity in a vital industry that has a significant impact on the national economy.

Funds in the magnitude of \$75,000,000 per mill or \$225,000,000 for three mills are not available on a long term (15 to 20 years) basis at interest rates that are compatible with the relatively low rates of return on investment. Preliminary data based upon an EPA report by Arthur D. Little, on the process economies of the pulp and paper industry, indicates that for new investment (with only rare exceptions) return on investment for virgin mills is from 1 to 15 percentage points greater than that for secondary fiber mills. However, a recycling tax credit of \$10.00 per ton for waste paper consumed by a mill in the manufacture of new paper products would make the return on investment for secondary mills competitive with virgin mills and can result in more favorable financing terms than now exist and a substantial reduction in the overall cost of financing the mill.

A tax credit proposal which embodies these features could result in the construction of 25 to 30 new paper recycling mills over the next decade, with an investment value of approximately \$1 billion dollars.

Garden State Paper Company, for example, would have in operation and/or under construction at the end of 5 years at least 3 new 150,000 ton newsprint recycling mills. This would double present capacity and would provide a market for additional thousands of tons of used newspapers. There would be undoubtedly, comparable capacity increases in recycling mills that produce paperboard, boxboard, corrugated medium and other recycled paper products.

A tax incentive measure such as we propose, designed to increase investment in paper mill capacity, has the potential of increasing the recycling rate for paper from the present level of approximately 22% to around 26% and perhaps higher. This projection is based upon a report for the American Paper Institute by Midwest Research Institute and on preliminary data being developed by the Environmental Protection Agency. The API report indeed suggests that without an economic incentive the recycling rate for paper could drop to 17 percent by 1985. The increased recycling rate which would result from our proposal would mean roughly 20 million tons of additional paper recovered over the 1975 to 1985 period. According to EPA data, if the recycling rate increased to 30 percent, which we believe is entirely plausible, there would be 40 to 45 new waste paper using mills, or nearly 40 million tons of additional paper recycling over the decade.

The \$10.00 per ton recycling tax credit for paper derives from studies that have been made in the past few years to determine the potential that exists for recycling waste paper. These studies discuss the need for economic incentives if paper recycling rates are to be increased to what is reasonably considered to be feasible. Based upon these studies the paper industry has concluded that a \$10.00 per ton recycling tax credit would be needed to achieve feasible paper recycling objectives. EPA data support these conclusions.

RECOMMENDATION FOR PAPER RECYCLING TAX CREDIT PROPOSAL

To achieve the objectives for increasing recycling of post-consumer waste paper a tax credit must be tailored to the unique circumstances of waste paper as distin-

guished from other recyclable materials in the post-consumer solid waste stream, including residential and commercial solid waste.

According to EPA, paper represents 53 million tons of the 69.8 million tons of post-consumer solid waste. Glass is second in volume with 13.5 million tons followed by textiles, 1.9 million tons; aluminum, 1.0 million tons; and other non-ferrous metals, 0.4 million tons. Waste paper prices fluctuate widely, and are at the very bottom of the pricing scale ranging from \$6.00 per ton to as high as \$70.00 per ton. This compares with prices of aluminum scrap and other non-ferrous metals which range upwards from \$400.00 per ton. That is why a flat \$10.00 per ton tax credit for paper meets the unique requirements of the paper recycling industry but may not fit the needs of other waste material recyclers.

To make a \$10.00 recycling tax credit effective in helping to achieve objectives to increase paper recycling, the tax credit must be applied to the expansion of existing facilities or to the construction of new plants. This limitation on the application of the tax credit will reduce the cost of the tax credit provision substantially and at the same time will substantially increase necessary productive capacity.

The proposal follows:

PROPOSAL TO PROVIDE INCOME TAX INCENTIVES FOR INCREASING WASTE PAPER
RECYCLING

Definitions:

1. *Processed*.—The term "processed" means repulped, defibred, or otherwise subjected to a treatment that alters its composition or physical properties. The term does not include conversion processes consisting merely of sorting, shredding, and packing for storage and shipment.

2. *Post-consumer waste paper*.—The term "post-consumer waste paper" means paper, paperboard, or other fibrous product that has gone through its useful life, served the purpose for which it was intended, and been discarded by the user. Such term does not include waste or scrap:

- (a) Created in a manufacturing or converting operation, or
- (b) Recovered outside the United States.

Proposal

1. Allow a tax credit in the range of \$10.00 for each ton of post-consumer waste paper processed in the United States by the taxpayer during the taxable year, into new commercially marketable pulp, paper, paperboard, and other similar products.

2. The tax credit allowed may be used by the taxpayer only for the purpose of expanding existing paper recycling capacity or in the construction of new paper recycling facilities.

3. If the amount of the credit for any taxable year exceeds the liability for tax for the taxable year (an unused credit year) the excess shall be treated as:

- (a) a recycled waste paper credit carryback to each of the 3 taxable years preceding the unused credit year, and
- (b) a recycled waste paper credit carryover to each of the 2 taxable years following the unused credit year.

4. The aggregate of the tax credit allowed the taxpayer under the provisions of this paragraph may not exceed 15% of the total cost of the proposed capital expansion, including machinery, equipment and buildings, but excluding land and site preparation costs.

The CHAIRMAN. Senator Haskell.

Senator HASKELL. Thank you, Mr. Chairman.

Mr. SCUDDER. I guess this shows what the horserace is. I think your proposal is undoubtedly a very worthy thing, but I suppose I should express myself, in view of the fact that I think that percentage depletion ought to be eliminated entirely. All members of the committee are not unanimous on that. In view of the fact that I think that capital gains on timber ought to be eliminated, I do not believe that I could go along with another subsidy to another industry. I just thought I ought to make myself clear.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Byrd.

Senator HARRY F. BYRD, Jr. Mr. Scudder, two of your associates are very close and dear friends of mine, Tennant Bryan and Alan Donahoe, of Richmond, Va.

In reading your testimony, I am not clear as to whether this tax credit would be taken in 1 year, or taken over a period of several years—is that the way?

Mr. SCUDDER. It would be over several years; yes, sir.

Senator HARRY F. BYRD, Jr. Seven years?

Mr. SCUDDER. Presumably, it would be 7 years.

Senator HARRY F. BYRD, Jr. Why 7? Why not 5, or 10?

Mr. SCUDDER. Only that the mathematics work out that way under the formula we have proposed.

Mr. DRANCE. And based upon the consumption of a mill, the \$10 credit applies to each ton that the mill would consume, so that a 150,000-ton capacity mill—

Senator HARRY F. BYRD, Jr. Each ton of old newsprint that a mill would consume—not the amount that the mill would produce?

Mr. SCUDDER. That is correct.

Senator HARRY F. BYRD, Jr. What is the difference between the cost of the regular newsprint, you might say, and the recycled newsprint?

Mr. SCUDDER. Recycled newsprint is somewhat cheaper, \$10 a ton, \$5 a ton, depending on where it is sold.

Senator HARRY F. BYRD, Jr. And with \$265 newspaper?

Mr. SCUDDER. \$260; yes, sir.

Senator HARRY F. BYRD, Jr. \$260, that is not a tremendous difference in price, then, is it, to the consumer?

Mr. SCUDDER. No; it is not.

Senator HARRY F. BYRD, Jr. How many recycling mills are there for newsprint at the present time?

Mr. SCUDDER. There are three. The construction of another is contemplated in Virginia. One is being built in Arizona; one is contemplated in Georgia.

Senator HARRY F. BYRD, Jr. I guess what I really meant is, how many different companies are involved? You are the pioneer in it, as I recall.

Mr. SCUDDER. We are the only company.

Senator HARRY F. BYRD, Jr. Are you the only company?

Mr. SCUDDER. That is able to make newsprint completely from waste paper. There are others who choose waste paper as a partial furnish. We believe that these incentives would lead to other companies who have newsprint mills and other mills to use waste paper, instead of trees.

Senator HARRY F. BYRD, Jr. You mentioned that American newspapers are dependent on foreign sources for 70 percent of newsprint. I guess most of that comes from Canada, the 70 percent?

Mr. SCUDDER. Almost all comes from Canada today. But there was an important instance of what can happen last year, when the Scandinavian countries just unilaterally withdrew, regardless of contracts or anything else, from the American market. They do not sell paper in the American market any more. The newspapers who were dependent on those supplies were in a very difficult situation.

Senator HARRY F. BYRD, Jr. The price escalated almost as much as the price of oil.

Mr. SCUDDER. Yes; it did.

Senator HARRY F. BYRD, Jr. At least it seemed that way to a lot of newspaper publishers.

How do you judge the newsprint production now? Is it relatively stable? And what do you look for in the near future?

Mr. SCUDDER. We look for shortages again in a year or two, Senator.

Senator HARRY F. BYRD, Jr. At the present time, I take it that there is not a shortage. In fact, there is a very heavy inventory.

Mr. SCUDDER. The shortage ended in December, with a violent switch, and there is a surplus of newsprint at the moment.

Senator HARRY F. BYRD, Jr. Is that because the publishers have taken steps to reduce consumption?

Mr. SCUDDER. That certainly is part of it, but it also is a reflection of the recession, diminution of advertising.

Senator HARRY F. BYRD, Jr. When you speak of a shortage, are you speaking worldwide, or are you speaking insofar as U.S. publishers?

Mr. SCUDDER. I think it is a worldwide shortage, sir.

Senator HARRY F. BYRD, Jr. It will be a worldwide shortage?

Mr. SCUDDER. Yes, sir.

Senator HARRY F. BYRD, Jr. And you think that will come about in 18 months or 2 years?

Mr. SCUDDER. The forecast is for an annual increase of 5 percent in use, but the capital costs of building a mill are such that nobody is very anxious to build one. So there is no real prospect of increased production, but there is a very real prospect of increased need.

Senator HARRY F. BYRD, Jr. You mean the mills are now producing at capacity?

Mr. SCUDDER. They were in November, December, October, and were unable to meet demand. We think that situation will recur in 1976, even without further growth in their business, in the development of new papers and small papers, where most of the growth has been. I do not see who is going to furnish the paper for that growth.

Senator HARRY F. BYRD, Jr. Do you anticipate the growth will come about largely because of improved economic conditions?

Mr. SCUDDER. Yes, sir.

Senator HARRY F. BYRD, Jr. Thank you, sir.

Now Senator Fannin is not able to be here. He has another committee meeting simultaneously with this one, and he cannot be here, but he has six questions which he would like to have answered for the record. I would assume that would be satisfactory to you?

Mr. SCUDDER. Yes, sir. I should say so.

Senator HARRY F. BYRD, Jr. Thank you, Mr. Scudder.

[Senator Fannin's questions, with responses, follow:]

QUESTIONS FOR RICHARD B. SCUDDER FROM SENATOR FANNIN

Question. If you plan to build new mills, why don't you begin now? Why is a tax credit incentive needed when it is apparent that a market for your product seems to be assured?

Answer. The combination of high capital costs and high long term interest rates make the return on investment unattractive.

Question. How does a tax credit that is earned after a mill commences operations affect your ability to obtain capital financing now to begin construction of a rather expensive project?

Answer. The guaranteed return affects the pro forma financing statement in a favorable way so that financing would become more readily available and at lower rates.

Question. Your proposal is rather attractive, and we would like to know whether in your judgment the recycling industry generally could obtain more favorable financing for new plants in anticipation of future tax credit increments.

Answer. We believe it could.

Question. How do you arrive at the figure of \$10.00 per ton as the amount of the tax credit you feel you need to build mills?

Answer. The \$10.00 per ton tax credit is the result of a mathematical study aimed at achieving a financial return adequate to attract new capital.

Question. Are you inferring on page 2 of your statement that we have an international newsprint cartel that is seeking to set and to control newsprint prices?

Answer. There may be such a cartel. We have no direct knowledge of its existence or operations.

Question. Would a loan guarantee program achieve the same objective of allowing you and other industry people to develop and construct recycling facilities.

Answer. A loan guarantee program would help only to the extent it resulted in a reduction in the cost of borrowing from financial institutions. Since most large companies can borrow short term at or near the prime rate and long term at the lowest competitive rate, a guarantee will not help them to finance a new mill. Its help would be limited to companies not otherwise able to borrow, but since even the lowest long term rates presently available, when applied to current costs of constructing a paper mill, make the return on investment unattractive, guarantees which can only reduce rates to those levels may not be very helpful.

A program under which the government would loan money at moderate interest rates would, however, be helpful in a major way. Such loans might be limited to the financing of facilities whose production would benefit the U.S. in such ways as reducing our adverse balance of payments, elimination of dependence on foreign sources, elimination of national problems such as disposal of solid waste, or other objectives that might seem to serve the national interest.

The CHAIRMAN. Those questions were developed by Senator Fannin, who is necessarily absent, participating in another committee meeting—and I would appreciate it if you would answer those in writing. He would like to better understand your suggestions, and so would I.

For years now, I have been importuned to do something to help with the recycling of materials. The argument that has been advanced to me is somewhat similar to that which Senator Gravel was making. It was said that people in the scrap and recycling business are offered no tax advantage in any respect, while in other areas, there are tax incentives. For example, they would point out that, as Senator Gravel has indicated, that we are giving incentives to people in the tree farming business to plant land in trees and to grow it to its proper maturity and to harvest those trees in the proper way. And because it takes a long time to grow it, we permit them to have capital gains treatment for timber. And I do not expect to vote to repeal that. I expect to vote to keep it just exactly the way it is.

But they say, now it is a tax expenditure or a tax advantage that you gave these people, and their reason really is no better than it would be to encourage us to make better use of what we have. So that if you give us the same type tax treatment, if you equate our tax treatment with what they have, we think we could recycle a lot of vital materials.

Now, have you analyzed the relative tax advantages of capital gains treatment for newly harvested timber—compared to what you are asking for here?

Mr. SCUDDER. No, sir. Our objectives were not equalization so much there as it was incentives that would make it possible to go ahead with new production.

The CHAIRMAN. So it is your theory that you should have a tax treatment of \$10 a ton, I take it, based on your cost and what you think it costs to make the investment feasible.

Mr. SCUDDER. That is roughly what it is; yes, sir.

The CHAIRMAN. Now, what is the going price for a ton of newsprint nowadays?

Mr. SCUDDER. It is \$260 in the east, \$280 in the west.

The CHAIRMAN. I see.

Can you give me some indication about what you think the profit is on a ton of recycled newsprint?

Mr. SCUDDER. It has varied widely. It was somewhere in the neighborhood of \$20, I think, in 1974.

The CHAIRMAN. Well, I think you ought to give us the best documentation you can to show why you think that this is not adequate to permit the industry to expand and why you think that the additional \$10 would make it feasible. I personally think that you have got a good argument insofar as this would help with the balance of payments. And it would help us to clean up the environment, and help us to make better use of the resources that we have. But I think that you ought to try to document that \$10 of what it would take, the best you know how.

Mr. SCUDDER. I was distinctly wrong on the figure I gave you a minute ago. The profit per ton in 1974 was closer to \$5, but it will be considerably more in 1975.

The CHAIRMAN. That is a lot of difference, \$20 and \$5.

Mr. SCUDDER. Yes, sir, it is. I am not a good in-the-mind mathematician.

The CHAIRMAN. So was that your after tax profit?

Mr. SCUDDER. Yes, sir.

Now, one of the principal problems is that the interest costs that each ton of paper has to carry will be around \$60.

The CHAIRMAN. Now can you tell us—

Senator GRAVEL. Mr. Chairman, could I just ask one thing?

The CHAIRMAN. Certainly, in a moment.

How are we going to equitably administer a tax law where you get \$10 a ton tax credit, but you would not get tax credit for what you have now? In other words, what kind of equity does that make?

It seems to me that assuming someone opened a new mill to compete with you, it would be completely unfair that he would get a tax credit on every ton he recycled and you would be penalized for all that you had been doing. I do not see how we can make much justice or equity or uniformity out of a situation wherein a fellow who is doing something that we would like him to do gets no advantage for that, but some newcomer in the field would get the full advantage of it. How can you justify that?

Mr. SCUDDER. It is addressed only to what we conceive as the national interest, the need for new productive facilities and the need to attack the balance of payments deficit. I am sure anybody that runs a mill would be delighted to get an extra amount of dollars per ton for what they produce. However, in our case, we built the mills we have on sound economic principles; we are content with them and are looking now toward the future and what we can do in the future. Inflation and the cost of money—it has been unbelievable; it costs

four or five times as much today to build a mill as it did only 3 or 4 years ago. And under that circumstance, help is needed; whereas, we built our first mill for \$9 million. To be sure, it was smaller; but today we are talking about \$75 million.

The CHAIRMAN. How long ago did you build your first mill?

Mr. SCUDDER. In 1961.

The CHAIRMAN. It has gone up that much in that short a period of time?

Mr. SCUDDER. Well, to be sure, the mills are bigger, but it has gone up dramatically, a multiple of times.

The CHAIRMAN. And if I understand your argument, in view of the fact that the argument was made on the House floor that this was a matter of rewarding people for doing something they were doing already, you want to make it clear that the only respect in which you would ask a tax advantage would be just insofar as you can expand production.

Mr. SCUDDER. Yes, that is correct.

The CHAIRMAN. Thank you very much.

Senator GRAVEL. Mr. Chairman, could I just follow on that, because that does rankle me a little bit. You have a plant in existence that cost you x amount of dollars. You are going to build a new plant under this device that will cost you, say $2x$. Now, if plant No. 2, which cost $2x$, can buy newsprint or can buy recycled paper at a \$10 economic advantage, and then plant No. 1, that you similarly own, cannot have that economic advantage, so it buys at y ; plant No. 2 buys at y plus a \$10 advantage. Now, when you have to repair plant No. 1, if a generator goes out in plant No. 1, it is going to cost you e . If the generator goes out in plant No. 2, it is going to cost you e , also. So how can you, in economic terms, testify before us and say that you are prepared to let that inequity exist? Because you have got one plant that will not, even within your own organization, will not be able to compete favorably plant No. 2.

Am I making a false assumption here?

Mr. SCUDDER. I think so, in part, Senator. These are depreciable expenses. Mills renew continually and are buying new equipment continually, while the allowance for depreciation never pays in a period of inflation for the new equipment you have to buy from it. It can come fairly close. You have the depreciation factor working equally in both mills.

Senator GRAVEL. Well, but if in the first mill you depreciate at a cost which is half of what your replacement cost would be, then your depreciation gives you no succor at all.

Mr. SCUDDER. Well, there is validity in what you are saying, in that nevertheless, when you go to build a new facility it is the return on your investment that counts. And the return on the investment of the old mills at a cheaper price can be considered adequate. The probable return on the investment of the new mill can in no way be considered adequate.

Senator GRAVEL. I grant you that. Now, we have got one injustice there that we are trying to correct because it is good. But I hate to see you take the public position, just to get it through the Congress, or think that you can get it through the Congress, by writing off an

existing inequity and being prepared to sort of bite the bullet on that. Because we can look at a problem straightforwardly, and I think the chairman recognizes it and I do. I think it is grossly unfair, whether it is you or another company, that they labor in the vineyard in a bad competitive situation and then all of a sudden there comes benefit, and what you do is you reward Charlie, that has never made an effort—in your case, you have—but never made an effort to get into the recycling business. What happens to the pioneers in this business? It is discrimination. Now, you happen to own two mills, but supposing an old gentleman who has a recycling mill has now got to compete with you. He has been in the recycling business and you build a new plant and he has an old plant. And you can now buy at a \$10 advantage. You are going to run him out of business, are you not?

Mr. SCUDDER. Well, in practical fact, no, I do not think so.

Senator GRAVEL. Why would you not? If you have a \$10 advantage per ton on him, then you are going to take away all of his customers—unless he is prepared to eat that in profit.

Mr. SCUDDER. This is a limited \$10. It is going to be eaten up in the interest costs and other costs of constructing this new mill. It is not going to come out in a competitive advantage in purchasing wastepaper.

Senator GRAVEL. If that is the case, should the competitive advantage not be what I asked—and that is, what is the tax advantage for virgin timber—and then tell us what that is and then we will give you the same thing so that you are equal in the marketplace. That is what we want to do.

Mr. SCUDDER. That is an interesting approach.

Senator GRAVEL. There is no other reason that we would want to help to give you a tax loophole—at least for me, I do not want to give you a tax loophole. All I want to do is give you the same weight boxing gloves that the other people have in that kind of affair. Because as the chairman pointed out, there is great energy savings in recycling paper, and that is what this bill is all about. So we want to save energy, and the way to do it is to make you equal in the marketplace. Now, you tell us what that equality is. So all you are saying is, we want \$10. We do not know what that \$10 means; I do not know what it means.

Mr. SCUDDER. Well, you see, like my predecessor, I am an economist, and I want to state to you a view that I think this country will have difficulty in surviving unless more of its capital is put into productive facilities. This is strongly oriented in the direction of leading people to build new plants.

Senator GRAVEL. Maybe if we made it—since you are talking about an interest of \$60 out of \$280, maybe we ought to make it \$20. Give us a rationale for that; that is what the chairman was asking. Tell us what that \$10 means—and also, since you are in the business, you tell us what the capital gains treatment for virgin timber is.

The CHAIRMAN. Well, Senator, if I might just interrupt, I think that from a practical point of view it is fairly easy to understand why the man is making such a modest request of the committee. The House treated him better, but he got knocked out on the floor. He would

just as soon settle for half a loaf, hoping this time it will stick in, then, and it will not be knocked out.

Senator GRAVEL. Maybe on the Senate floor we might have a greater deal of maturity and wisdom and they would accept something based on logic and not on something that is a tactical consideration.

Mr. SCUDDER. This is based on financial logic.

The CHAIRMAN. What would we be paying you if we gave you \$10 a ton on your existing facilities? On your existing production?

Mr. SCUDDER. Over \$5 million.

The CHAIRMAN. About \$5 million a year on your existing production. How do you arrive at that maximum?

Mr. DRANCE. The maximum was calculated to be 15 percent of the cost of the mill, which, added to the 10-percent investment tax credit, would provide a total tax benefit of 25 percent of the cost of the mill. This is the amount of money which it was determined was needed in the way of a tax benefit in order to obtain the kind of financing that makes a mill of this size a viable enterprise, taking into account the very costly financing rates that are available to companies such as we.

The CHAIRMAN. What would the maximum then be?

Mr. DRANCE. The maximum would then be, for each mill, \$11,200,000, representing 15 percent of the cost of the \$75 million, plus the 10-percent investment tax credit—or \$7.5 million. So if you add the \$7.5 million to the \$11.2 million, you then have, roughly, \$19 million.

The CHAIRMAN. I do not see why you have to—are you talking about the existing tax credit?

Mr. DRANCE. The existing tax credit.

The CHAIRMAN. Well, I do not see why you have to add that to costs that is there already. It seems to me that all the cost you are talking about is the cost of what you are asking for, the cost of the change in the law that you would be asking for. Now, what would that be? We are talking about the maximum cost.

Mr. SCUDDER. \$11 million.

The CHAIRMAN. Is that over 1 year or over a period of time?

Mr. DRANCE. Over a period of 7 years.

The CHAIRMAN. So you are only asking for what would amount to only, hopefully, only about \$1.5 million a year—what you think would then make it feasible to build how many additional mills?

Mr. SCUDDER. Three.

The CHAIRMAN. Three additional recycling mills.

Mr. SCUDDER. Right.

Senator GRAVEL. The problem there, Mr. Chairman, as I view it, is that they are basing their request on the cost of building their mill now. I would rather that we let the discipline of the marketplace do that, and you just tell us where the inequity in the marketplace exists. You see, what you are saying is, we need this to get the financing for the mill. While your company may have one problem, another company may have another problem, and another big conglomerate may not have the same problem of getting capital as you are getting. So we cannot sit here and hand out a goodie to you and one to them, knowing that they are unequal. What you have got to do is tell us what the market condition is, and if you are equal in the marketplace, then you go to the financial marketplace and you finance it on your own strength.

If you cannot do it that way, then you cannot look to us. We have made you equal in the marketplace.

The CHAIRMAN. Well, Senator Gravel is sympathetic to the problem, but in being very modest in what you are asking, you might have shown better judgment than the Senator realizes, because after all, the House was better to you, I take it, then you are asking for here, but they did not succeed either; that is, the House committee was more helpful to you than what you are asking for here.

Senator GRAVEL. I think that is not the case, Mr. Chairman. They only offered them \$2 a ton, is what they got out of the House committee. They lost that on the floor, so they are not being more modest. I think they are just approaching it from a different vector. And I am sympathetic to that vector. The only thing is, I would rather see the discipline of the marketplace—and you could help us with that, by just giving us what the difference is for the capital-gains treatment of virgin timber, and then, if that is \$12, if that is \$15, then we have got a logical posture.

The CHAIRMAN. Well, I am frank to tell you that in my personal judgment, when you are recycling paper, you really have a right to claim every bit as much tax advantage as one has in cutting new timber, because that is an item we have in short supply. We have to import a lot of it, and we have an unfavorable balance of trade with Canada. So that I really think that you have got a right to ask for every tax advantage that his counterpart has. And it might even be in the national interest for us to give you more than that, because we ought to try to encourage people to pick up all of this trash rather than leave it out on the streets and have it cluttering up the environment. And furthermore, we ought to make better use of resources.

Now, when we consider this proposal in the committee, we are going to be looking at it along with what it will cost to recycle aluminum, aluminum cans, and what the potential is for recycling glass and things of that sort. So, if we are going to do something in recycling, I would be inclined to do something for the recycling of paper as well as recycling aluminum. I do not know whether we ought to do anything about tin cans or not, but I hate to see them beside the highway, I know that. So that if we can do something, I think this ought to be considered, and I would hope that if we decide to try something in this area that the House Ways and Means members might be willing to take it back and have another try at it, if we go to conference with them, because personally, I think that recycling, particularly in certain areas—aluminum, paper, glass—has a lot of desirability and a lot of potential.

Senator HASKELL. Mr. Chairman, may I ask Mr. Scudder a question?

Is the competitive advantage in the capital gains treatment on timber? I was out of the room for a while.

Mr. SCUDDER. That is correct.

Senator HASKELL. If we eliminated that advantage, would you be roughly equal with them economically?

Mr. SCUDDER. Well, the timber industry has both capital gains treatment and the depletion allowance.

Senator HASKELL. Suppose we eliminated both; would you be roughly equal?

Mr. SCUDDER. We would be roughly equal, but that does not mean we would accomplish our objectives.

Senator HASKELL. You had better define your objective.

Mr. SCUDDER. Well, our objectives are to find a way to build more mills, which has become extremely expensive, and which we think, in their own peculiar way, really do benefit the interests of the Government.

Senator HASKELL. Yes, I understand that. I am just thinking sheer economics. If we took away the capital gains and the depletion on timber, would your costs of delivering newsprint equate then with the costs from virgin timber?

Mr. SCUDDER. Well, bearing in mind that 70 percent of this substance comes from outside the country——

Senator HASKELL. I realize that.

Mr. SCUDDER. Yes, it would have the effect of equalizing our costs with those of the domestics, domestic suppliers.

Senator HASKELL. Thank you very much.

Senator GRAVEL. And then you would have an advantage in the marketplace because with the rapid increase in energy and since it takes more energy to produce from virgin stocks of paper, then you should enjoy the economic benefit.

Mr. SCUDDER. Well, many, many of those guys, many of the original old mills were on waterpower, if it stays the same.

Senator GRAVEL. Just so the Senator from Colorado understands our views, I hold the same position. You have got a choice: it either is to wipe out the tax advantages that your competitors have or to give you a tax advantage to equate what they have. And I can go either way.

The CHAIRMAN. Just to complete the picture, if you want to do this by taxing the other guy even if you do that, you still have not met the Canadian problem or the problem of foreign imports. Most of this newsprint is produced abroad, is it not?

Mr. SCUDDER. Yes; it is.

The CHAIRMAN. So, if you tried to put a tariff on the fellow who is producing it up in Canada and elsewhere, you get a letter down here from the State Department protesting that this violates the GATT and one thing or another, we are not living up to some trade agreement, and it would create all sorts of things. It would be just a lot easier to do something for this fellow than it would to try to tax all of the rest of them. I will tell you right now.

Senator GRAVEL. Well, can we pursue that for a moment? I do not know if that would be accurate, Mr. Chairman, if they are competing with the Canadian newsprint people. If we took away the tax advantage on virgin timber; it costs more to produce a ton of newsprint from virgin timber in energy terms——

The CHAIRMAN. How are you going to tax a producer in Canada?

Senator GRAVEL. You do not tax them, what you do——

The CHAIRMAN. All you can do is put a tariff on his product.

Senator GRAVEL. If that is your problem, then you cannot compete favorably with the Canadians.

Mr. SCUDDER. That is not our problem.

Senator GRAVEL. That is right, that is not his problem. That is what I am trying to focus on. We do not want to be led astray here in

thinking that we are going to give you an advantage so you can compete with the Canadians.

Mr. SCUDDER. We do compete successfully with the industry; we would like to do more of that.

Senator GRAVEL. I realize that. But I for one, Senator, am not prepared to vote you a tax advantage on that basis. I will vote you a tax advantage to equate what other advantages your competitors have.

Mr. SCUDDER. The tax advantage can be argued not to be a cost to the U.S. Government but to have certain returns that are worthwhile to the U.S. Government.

I think you are talking about something else.

Senator GRAVEL. What?

Mr. SCUDDER. We think there are other advantages.

Senator GRAVEL. Then you are in the wrong bill. You should be in the tax reform bill. This is the energy bill that we are dealing with here, Mr. Chairman, and the motivation here is to save money.

Now, if you have got other tax problems, we can treat it in another bill. But let me go back to the motivation that we have. I would have a motivation for recycling because it saves energy, and the way to do that is to do away with—the disadvantage you presently suffer. Now, is that satisfactory?

Mr. SCUDDER. It is not what we are seeking; no, sir.

Senator GRAVEL. So, you are seeking funding beyond the energy advantage that we are looking for in this bill?

Mr. SCUDDER. We bring you an energy advantage. We bring you an effect on the balance of payments which nobody else does practically. We do promote jobs and production in the United States, which I think is vital, and I hope the Senate is going to think it is vital because it is.

Senator GRAVEL. There is no question. It is vital, but I think this colloquy has brought out something very significant.

The CHAIRMAN. I think it would be a little bit easier to make your case if you would let these fellows who are going to be recycling aluminum cans, to come in here first because they are a bigger energy saver than you are, I believe. But in any event, I think that you have spelled out your problem, and I do think that we will consider the matter of recycled materials in connection with other things.

I mentioned aluminum, for example, where there is a big energy saving, and while we are considering recycling, we might as well consider your problems as well as the rest of them, and we will try to see that you are treated fairly along with the rest. Thank you very much.

[The prepared statement of Mr. Scudder follows:]

STATEMENT OF RICHARD B. SCUDDER, CHAIRMAN OF THE BOARD,
GARDEN STATE PAPER CO., INC.

My name is Richard B. Scudder. I am chairman of the board of the Garden State Paper Co., Inc., of Garfield, N.J., a firm which I founded in 1961 after participating in the invention of a process by which old newspapers could be de-inked and recycled for the manufacture of newsprint. We presently operate mills near New York, Chicago, and Los Angeles, and are building a mill in Mexico in partnership with an agency of the Mexican Government.

Garden State makes newsprint entirely from waste newspapers, and together with its associate FSC Paper Corp., produces some 450,000 tons of newsprint per

year, which accounts for the consumption of about 500,000 tons of waste newspapers annually.

We would like to produce an additional 450,000 tons of newsprint annually—and retrieve from the municipal solid waste stream additional thousands of tons of used newspapers.

To achieve this objective three new mills would be constructed. Each mill would be capable of producing 150,000 tons of newsprint per year. Each of these mills would cost in the neighborhood of \$75 million—for a total capital expenditure of \$225 million for the three mills.

I will explain briefly why the foregoing objective has national significance; how this objective may be achieved; and how our proposal for accomplishing the objective resolves questions that were raised against a different recycling tax credit proposal in the House.

The United States is dependent upon Canada for nearly 70% of its newsprint supply. The adverse impact upon the U.S. balance of international payments, at \$260/ton (up from \$165 in 1972) for 7 million tons, is nearly \$2 billion. The Commerce Department forecast a 5% per year increase in U.S. newsprint requirements, prior to the present economic recession, a rate of increase which will probably have validity when the economy begins its upward turn. Canadian mill executives met in Spain in April with other foreign producers to discuss the world price of newsprint. They have forecast increases in prices up to \$300 per ton by 1976. If the threatened strike of Canadian newsprint mill workers occurs, as expected, we may have \$300 per ton newsprint by the end of this year.

We must begin to take steps to ease the concern of American newspaper publishers about rising prices and the constant threat of strikes by Canadian mill and transportation workers which have affected newsprint supplies in the past. We should also do what we can to lessen our dependence on foreign sources and to improve our balance of payments.

We must also provide economically viable, stable, permanent markets for substantial amounts of valuable recyclable raw materials. This means, for example, that communities which supply recycling mills with used newspapers can reduce the cost and burden of waste disposal efforts by adopting profitable newspaper recovery programs.

Our proposal would provide income tax incentives, in the form of a tax credit of \$10 per ton, for increasing recycling of post-consumer solid waste materials in the manufacture of products for which the United States is more than 50% dependent on foreign sources. To avoid one criticism voiced in the House the tax credit would not apply to recycled materials required in the operation of existing facilities. The tax credit would apply only to recycled materials used by a new mill built after the enactment of authorizing legislation. The proposal places a limitation or ceiling upon the aggregate amount of the tax credit which may be claimed. The aggregate of the tax credit would not exceed 15% of the total cost of the manufacturing facility. The tax credit, however, would be in addition to the existing investment tax credit of 10% and would apply to buildings as well as machinery and equipment.

There were serious and unanswered questions in the House concerning the cost and potential benefits of the former tax credit proposal which was stricken from H.R. 6860.

The cost of our proposal and the benefits which would accrue may be readily computed. For example, in the case of a new newsprint mill costing \$75 million dollars and having a capacity of 150,000 tons of newsprint per year, the tax credit would aggregate \$11 million 250 thousand dollars—which is 15% of \$75 million dollars—the total cost of the mill.

The tax credit would be earned at the annual rate of approximately \$1,650,000. This is computed on the basis of \$10 per ton for the 165,000 tons of used newspapers per year which is required in the production of 150,000 tons of fresh newsprint. Thus, the total amount of the allowable tax credit could be claimed in 7 years from the date that the mill was fully operational.

This loss of tax revenue would be recaptured by the Treasury in substantial part through increased employment, and the taxes that would be paid from profits of the new facility. Nor should we overlook annual savings of \$45,000,000 in the balance of payments account for each mill's output computed on the basis of \$300 per ton for Canadian newsprint.

Opponents of the recycling tax credit eliminated from the House Bill estimated that increased recycling of only 2 or 3 percent would result from its provisions. Our proposal, if carried through, would result in an increase of 22% in the re-

cycling of old newspapers nationally. The actual recycled tonnage could increase from 2,200,000 tons annually to 2,700,000 tons from the efforts of only one company—Garden State Paper Company—when the three mills it proposes to build are in full operation. Many other mills might be built.

We have no estimates on the total effect upon recycling that would result from the adoption of the recycling tax credit proposal we have discussed in the statement.

We do urge, however, that a realistic approach must be taken to make recycling of valuable waste material resources a viable enterprise. We believe that our proposal if adopted would be a good start. The details of our proposal are contained in the attachment to my statement.

I will be pleased to answer any questions you may have.

ATTACHMENT TO STATEMENT OF RICHARD B. SCUDDER BEFORE SENATE COMMITTEE
ON FINANCE

Proposal to provide income tax incentives for increasing recycling of post-consumer solid waste materials in the manufacture of products for which the United States is more than 50% dependent on foreign sources.

DEFINITIONS

Recycled—The term "recycled" means the process by which waste materials are transformed into new products.

Post-consumer solid waste material—the term "post-consumer solid waste material" means any material which has been used by an ultimate consumer and which has no significant value or utility except as a waste material.

PROPOSAL

Allow a tax credit of \$10 for each ton of post-consumer solid waste material recycled in the United States by the taxpayer during the taxable year into new manufactured finished products in a plant which meets the following criteria:

1. The manufacturing plant must be constructed after the enactment of this paragraph and construction must commence within 5 years thereof.
2. The recycled waste materials to which the tax credit is applicable must be used in the manufacture of finished products for which the United States is more than 50% dependent upon foreign sources, as certified by the Treasury Department.

The aggregate of the recycled waste material tax credit allowed the taxpayer under the provisions of this paragraph may not exceed 15% of the total cost of the manufacturing facility, including machinery, equipment and buildings, but excluding land and site preparation costs.

If the amount of the credit for any taxable year exceeds the liability for tax for the taxable year (an unused credit year) the excess shall be treated as:

- (a) a recycled waste material credit carryback to each of the 3 taxable years preceding the unused credit year and
- (b) a recycled waste material credit carryover to each of the 2 taxable years following the unused credit year.

The recycled waste material tax credit allowed by this paragraph shall not affect the eligibility of the manufacturing facility for the investment tax credit provided pursuant to Section 46 of the Internal Revenue Code.

The CHAIRMAN. Now we will call Dr. Fred Schulman of Fred Schulman Associates, energy consultant and chairman of the trade-energy information center.

STATEMENT OF DR. FRED SCHULMAN, FRED SCHULMAN ASSOCIATES, ENERGY CONSULTANT AND CHAIRMAN, TRADE-ENERGY INFORMATION CENTER

Mr. SCHULMAN. I appreciate this opportunity to discuss the energy conservation and conversion bill and with your permission I would just merely like to summarize my statement.

The CHAIRMAN. Yes, we will print it in the record.

Mr. SCHULMAN. My name is Fred Schulman. I am chairman of a technology assessment oversight committee on underground coal mining aimed at assessing the problems involved in increasing coal supplies for electric utilities.

I am also a consultant to a New England firm engaged in energy conservation and conversion.

I am founder of the trade-energy information center which consists of a small group of volunteers which has met about once a month since the first Arab oil embargo to discuss related issues of trade and energy.

Today, since it is late, I will confine my summary to three main points.

First, can the bill now under discussion serve as a means to shift oil company interests and profits to domestic oil production, domestic refinery construction and away from operations abroad especially away from international OPEC oil production? And if so, how can this be done?

Second, I would like to discuss before this committee, which is unique, in my opinion, because it has responsibilities not only in the energy area but also in the tax area and the trade area and you have had extensive hearings on these subjects whether U.S. trade policies can be used as a means to reduce exorbitant OPEC oil prices, and if so, how? It seems to me that the combination of these three areas can be used very effectively to maximize American strengths to obtain oil in adequate amounts at what you consider to be fair prices and with beneficial effects on both inflation and jobs.

Two examples will illustrate what I mean. We have read in the papers, I believe either today or yesterday, that our detente partner, the Soviet Union, is in the market again for food. And, of course, the U.S.S.R. will be obtaining our food at the market price, which is a pretty low price. They are short of food, that is why they are here and they know that our export and domestic food prices are the same.

When we were short of petroleum products during the Arab embargo, the Soviets did make available to us some petroleum products, but at the price of \$24.17 per barrel at a time when the average price for these products was somewhat over only \$10. So, they obviously took advantage of our needs and have done some really good trading. And, it seems to me, that perhaps somewhere in the bill we should have some provisions that combine our own trading strengths to avoid this kind of double-barreled trade weaknesses; that we buy high when we are short and we sell low when they are short.

The second illustration I want to make is this problem of indexing, Mr. Chairman.

The CHAIRMAN. I might just interrupt—what you are saying is that when the Soviets trade with us they do not trade like they love us.

Mr. SCHULMAN. Yes; they trade like they are capitalists and we are not, and it always surprises me.

The second illustration, Mr. Chairman, is that of indexing which we have heard so much about. Now, if you take a look at the data, and they will be in my statement, you will find that in the case of Iran, the prices that Iran paid for imports over the last 16 years increased about 74 percent; which means that if they wanted to recover this

increased price level by the price of oil, they would have only received \$1.55 in revenue instead of \$9.38 in revenue that they did receive. So, that is a far higher figure than merely recovering the cost of inflation.

Now, when I say \$9.38 revenue, that is not what I mean by posted price. I am speaking about revenue to the Government. To this amount, you have to add profit, transportation, cost of production, taxes, things like that in order to arrive at the posted price. But this is what they received, \$9.38 in income from the posted price of \$12.65 but only \$1.55 would have matched all the import price increases in Iran from 1958 through 1974.

In the case of Venezuela, the price level for the imports that they paid for increased over the same 16 year period by 106 percent which means Venezuela should have received only \$2.06 instead of the \$8.65 that they did receive.

Now, at the same time, it is kind of interesting to see that Iran, the same country which overcharged us for oil by more than 500 percent last year, received 61 percent of its total food supply from the United States. I do not have to go into industrial products, machinery, or arms purchases of which we supplied a very significant proportion of Iran's needs.

So, we do have products, I am glad to see, that OPEC countries want and are willing to pay for. The question is, can we use these needs for our technology and products in some way to help us in our own energy situation?

And the third point I would like to mention and discuss briefly is this. Are the incentives in the bill for energy conversion adequate and can they be improved and if so, how? I will just take a few minutes to go into these matters.

Now, during the past year this committee has heard and others have heard, many discussions of how unemployment and inflation have been caused by the high price of imported oil. There was recently released a congressional budget document which went into this subject. There also was the analysis made by the Chase Econometric Associates for the New York Times which was published in the Times and which indicated the effects both on employment and inflation of the proposed \$4 increase scheduled by OPEC for October and on decontrol of old oil prices which only serves to increase the price of oil as well as resulting in higher inflation and unemployment unless special measures to prevent this are taken. The recent report on decontrol by Representative Dingell of the House Committee on Interstate and Foreign Commerce confirms some of these findings. The point that is often forgotten is this; that in the United States where we enjoy high wages and a high standard of living we have always been energy intensive in industry. We may call it wasteful, that is true, but in order to compete in the world market we always maximized energy use in our industrial processes so as to require fewer labor in order to compete successfully abroad. We have been able to do that for many years by using lots of energy. To the extent, therefore, that the price of oil goes up, or the price of energy goes up, we become less competitive in the world market and we will lose jobs and business.

That is why, again, I feel this committee is very unique in that it can consider the whole problem as a totality rather than in bits and pieces.

The question is, how do you translate this in a few minutes into recommendations to serve the goals that I have just mentioned?

Well, it seems very clear that one of the greatest positive incentives for oil operations abroad, rather than here in the United States, in Louisiana and New England, including building needed refineries as was mentioned earlier, has been the tremendous tax incentives, if you will, which are given if oil is produced abroad.

Now, it turns out that most of the OPEC nations are assuming a larger ownership role in their own oilfields. In other words, they are buying control, or nationalizing in some cases, American properties. And so what do we find? We find that buyback oil—buyback oil is the oil that U.S. oil companies must buy back from the OPEC host nations—could very well be treated, because there is nothing in the bill that prevents it, as a tax credit, dollar for dollar, by virtue of an IRS ruling, which Senator Church has suggested is being requested.

Just as the ruling which changed royalty payments to tax credits for foreign income taxes back in 1950, as Assistant Secretary of State George McGee testified last year greatly increased incentives for foreign oil operations, so will a buyback oil tax credit. As you know, the 1950 ruling shifted a tremendous amount of activity and exploration from domestic operations to foreign operations. This is the source of much of our problems with OPEC.

If we really want to reduce our dependence on OPEC and if we really want to aid domestic oil exploration and oil refineries, it seems to me clear that we could very simply shift those incentives to domestic industry rather than to activities abroad.

The second is this. We now provide investment guarantees, through the Overseas Private Investment Corporation, to projects overseas, but not to domestic oil operations. The gentleman from Louisiana who testified earlier is building a refinery in Louisiana may lose money if he does not get crude oil at the proper price. He has no risk from nationalization. But if you build the refinery abroad you can get OPIC guarantees against loss from nationalization or certain other risks.

And the question is: Why? Especially if we want to discourage overseas oil investment. Since we are talking about equity, why do we not provide at least the same kind of treatment for domestic oil investment? Or better yet, if we are trying to reduce the amount of investment in oil abroad and convert it into investment here, why do we not just eliminate OPIC guarantees for oil operations abroad?

I have in mind the case of Libya, for example, which nationalized the property of Mobil Oil and within a month later Mobil announced a \$300 million additional investment. They do not lose anything. If the compensation is not adequate, OPIC picks up the tab. I am sure you want to consider whether or not that is the proper thing to do in the current situation that we have.

Finally, we also have the Export-Import Bank which provides low-cost loans for operations abroad. Should this be given for oil operations abroad? Domestic industry does not get it. You heard testimony this morning about this gentleman from Louisiana who had to borrow \$300 million to build a refinery. Now he does not get the low-cost loans that are available from Eximbank if you build equipment

abroad. It just seems to me, you may want to consider whether that is proper.

With respect to the incentives—I certainly think it is quite wise to provide incentives in the bill for all domestic nonpetroleum sources. But they should not be limited to the energy alternatives listed in the bill. The incentives ought to be extended to such other alternatives as geothermal energy and nuclear energy. Geothermal energy can probably be available almost anywhere in the world at deep depths. According to some data that NASA has obtained from the Apollo lunar surface experiments that were described at the Houston lunar science meeting that I attended in March 1973.

Geothermal energy may possibly be gravitational in origin which is generated as various celestial bodies move through space. You get earthquakes and movements of the crust which generates frictional energy and heat. Therefore, deep drilling techniques ought to have some incentive consideration in the bill—not only for oil but for geothermal energy.

Nuclear energy is not mentioned anywhere in the bill and it seems to me that it should also be included for similar incentive treatment. There are other ideas for alternate energy sources. It seems to me we should not preclude them by simply not specifically mentioning them in the bill. Let me mention a possible example. It may well be that we can grow oil as a crop. When oil was cheap this approach was not economically feasible but there are ways to convert agricultural products and agricultural wastes into other organic compounds similar to petroleum. It is a matter of economics, it has not been looked into. But, do you want to encourage that kind of thinking. It is something to consider.

I know my time is up and it is late so I want to conclude.

The CHAIRMAN. Sir, if I might interrupt you just for a moment?

I am sure you have given some thought to it but I have too and I am sure you will find that you will make more money doing it the other way around; converting petroleum into food.

Senator GRAVEL. It is five calories to one, five calories caloric count for one unit of food. That is what we are putting in now.

The CHAIRMAN. I think you will find you will make a lot more money if you convert petroleum into food.

Mr. SCHULMAN. That is true.

The CHAIRMAN. Than you will, if you convert food into petroleum.

Mr. SCHULMAN. Well, what I had in mind, obviously must be simple and cheap.

The CHAIRMAN. Right now they are still making money making fertilizer out of petroleum.

Mr. SCHULMAN. I know. You are absolutely right, Mr. Chairman.

What I had in mind was simply taking agricultural matter containing carbohydrates material and treating it with a digestive organism like cellulomonas which converts it into smaller organic compounds.

If you do this in the absence of air you do get some hydrocarbons. In the future, perhaps, if we are cut off again from foreign oil and if we do not have the petroleum we need, that might well become a new source.

You know, this is a very big poker game that we are all playing here.

The United States is dealing with OPEC countries which have greatly increased the price of oil and caused very high inflation in the United States and around the world. Earlier you have heard of the tremendous increases in the cost of a refinery, the tremendous increase in the cost of a coal mine and everything else. And the reason for this, Mr. Chairman, is, to an extent, not realized yet that since the price of oil, in effect, is maintained by the cartel, it has caused the price of everything else to rise to what I call its equivalent in value to oil.

Now, the equivalent value to oil of everything, including clothes, housewares, food, industrial products, and so on is a 400 to 500 percent increase. This is essentially the excess OPEC oil price over the index price, as in the Iran-Venezuela case. So we are going to have a tremendous increase in prices which we are now seeing everywhere. Phosphate fertilizer, as an example, has already risen more than 150 percent in price since 1973. Unless we can bring counter pressure to bear by using our strength in trade and aid, food, arms assistance, technology, and so on, to bring the price down, our prices will continue to rise until they have reached 400 to 500 percent of the 1973 levels. If our strengths in these areas are used as bargaining chips, we won't need the cumbersome quota system and licensing system to which the chamber of commerce and others have objected.

I suggest, in lieu of that, that there be a Petroleum Import Administration of some kind at the Cabinet level, which can deal with the OPEC countries for oil needed by the United States. We should have authority to deny or to grant access to American food, trade, machinery, arms assistance, and so on, in order to be in a strong position to get a decent deal at lower prices for the United States.

There is a tremendous gap between the true value of oil, based on equivalent prices with other materials and the actual price. If we do not succeed in getting oil prices down to its real value, the actual price of everything else is going to rise to its equivalent level with oil, which is 400 to 500 percent of the prices in existence in October of 1973. This could occur slowly or quickly, depending on whether the goods in question are in international trade or not. But they will tend to rise. Thus, there is much at stake. If we succeed in this, then decontrol of domestic oil will not result in harmful price increases because the OPEC level will be lower.

I'd like to conclude with this story of the strange poker game which we are playing with OPEC. We have a hand of four aces and OPEC has three kings, so we think we win. But OPEC shows us three kings and a knife, the knife being the threat of an oil embargo and says no you are wrong, we win.

So we fearfully look at the three kings and the knife and we say, "You are right, you do win." And then realizing our poor situation, we ask, "How come you are always so lucky?"

And that is the trouble. We have four aces. And yet we let three kings, three tens, or even a pair of duces beat us because we do not use our full strengths in trade, technology, arms assistance and food together as a unit to get the energy access that we want at reasonable prices.

Thank you, Mr. Chairman, I appreciate this opportunity. I hope I have not taken too long.

[The prepared statement and a biography of Dr. Schulman, and newspaper articles by Dr. Schulman follow:]

TESTIMONY OF DR. FRED SCHULMAN, TRADE-ENERGY INFORMATION CENTER,
WASHINGTON, D.C.

I. INTRODUCTION

Mr. Chairman and Members of the Committee:

I appreciate this opportunity to present to this distinguished Committee my views on the Energy Conservation and Conservation bill. As the energy crisis continues its destructive course, with its growing impact on industry, our standard of living, our foreign policy and our financial, social and political stability, it is clear that this Committee can perform a much needed service to the nation by clarifying the present confusion on energy policy. Because of your extensive responsibilities in a number of interrelated areas and your incisive hearings during recent months, on trade legislation, tax policy and energy matters, the Committee on Finance has a unique opportunity to use its considerable powers to provide effective energy legislation which would reduce or eliminate the present heavy-handed OPEC impact on our jobs, our prices and our ability to conduct an independent blackmail-free foreign policy. Obviously, these are complex interrelated subjects which cannot be fully treated here, but they must be understood if both the public and industry are to support the sacrifices expected of them and the measures proposed in the bill or their modification. Relevant details on some of these matters are discussed in the two Capitol Hill Forum articles which are attached to this statement and they will not be repeated here.

II. RECOMMENDED CHANGES FOR FOREIGN OIL OPERATIONS

The proposed Energy Conservation and Conservation Act of 1975 (HR6860) contains many desirable features. But if the aim of the bill is to reduce U.S. dependence on imported oil as quickly as possible, then other provisions are needed, and they are needed fast. At present, under current law and regulations, it is just too profitable to produce OPEC oil and to import it into the United States. The present bill does not remedy this fundamental defect of energy policy. This defect can, however, be effectively eliminated by this Committee by recommending certain changes, affecting overseas operations, in the tax laws, investment credits, low cost Export-Import Bank loans and federal Overseas Private Investment Corporation (OPIC) guarantees.

First, in order to encourage domestic oil over OPEC oil, the bill should specifically exclude U.S. tax credits for both foreign taxes in lieu of royalties and for oil bought by U.S. international oil companies from the equity shares of oil fields owned by host OPEC countries. This equity ownership by OPEC governments is increasing rapidly by negotiation of participation agreements and by nationalization. Saudi Arabia now owns 60% of ARAMCO and is negotiating for a full takeover of 100%. The American partners of ARAMCO buy back this oil, usually below market price. These tax credits last year amounted to \$16 billion. If these credits are not excluded for "buyback oil", they could amount to \$40-\$50 billion in credits against U.S. income taxes. Surely, the Committee is opposed to this non-congressionally approved giveaway and to the distortion it creates against domestic oil production.

Second, there should be language in the bill which excludes the Overseas Private Investment Corporation and the Export-Import Bank from making low cost loans or guarantees for foreign oil operations. Surely, we want to assist domestic oil operations; not subsidize foreign oil! Such a provision might have diverted Mobil Oil, whose investments in Libya were nationalized, into investing its money in U.S. oil operations instead of putting another \$300 million into additional oil exploration inside Libya.

The importance of such a provision in the bill is obvious. Finally, the Committee may wish to consider adding authority in the bill for the Treasury to recover revenue lost as a result of private IRS tax rulings which, without an Act of Congress, have the effect of significantly changing tax laws affecting

energy. Such authority would prevent the issuance of important tax rulings affecting energy and tax policy without Congressional debate similar to the landmark private IRS ruling in 1950 which, without Congressional sanction, allowed royalties, then paid to foreigners for use of oil lands, to be treated for U.S. income tax purposes as foreign taxes, creditable dollar for dollar, against U.S. income taxes. This important ruling caused scores of U.S. oil companies to shift overseas their major future activity because in the United States, royalties are not creditable against income taxes. Not only could large profits be made from cheap mid-eastern oil, but these profits could be kept or reinvested overseas with little or no U.S. income taxes. As a result, great efforts were spent by the oil companies to develop large markets for oil in Europe and Japan and the societies of these areas were transformed from a largely non-automotive society in 1950 into a largely automotive and mechanized society by 1960. Thus without Congressional debate or approval of the issues involved, this private tax ruling laid the foundation for developing foreign instead of domestic oil sources. We are all paying dearly for this mistake in policy.

III. ROLE OF SPECIAL TRADE REPRESENTATIVE

The United States is probably the world's strongest economic and technological power. It is important not to fragment in this bill, the combined strength of the United States in trade, technology and agriculture so that this unified strength can be used as an important element of energy policy. Clearly, the need for American know-how, industrial goods, arms and food can, if we choose, be used to assure access to OPEC oil at reasonable prices. This can be accomplished, while at the same time meeting the goals of reducing oil imports as set forth in this bill, by vesting in the Special Trade Representative (STR), exclusive power to import all foreign petroleum for auction to the domestic petroleum industry. The STR already has the cabinet level status he will need to equal that of the OPEC ministers he will have to deal with. If necessary, a Petroleum Import Administration could be created to assist the Special Trade Representative. Such an approach would eliminate the need for an extensive licensing and quota system to control imports and would simplify administration of the program by elimination of most hearings, decisions and appeals of license and quota proceedings. Significantly, it centralizes American buying power for negotiations with the OPEC oil cartel and can offer the carrot of trade, technology, food, and arms, or the stick of withholding them.

This approach can bring down the price of OPEC oil to levels closer to its real value, a goal important to the American worker, businessman and public. For example, the Shah of Iran has often linked the price of OPEC oil with those of goods imported by Iran. What are the facts? During the period 1958 through 1974, import prices in Iran rose 74%. Iran therefore would need to receive only \$1.55 per barrel in revenue to achieve equality in price, not the exorbitant \$9.38 per barrel in revenue it received last year. Similarly, the prices of goods imported by Venezuela during the same 16 year period rose 106%. In order to achieve indexing of oil with imported goods, Venezuela therefore would need to receive only \$2.06 per barrel of oil, not the \$8.65 it did receive. Recent data from the International Bank for Reconstruction and Development show similar trends. If the OPEC prices are allowed to remain at present high levels, then other goods will rise to seek its real "equivalent value to oil." This means inflation levels rising to 400-500% of 1973.

Furthermore, the price of oil affects alternative fuels like coal and natural gas. For each dollar per barrel rise in oil prices the price of a ton of coal will increase by about \$4 per ton and natural gas prices will increase by about 17¢ per thousand cubic feet. Studies by Chase Econometric Associates and by others have shown the strong impact of oil prices on employment and inflation.

According to data published by the Subcommittee on Energy and Power of the House Committee on Interstate and Foreign Commerce, a rise of \$4 per barrel in the OPEC oil price, now scheduled for October, will result in direct losses of 60,000 homes and 430,000 car sales. Direct unemployment will rise by 280,000 persons. The consumer price index will rise an additional 1.3% but the wholesale price index will rise faster, climbing to an additional 12.8% within a year and to 18.6% within two years. In other words, industry will be hardest hit first, but consumers will feel the pinch of increased OPEC-inflation some months later. When these effects ripple through the economy and if they are added to the effects

of decontrolled domestic oil under present conditions of acquiescence to OPEC, we can expect that another million Americans could be put out of work.

The suggested approach can avoid this catastrophe. Since OPEC oil is now selling far above its real value, the Special Trade Representative would be in a strong position to bargain with OPEC to reduce its prices in exchange for access to reasonably priced needed U.S. goods and technology. Even decontrol of old domestic oil would not cause the economic mischief now feared because lower OPEC oil prices would serve as a ceiling for domestic oil. A price of \$7 to \$8 is not out of the question if the STR is given the combined authority described earlier. The STR could equalize situations like our recent purchase of oil from the USSR at high prices and our sale to the Soviets of low priced American grain. Records indicate that during the Arab oil embargo, when we needed oil, the Soviets sold petroleum products to us at an average price of \$24.19 when the average price of all imported petroleum products was \$10.57. However, the USSR can get our low domestic market price for the grain it needs now because it can deal privately with our grain companies and it does not have to make a quid-pro-quo for oil as it would if it had to deal with the Special Trade Representative. It is important to note that the STR could use as bargaining points for OPEC, the facts that OPEC countries receive large percentages of their food, industrial products and arms from America. Thus, the U.S. supplied Iran last year with 61% of its food imports and 64% of its arms imports. Saudi Arabia received 20% of its food imports and 65% of its arms from the United States. At the same time, because of the OPEC oil price rise of 500%, the negative U.S. trade balance with OPEC rose from a deficit of \$0.9 billion in 1973 to a whopping deficit of \$8.9 billion in 1974.

IV. CONCLUSIONS

An extensive analysis of the energy crisis by Professor Edward W. Brickson, Leonard Waverman, and M. A. Adelman and 33 other scholars, shows that the success of the OPEC oil cartel was due largely to an international failure of policy by the Western industrial nations. I believe that this Committee can help restore the United States to its former position of leadership in energy policy by effectively meeting the challenge of the OPEC nations. The modifications to HRC869 which I have suggested are aimed at that goal.

Thank you for the privilege to appear.

BIOGRAPHY OF DR. FRED SCHULMAN

Dr. Schulman holds the Ph. D. degree in chemistry from Georgetown University and studied nuclear engineering at the University of California at Berkeley. He has been in the energy field for more than 30 years and has published extensively. Dr. Schulman was Chief of the Nuclear Systems program at NASA for more than 10 years, then was appointed Special Assistant to the Manager of the merged joint AEC-NASA Space Nuclear Systems Division, the position he left in July 1973 to become an independent consultant. Dr. Schulman served as power and propulsion systems coordinator for the Chief of Naval Operations (Development) and was Technical Director of H. L. Johnston, Inc., a firm which specialized in cryogenic research on hydrogen for rocket and aeronautical applications. He received Group Achievement Awards from NASA for contributions to the Dynamic Space Power Systems Program and the Apollo Lunar Surface Experiments Program and was commended for performance as a member of the United States Technical Teams in France and Germany in connection with energy research. Dr. Schulman is a Navy veteran of World War II, serving in the Pacific as a Lt. (jg) and holds 5 battle stars.

Dr. Schulman was a member of the Power Systems Technical Committee of the American Institute of Aeronautics and Astronautics for two terms and is presently a fellow of the Washington Academy of Sciences as well as a member of both the AIAA and the American Chemical Society. He has contributed more than 35 articles to journals, books, and technical society and civic functions and has been active in the field of education, teaching part-time at a number of institutions. Currently, Dr. Schulman holds a visiting Professorship at George Washington University and is a founder of the Trade-Energy Information Center of Washington, D.C. He is married to the former Madelynne Gross of Minneapolis, Minn. and they have four children. Dr. Schulman has been interested in national needs and priorities for many years.

[From the Capitol Hill Forum, May 12, 1975]

FOREIGN POLICY INFLUENCED BY OIL COMPANIES

(By Dr. Fred Schulman)

(Dr. Schulman is with the Trade-Energy Information Center)

High prices, unemployment, high interest rates and bankruptcies, a weakened dollar, and political instability are all fruits of the energy situation in the United States today. With all these miseries combining into the worst recession since the depression of the 1930s, you would think that legislative action would be forthcoming in a serious attempt to overcome some of them. A cursory look at the breakneck pace of current congressional activity would show that you would not be wrong. This article will discuss briefly some energy legislation, with a view to identifying certain important aspects suitable for further discussion and possible action by those in a position to do so. Other aspects of energy policy and related tax legislation will be covered in subsequent articles.

Last year during extensive hearings on multinational corporations, Senator Frank Church identified several areas of legislative oversight that may need correction. The American oil industry not only controls all petroleum products, but also owns 72 percent of the natural gas, 27 percent of the coal, and 52 percent of the uranium in the United States. Such figures spell real vertical control of energy resources in this country. Is this desirable from either a congressional or a consumer point of view? During the recession year of 1974, when unemployment nearly doubled, the net profits of the oil industry increased 167 percent to \$16 billion from \$6 billion in 1973. From foreign crude oil operations alone, net income, after deducting oil depletion allowances of 22 percent, amounted to \$2.1 billion. But foreign tax credits, never voted by Congress, amounted to \$2 billion, leaving a tax payable to the United States of only \$97 million, or less than five percent.

As former Assistant Secretary of State George C. McGhee testified, these tax credits were created through the mechanism of a private IRS ruling in 1950 which allowed royalties then paid to foreigners for use of oil lands to be treated for US income tax purposes as foreign income taxes, creditable dollar for dollar, against US income taxes. This important ruling caused scores of American oil companies to shift the emphasis of their operations overseas because in the United States, royalties are not creditable against income taxes. Thus we laid the basis for developing overseas rather than domestic oil sources, and we all are paying dearly for this mistake in policy.

It is quite possible that unless effective legislative prohibitions are enacted against future private tax policy rulings which could again bypass Congress, new tax credits for "buyback" oil from the Oil Producing and Exporting Countries (OPEC) may be allowed. In amount, these credits would dwarf the loss of the oil depletion allowance, thereby defeating the intent of Congress in passing the Tax Reduction Act of 1975. Such a quiet gambit would create an unintended new bonanza for the oil companies. Language on page 43 of the Conference Report of March 26, 1975 on the Tax Reduction Act of 1975 is unclear and may provide the needed loophole for such a ruling. This section says that certain payments for foreign oil purchases cannot be considered for tax credits, if the taxpayer has no economic interest in the oil and if the purchase price is not at a fair market price. Won't the oil companies interpret this language to their own advantage and use it to create another unintended giveaway? The interests of the public would be served by clarifying this language to better conform to congressional intent and by closing this potential loophole.

At a time when imports of exorbitantly-priced OPEC oil are causing unprecedented unemployment and inflation in the United States, there is no effective program to substitute alternative domestic fuels such as coal, nuclear power, or oil-shale. It is unfortunately true that 19 of the 21 electric utilities which had converted from oil to coal during the Arab oil embargo have shifted back to oil. Why? Lack of incentives, environmental restrictions, or what? Two of the three oil companies involved in preparing for oil shale production have stopped their development work. We all know that nuclear power is being delayed for a variety of regulatory, mechanical, safety, and environmental reasons. Yet nuclear power currently generates electricity at a rate equivalent to total imports of Arab oil. Much more power could be generated safely—and without the loss of jobs that OPEC oil causes—if we made the effort. Part of the answer seems to be that

under present tax and trade policies, the international oil companies seem to enjoy cozy relationships with both the Arab countries and the United States.

John G. Sawhill, former Administrator of the Federal Energy Administration, told a congressional committee that the oil industry exerts much more influence in Washington than he had imagined, and that he was surprised at the tremendous number of oil industry people here in Washington. Mr. Sawhill need not have been surprised. Back in 1953, a formerly top-secret memorandum to the President through the National Security Council from the Secretaries of State, Defense, and Interior stated that "American oil operations are, for all practical purposes, instruments of our foreign policy toward Middle East countries." The report used "national security" as the reason for secretly turning over key responsibilities for the conduct of American foreign policy, without congressional debate or approval, to the multinational oil companies. And so, far from being agents of the United States, during the oil embargo, when we really needed them, the oil companies were, in reality, agents of the host Arab countries—even to the extent of refusing to refuel American armed forces at the command of the late King Faisal. Thus, without congressional discussion of the national policy interests involved, the international oil companies proceeded to transform the backward Persian Gulf principalities into modern nation-states with the power to reshape the policies of the free world against us. This occurred with a vengeance with the abandonment of the U.S. by all allies in Europe, except Portugal, during the October 1973 Arab-Israeli war and nuclear alert.

It is interesting to speculate about the role of the congressionally unrestricted oil companies during the Suez Crisis of 1956. At the height of the crisis, British Prime Minister Anthony Eden cabled President Eisenhower on September 6, 1956, saying that "if our assessment is correct and the only alternative to military intervention is to allow Nasser's plans quietly to develop until this country and all Western Europe are held to ransom by Egypt acting at Russia's behest, it seems our duty is plain. We have many times led Europe in the fight for freedom. It would be an ignoble end to our long history if we accepted to perish by degrees." Well, the United States, against our own real interest, opposed the British and saved Nasser. What was the influence of American companies with Arab oil concessions in forming this policy? At any rate, less than two years later, Iraq fell, the Baghdad Pact collapsed, and the Soviet Union filled the power vacuum in the Middle East, gaining a network of military bases that today is drawn tightly across the oil-jugular vein of the West. It seems clear from this experience that Congress may well decide to put constraints in an appropriate bill to insure Congressional consideration of all important policy-making decisions. This would put Congress in partnership in energy matters as well as in foreign policy. Senate Bill S. 505, relating to the creation of a petroleum import administration, might well offer the opportunity.

S. 505, which was introduced by Senator Church, removes the multinational corporations from control over OPEC oil imports by setting up a Federal Petroleum Import Administration. Its goal is to reduce the power of the OPEC cartel over oil supply and prices by requiring sealed bids for all oil offered for import to the U.S. by individual exporting nations. Oil companies, and others, are prohibited from importing oil. The goals of S. 505 are clearly timely subjects for congressional debate. Congress may well wish to consider upgrading the Federal Petroleum Import Administrator to ministerial (cabinet) level in order to give him equal stature with the OPEC ministers he will have to deal with. This can be done, for example, by removing him from the FEA and making the Administrator a Presidential Assistant with cabinet rank. His authority, and that of the US Trade Negotiator, should be clearly defined and separated. Specific authority to the Administrator should be considered to enable him to deny American trade, investment, technology, and military assistance to those OPEC countries which refuse to participate in the US oil-import program. This authority is needed in order to provide necessary incentives for OPEC participation. A further safeguard against future private tax policy rulings might be language to provide authority in the bill for the US Treasury to recover all revenue lost from any private ruling which has the effect of changing the tax laws without act of Congress.

Strong remedies for deteriorating oil-induced world instability seem to be in order. According to the International Monetary Fund, the OPEC countries received, from oil exports in 1974, the fantastic Aladin-in-Wonderland sum of

\$133 billion. This caused a trade deficit in the industrialized West amounting to \$67 billion. When it is remembered that a deficit of only \$6.4 billion in 1972 resulted in two devaluations of the US dollar, the effect worldwide of a massive deficit of \$67 billion can be seen to be potentially calamitous to our weakened allies and ourselves. Further, importation of about \$27 billion worth of foreign oil last year is equivalent to the loss of purchasing power supporting more than four million jobs. In other words, as all products seek to rise to their equivalent in value to OPEC cartel oil (400-500 percent), inflation, hardships and unemployment become the unwelcome gifts of the OPEC countries. It is, therefore, quite surprising that there are many who are hesitant about taking effective counteraction. Why?

Finally, the arrangements by Occidental Petroleum, El Paso Natural Gas and others to explore and develop the Siberian oil and gas fields are equivalent to taking the Soviet side in the Sino-Soviet dispute. This is due to the fact that much of the territory is claimed by China. Obviously, this has enormous foreign-policy implications which have never been presented or debated in Congress. The decision was basically made by the oil industry, as in the Arab countries, in cooperation with the executive departments only. Similarly, are there no important foreign-policy aspects of concern to Congress in the recent decision to ship 1.4 million pounds of uranium oxide to the Soviet Union for processing into enriched uranium intended for West Germany nuclear power plants?

It is time for more effective congressional participation in the making of national decisions dealing with the related problems of energy and tax policy. Time is running out.

[From the Capitol Hill Forum, June 30, 1975]

OPEC BLAMED FOR UNEMPLOYMENT

(By Dr. Fred Schulman)

Higher oil prices . . . will result in a reduction in economic growth, higher unemployment and a continuing high rate of inflation.—International Economic Report of the President, 1974.

The Oil Producing and Exporting Countries (OPEC) plan to increase their oil export price after September 30 to four dollars per barrel. What this constitutes, as the President's report explains, is a threat to your job, your savings, and the economic and social health of the United States. Although the relationship between escalating oil prices and escalating unemployment was apparent in early 1974, existing economic predictive models are based upon a price structure which is no longer applicable. However, the quadrupling of oil prices—and the simultaneous doubling of unemployment—betray an underlying etiology.

This year our foreign fuel bill will be \$25 billion. To the extent that this sum exceeds fair value, it removes wealth and jobs from the United States in immense amounts. For example, import prices in Iran rose 74 percent between 1958 and 1974. If oil revenues were to exactly match the increase in import prices, Iran would have received only \$1.55 per barrel of oil last year instead of the \$9.38 average actually received. Similarly, another OPEC member, Venezuela, experienced an average rise of 106 percent in import prices during the same 16 year period. If it were to have fully recovered its import price increases (indexing), Venezuela would have needed to receive only \$2.06 per barrel in 1974 instead of the \$8.65 it actually received. These figures represent excess payments over indexing to Iran of 505 percent, and to Venezuela of 320 percent. These are tremendously important figures, the significance of which is often missed when estimating the harmful effects of the OPEC-cartel price policy to the West.

Some general effects on unemployment, inflation and interest rates were given in my statement to the House Ways and Means Committee hearing on the President's Authority to Adjust Imports of Petroleum in January of this year. The price effects ripple through the entire economy causing price rises everywhere as other goods seek to reach their "equivalent value to oil" which, by OPEC action, now is in the 300-400 percent increase range. Thus many food prices have risen more than 50 percent since the OPEC price actions, despite plentiful harvests. Coal costs to the Potomac Electric Power Co. (a typical energy using utility) have risen 166 percent between September 1973 and January 1975. Cumulative effects of the rapidly rising costs of doing business have

been devastating to small business, minority enterprise, and jobs for youths. A further rise of four dollars per barrel in the OPEC oil price, now scheduled for after September 30, will result in the direct loss of an additional 120,000 jobs, according to a recent study by Chase Econometric Associates for the New York Times. If these figures are extrapolated to the President's plan to decontrol domestic oil, the resulting price rise will increase the net direct loss of jobs materials, credit, capital and labor which result from such price increases, the overall loss of jobs can enlarge the unemployment rolls by another million Americans.

The monetary outflows to OPEC from the Western World now exceed \$60 billion a year and may continue to drain our resources indefinitely. In contrast, the Marshall Plan, which revitalized a devastated continent cost only \$9.7 billion during its three years. Also, our \$25 billion outflow to OPEC is equal to the cost of our entire national research and development efforts both private and governmental, which affects our jobs, national security, and health. Finally, this \$25 billion translates directly into jobs. In testimony before the Joint Economic Committee, Arthur Burns proposed a \$4 billion program to generate 800,000 jobs. Extrapolating the \$25 billion outflow is equivalent to the loss of 5 million jobs. It is no coincidence that OPEC related unemployment has now reached the highest levels since the Great Depression. Between April 1974 and May 1975, unemployment climbed from 4.8 percent to 9.2 percent—an additional 4.2 million people unemployed—and it is still climbing.

The \$25 billion pumped from our economy represents a significant portion of our GNP. But this massive drain of revenue has side effects which compound—and even outweigh—the original damage to the economy since each lost job eventually results in further layoffs. Thus the \$25 billion is merely a base from which to calculate the true economic cost of monopolistic oil pricing.

Similarly, the \$75 billion spent by our trading partners on oil imports not only weakens their economies but also has important negative implications for the American economy. OPEC dependency requires them to relinquish a higher share of their own GNP. The economic outcome is readily apparent. The reduction in purchasing power lowers their demand for our export commodities. But a drop in American exports and the adverse consequences of the multiplier effect imply still further unemployment.

Higher oil prices also diminish the competitiveness of our export sector in international trade. Because of America's traditional abundance of raw materials, and high wages, production in the US is much more fuel-intensive than in other industrialized nations. Increases in oil prices, therefore, have a more selective harmful impact on total production costs in the United States. Profits are squeezed and sales and jobs are lost to foreign producers when energy costs are increased.

Recycling of oil dollars to the industrial countries is mistakenly touted as a petropanacea. But recycling primarily mitigates to a questionable extent only some of the balance-of-payments deficit, but not the loss of income and employment. If the recycled OPEC wealth can be fully invested in long term compatible enterprise, then the multiplier effect can be reduced but the \$25 billion in goods and services are irrevocably lost, and the net effect is still harmful to the US economy.

The recycling decisions and policies, moreover, rest exclusively with OPEC rather than with the Western nations. Such policies are suspect. OPEC may distribute funds in a way which maximizes its revenues, furthers its political goals and harms the world economy. Already, the industrial labor block has had to resort to a \$25 billion "safety net" to bail out countries with balance of payments difficulties. The stronger economies, notably West Germany and the US, must bear the major part of this burden with consequent weakening of our banking system due to transfer of assets abroad.

Besides leading to substantial income transfers from the US, precipitous oil price changes throw the economy into disequilibrium and cause massive dislocations. Developing new, fuel-efficient technology, depreciating present equipment and replacing it with less fuel-intensive processes entails additional expenditures over a protracted period. Meanwhile, the inability of industry and labor to accommodate effectively to new oil realities results in persistent unemployment. The auto industry, for instance, presently suffers from its complementary relationship to gasoline. When consumers contemplate auto purchases, they weigh both operating and capital costs before making a decision.

Increases in petroleum prices affect the total cost of motor vehicle ownership and therefore seriously alter buying patterns. The result is hundreds of thousands of lay-offs. Rather than being diffused throughout the country, these losses are concentrated over the short term in a few communities, which are consequently unable to provide alternative employment.

Implicit in the structure of our national economy is a finely-tuned balance among several key factors and commodity prices. An imbalance in one invariably induces wild oscillations in the others. Compounding the problem is the expectation that OPEC's example will inevitably spawn additional monopolistic cartels. Indeed, there is increasing evidence that OPEC is financially and politically supportive of such formations.

Accepting the central thesis that a cause and effect relationship does indeed exist between higher oil prices and higher unemployment, it is not likely that we shall realize a significant economic turnaround without affirmative remedial measures that would alter the underlying causality. The most direct cure for our current economic malaise is to face the OPEC challenge to US employment and prosperity.

Surely we ought to better understand what is happening. The first steps to correct the OPEC-caused unemployment and inflation are to identify OPEC and its policies as harmful to the interests of the United States and to adopt export policies of our own designed to reduce OPEC's power to harm US and world economics. At the very least, availability of US food, arms, technology and industrial goods, and plants should be contingent upon reciprocal availability to the US of OPEC oil at fair prices.

Second, US energy policies should not be designed to support, or have the effect of supporting, OPEC high prices. US energy and tax laws should be strengthened and enforced. Tax benefits and credits, for OPEC operations should be removed. The Supreme Court gave Congress a powerful tool when it ruled recently that corporation executives are responsible for their firms acts—including violation of any laws. Thus US oil company executives now do OPEC's bidding at their own personal risk. It seems that Congress is now in a better position to take the leadership to provide effective countermeasures to OPEC's economic warfare.

World economics, at the very least, availability of US food, arms, technology and industrial goods and plants should be contingent upon reciprocal availability to the US of OPEC oil at fair prices. To do less is to short change the American people. To do nothing is to invite OPEC to dictate the amount of unemployment and inflation in the United States. It is obvious that we can and should do better.

The CHAIRMAN. Thank you very much, sir.

Senator GRAVEL. I have no questions, Mr. Chairman, thank you.

The CHAIRMAN. Thank you very much.

That concludes today's hearing. We will meet again at 10 o'clock on Monday.

[Whereupon, at 4:10 p.m. the meeting was recessed, to reconvene at 10 o'clock a.m., Monday, July 14, 1975.]

ENERGY CONSERVATION AND CONVERSION ACT OF 1975

MONDAY, JULY 14, 1975

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to notice, at 10 o'clock a.m., in room 2221, Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senators Long, Talmadge, Ribicoff, Byrd, Jr., of Virginia, Nelson, Mondale, Gravel, Haskell, Curtis, Fannin, Hansen, Dole, Packwood, Roth, Jr., and Brock.

The CHAIRMAN. The hearing will come to order. We are pleased to have the Secretary of the Treasury as our first witness this morning. Mr. Secretary, you have worked long and hard to move this Nation toward energy sufficiency. We will be pleased to hear what your views are on this bill, as to how this committee can make it something that would be more in line with what the administration would think might do the job. Would you please proceed in your own fashion.

STATEMENT OF HON. WILLIAM E. SIMON, SECRETARY OF THE TREASURY

Secretary SIMON. Thank you, Mr. Chairman. I appreciate the opportunity to appear before you to comment on H.R. 6860, which you are now reviewing, and to discuss a number of other considerations relating to the development of our energy policy.

At the outset, I would like to reemphasize the urgent need to establish a national energy policy and a comprehensive and integrated legislative program to help achieve it. Energy policy simply cannot be approached on a piecemeal basis.

In formulating a sound national program, we must address both the supply and the demand aspects of the energy equation. The shortfall in domestic supply, of course, has to be accommodated through imports. The urgency of the import problem is highlighted by the fact that, during the first quarter of 1975, we imported about 37 percent of all the oil we used, at a value of close to \$26 billion.

The President has already determined that our current imports of oil are of such volume and under such circumstances as to threaten to impair our national security. He has acted within his authority to constrain demand through the imposition of an additional license

fee on crude oil and products. This limited action is an initial step, but we need to get on with further energy measures without delay.

As you know, our current domestic production has been declining. In spite of a 20-percent increase in exploration and drilling activity during the last year, the decline in production has not yet been reversed. In the wake of declining production, we are not well prepared to withstand another embargo. Crude oil production for March 1975 was 9.6 percent less than in October 1973, and natural gas production had declined by 5.6 percent.

— While energy demand declined by slightly over 2 percent in 1974, recent indicators, particularly in the area of motor gasoline, are that consumption is moving up again. As the economy continues to recover, we expect demand for petroleum and natural gas to increase in the last half of this year.

The anticipated consequences are clear—demand, in the absence of new legislation, is going to move up, production will continue to decline; and we anticipate an inevitable increase in imports, with the resulting adverse impacts on national security and balance of trade.

Since the President submitted his legislative proposals for a national energy policy last January, the Congress has not enacted any legislation which would address our energy problem in a comprehensive and balanced way. On the contrary, the Tax Reduction Act of 1975, while it was essential to help stimulate the economy, will negatively affect our domestic energy program through the changes in the depletion allowance.

Altering the percentage depletion allowance has the net effect of withdrawing \$1.6 billion from oil producers this year and about \$2 billion per year thereafter. The reduction in depletion is, in effect, a permanent tax increase on the oil producer at the very time we need additional investment in domestic exploration and development. It has already had a significant adverse impact on exploration. To remove this incentive without a compensating decontrol of prices will substantially impede progress toward our national goal of energy independence.

While alternate energy sources, such as solar energy, oil shale, nuclear fusion and synthetic fuels, are promising after 1985, the greatest energy potential for the next 10 years is from our conventional oil, gas, and coal resources. Today almost 77 percent of our energy consumption comes from oil and gas and about 18 percent from coal. These are our basic sources of energy. Our distribution facilities, as well as our plants and equipment, are designed to use these sources. Substantial conversions of our plants, our industries and our homes to use other energy forms are not likely within the next 10 years.

Recently, the U.S. Geological Survey released estimates of undiscovered oil and natural gas in the range of 50 to 127 billion barrels of oil and 322 to 655 trillion cubic feet of gas. While these new estimates are lower than the previous ones, they are significantly larger than existing proved reserves of 40.6 billion.

In addition, there are in known fields enormous quantities of oil that have not been produced as a result of inadequate technology and uneconomical prices. In fact, by present methods we are able to produce only about 30 percent of oil which has been found. This means that almost twice as much remains in the ground as has been produced.

There are promising technological developments which may improve the recovery rate, and increased prices make it economical to develop these technologies and to produce these more difficult reserves.

Clearly, a potential exists for additional production through additional exploration and secondary and tertiary recovery but only if there are sufficient financial incentives. The Project Independence report estimates that by 1985 at \$11 per barrel equivalent prices, domestic oil production will increase from current levels of about 8.5 million barrels per day to 13.1 million barrels per day, and that natural gas production will rise from 21.3 trillion cubic feet to 24.6 trillion cubic feet.

I have emphasized the need for increased domestic oil and gas production because these sources provide real potential in the near term for significant quantities of additional energy. In addition, we must look to coal and other sources.

Today, this Nation has about a third of all the recoverable coal reserves in the world. We are the largest exporter of coal in the world, and at 1973 levels of consumption, we have enough coal to burn for 800 years. Yet, coal production in the United States today is lower than it was 30 years ago. In 1960, coal represented 23 percent of our energy consumption; last year this dropped to 18 percent. This trend has to be reversed. Our goal of 1.2 billion tons per year of production by 1985 will not be reached if we do not remove Government impediments and create incentives for expanded production. These must include improved transportation facilities as well as the opening of new mines.

In the remaining areas, nuclear power is also a very promising source of energy. By 1985, it is expected to furnish 13 percent of our total domestic supply, up from 2 percent in 1975. There are however, limitations in its use. It is confined to electricity generation, and its development is plagued by construction, regulatory and siting delays. This country was a pioneer in the development of nuclear power; yet, today, it can take up to 11 years to build a powerplant in the United States while only 4 to 4½ years in Europe and Japan. Why? Because of excessive governmental regulations.

While there has been some progress in developing synthetic fuels, substantial volumes of these fuels are years away. So, for the next 10 years, our main focus for expansion of energy resources must be on oil and gas, coal and nuclear energy. We must continue to recognize, however, that the chief barriers to all new energy production lie at our own doorstep, right here in Washington, D.C., in the problems created by the Clean Air Act, the moratorium on coal leasing, as well as price and supply regulation affecting oil and gas. This administration is firmly in favor of protecting the public health through balanced clean air standards and protecting the environment. At the same time, while never losing sight of our environmental and safety concerns, we must strive to ensure that our policies are properly balanced to meet our expanding energy needs.

I have previously discussed the extraordinary need for capital investments to meet future energy demands. The capital requirements for energy alone will approximate \$1 trillion in the next decade. The required investments for domestic petroleum are variously estimated to range between \$12 and \$20 billion a year through 1985.

The availability of such capital funds will depend on the profitability of the oil industry. Recent reports indicate that, during the first

quarter of 1975, the earnings of major oil companies fell sharply from the level for the first quarter of 1974. This has been due to nationalization moves abroad and low margins on servicing foreign operations as well as the lack of price incentives at home. Concurrently, the major companies have announced substantial investment cutbacks. Since there is a direct relationship between the supply of energy and the investment made to secure that supply, the availability of capital will largely determine whether we receive the energy we need. Unless we recognize the need to increase investment and capital formation and realize that profitability is essential to this, we will not be able to develop needed supplies of energy and our reliance on foreign sources will increase.

With that background in mind, I will turn to the bill on which you have asked me to comment, H.R. 6860, the Energy Conservation and Conversion Act of 1975, which consists of four titles.

I will limit my comments primarily to tax issues, because Frank Zarb, who will be up here in a little while, will comment on the other issues. I would, however, like also to comment on the difficult problems associated with a quota restriction on imports.

There have been suggestions that, instead of increasing oil prices to reduce oil consumption, we should simply reduce the supply of oil available by placing a quota on the amount of oil that can be imported. Proponents of quotas argue that we could not consume oil that was not available.

That sounds simple. However, such an argument leaves off in mid-air, and does not consider what happens after the quota is imposed. One of two things is possible: prices of oil will rise, just as in the case of an import fee; or, alternatively, shortages and/or rationing will occur.

If we put a quota on imports the price of oil will rise unless we take further action to prevent that rise. If we knew for sure that a 10-cent-a-gallon price increase would reduce consumption by one million barrels daily, we could be equally sure that an import quota that reduced consumption by one million barrels would increase U.S. prices by the same 10 cents. We are dealing with the same supplies and the same demand, and they will balance out at the same place. Thus, an import fee and a quota are likely to have identical price implications.

A quota system, however, has two disadvantages. First, a quota normally leaves the additional price increase in the hands of importers and producers, rather than in the hands of the Government.

Second, a quota would probably be more disruptive of economic activity, because the expectation of quota reductions would create new business uncertainties.

Some proponents of a quota would introduce controls to prohibit the price increases that would normally follow from it. But such controls would, in turn, create shortages. At artificially low prices, the quantities demanded will exceed the supply. The shortages could then be distributed across the population by a system of allocation or rationing. We might embark on an era of chronic shortage and maladjustment, without the incentives to develop more sources of supply and to accept substitutes. I do not think the public would tolerate such a system.

An allocation program is sometimes cited as a solution—primarily, I think, on the mistaken notion that it would avoid rationing. But allocation is itself a system of partial rationing which occurs at the business rather than consumer level. An allocation program would deny businesses some of the supplies they need to continue functioning and would lead to business dislocations and the loss of jobs. Further, much of the impact will be felt by small and growing businesses. The established and large enterprises can reduce, but others do not have such flexibility.

We could find a continuation of the situation that occurred last winter when plants closed because they could not get a sufficient "allocation" of natural gas. Undoubtedly, thousands of jobs would be lost. At the retail level, quantities would be rationed by queuing, as was gasoline last winter. Nor would all of this necessarily prevent consumer prices from rising. To fully ensure that prices will not rise due to shortages, we would ultimately have to ration gasoline, fuel oil, fertilizers, and petrochemicals.

Rationing is certainly one way of curbing demand and a number of national leaders have proposed it. We could, perhaps, live with rationing in a period of temporary emergency. But, as a way of life, I suggest it is fundamentally inconsistent with our system and with the spirit of the American public.

People should ask themselves which they prefer: a small increase in prices, or a system in which someone else could tell them now and for the indefinite future where and when they might drive or how warm they might keep their homes.

Does anyone honestly believe that the American public is willing to trade these basic freedoms, in perpetuity, for 10 cents a gallon?

The President has proposed instead that we reduce consumption of oil by the most neutral and least bureaucratic system available—through the price system. The energy proposals would raise the price of oil. At the same time, income tax cuts would increase the disposable incomes of every household. Taxpayers could, if they wish, continue to purchase more expensive oil and oil products, and they would have extra money with which to do it. The question they would face is whether they wish to spend that extra money for more expensive oil or whether they wish to use it for some other purpose, but the choice will be theirs. Imposing quotas as title I does and instituting rigid allocations or rationing will move us in exactly the wrong direction.

Another undesirable feature of title I is that it eliminates the President's current authority to impose import fees and tariffs and replaces it with set duties on imported oils and authorities to raise these duties to a fixed level. We believe that this will severely hamper our domestic program by removing needed flexibility to maintain adequate price protection for domestic supplies.

Title II of H.R. 6860 provides, along with a non-tax measure relating to auto efficiency standards, for the repeal of certain excise taxes on buses used in intercity public transportation, and on radial tires and rerefined lubricating oil. The Administration itself has proposed a comparable change in the tax treatment of rerefined lubricating oil, but we oppose the selective or discriminatory repeal of excise taxes. While repealing excise taxes on intercity public transportation might

save some energy by reducing the use of private transportation, our policy with respect to excise taxes that flow into the Highway Trust Fund has been that all highway users should bear the cost of highway maintenance, and we believe that the potential energy savings here do not warrant a change in this policy.

Title II also gives tax credits to individuals who install home insulation or solar energy equipment, or who buys electric cars. In January, the President proposed a tax credit for home insulation. It is a relatively inexpensive item, with proven energy-saving qualities. By contrast, solar equipment and electric cars are expensive items, years away from development and the cost effectiveness of which has not been satisfactorily proven. We do want to encourage solar energy, and we should do so through Federal support of R. & D.; but not attempt to develop such long-term energy sources through tax incentives. We oppose these tax credits to consumers because they appear to be premature.

Title III provides for an Energy Conservation and Conversion Fund, for the purpose of promoting research and development. We oppose such a fund. All trust funds reduce flexibility in managing the national budget. Furthermore, trust funds make available large sums of money without first defining needs and priorities, encouraging the Federal Government to overtake and supplant private sector efforts. When potential sources of revenue are set aside for special purposes, we do not have access to those sources, which may not continue to be needed for the original purposes.

With respect to this fund, for research and development, I would add that the new Energy Research and Development Administration has undertaken, and the Congress has approved, a major acceleration of Federal energy R. & D. programs, including a 63 percent increase in funding in fiscal year 1975. The Trust Fund would seem to ignore these developments, and indeed earmarks amounts of funds that may bear little relationship to the need for spending or the ability to spend wisely.

Title III also provides for a Trust Fund Review Board of five members appointed by the President, and whose duties would include evaluating projects for which expenditures are made and recommending changes to Congress. Although the Board would help select ERDA priorities, it would have no direct responsibility for ERDA activities. Such a role could possibly duplicate duties of other Government agencies and fragment the management effort.

Title IV aims to encourage businesses to use fuels other than petroleum and natural gas. Part I imposes taxes, beginning in 1977, on the business use of petroleum and natural gas. There are two weaknesses here.

First, the bill exempts from tax the oil and gas used by firms engaged in transportation, agriculture, mining, electric generation in existing plants, textile and glass manufacture, or in rental housing or lodging. Additionally, certain tax-exempt organizations would not have to pay the tax on purchases of oil and gas. The result would be an exemption for many major, industrial users of oil and gas, causing serious efficiency losses in the business sector.

Second, even if the tax on oil and gas used by business were to cover all businesses, the result would be an undesirable distortion in petro-

Team usage. Prices on products would be tilted in favor of gasoline for private cars, fuel oil and gas for home heating and other non-business uses. Yet, one of the main purposes of the President's program is to reduce consumption; and the individual consumer often offers the best scope for such reduction.

Ultimately, the best way to cut down consumption of oil and gas will be to raise prices across the board, as was intended by the President's program, rather than to impose most of the conservation burden on one or two sectors of the economy.

Part II of title IV introduces a set of 5-year amortization provisions for investment in "energy-use property," including certain facilities used to produce coal or shale oil, to liquify or gasify coal, to use solar energy, and to burn solid waste to produce thermal energy. Part II also provides for 5-year amortization for investment in certain railroad equipment and facilities and extends for 4 additional years the amortization provisions of section 184(c) relating to railroad rolling stock. Part III extends the investment tax credit to solar energy equipment and denies use of the investment credit for investment in electric generating plants fueled by petroleum or natural gas.

We do not feel that the 5-year amortization and investment credit proposals should be enacted. Wherever the economics are favorable, there is no need for a tax subsidy for coal mining or for utilizing solid waste as a fuel. Instead, we should concentrate on removing the governmental impediments. When the technologies for such things as solar energy utilization and shale oil production exist, the economics of business decisionmaking should suffice to induce their adoption. Where the technologies are lacking, what is needed is research and development—not an investment subsidy.

Whatever the merits of a policy of curtailing the construction of oil and gas-fired electric generating facilities, I would urge the committee to reject the proposal to deny the investment credit for such facilities and to accept our approach to assist utilities which I will discuss in a moment. There may be cases where utility companies will be forced to use oil or gas, either because they are required to meet environmental standards, or because they are situated where coal supplies are not available at reasonable prices. Denying investment credit would be another unavoidable capital cost that would be reflected in higher prices for selected groups of consumers. Thus, this proposal is inequitable.

The administration has recognized the advisability of easing the capital cost of converting to facilities not fired by oil or gas. Accordingly, we proposed to increase from 10 to 12 percent the credit for such facilities. However, denying the credit entirely so as to increase the capital cost of certain investments on the grounds that they are "unworthy" is quite a different matter. In that sense, H.R. 6860 is an unacceptable departure from the general neutrality of the investment credit. Accordingly, I urge this committee to reject the changes in the investment credit proposed.

Finally, in connection with all the provisions of title IV, it is important to note that tax subsidies generally address the results of the problem, not the causes. We must clear away the regulatory and price disincentives to energy development first. Further, tax subsidies generally benefit only persons with tax liabilities. However, new and un-

profitable businesses also should be encouraged to convert to alternative energy sources to conserve, or to increase supply.

The Government could better direct its efforts to encourage conservation and conversion directly, such as the programs initiated by FEA and ERDA. The Government is already spending much money for energy research and development. Total outlays for ERDA, for example, are expected to exceed \$3 billion during fiscal year 1976. Following further progress in technology and after identifying those energy areas which offer the best potential, it may become clear that we should step up Government efforts in well-defined areas.

In summary, we find that we cannot support most of the tax aspects of H.R. 6860, particularly in view of the unsatisfactory energy savings that we can expect from the bill. Likewise, these disappointing expectations make it difficult to justify estimated revenue losses from H.R. 6860 of \$768 million for 1976 and over \$1 billion for 1980. More important, gross revenue gains would go into the trust fund and would be spent. However, the revenue losses from the bill must also be taken into account in assessing the full impact on the Nation's budget. Doing so, the ultimate effect of the bill would be to increase the deficit by more than \$2 billion in fiscal 1976 and more than \$3.5 billion in fiscal 1980.

Having commented on the specific provisions of the bill under consideration, I would like to direct your attention to omissions which the administration feels are essential to the development of a comprehensive energy policy.

We need a definite plan to deregulate the prices of new natural gas and old oil—that part of domestic oil production which is still subject to price controls. Decontrolling prices and eliminating allocations are, perhaps, the most important parts of the President's program. Keeping a dual price system for crude oil and the oil entitlements program creates distribution and economic problems, which could distort the marketplace permanently. Such distortions change the basis of decisionmaking from one based on cost effectiveness to one based on political considerations. Retaining such a system will threaten the efficiency of the economy and ultimately result in higher prices to the consumer.

A failure to increase prices will surely accelerate the already alarming decline in supplies of natural gas. On June 6, the Federal Power Commission released preliminary 1974 statistics indicating a further decline in natural gas resources committed to interstate pipelines. Dedicated reserves dropped from 134.3 trillion cubic feet at the end of 1973 to 120.4 at the end of 1974, the seventh consecutive year of decline.

The FPC also released a staff report showing net curtailments of firm service by interstate pipelines of over 2 trillion cubic feet, roughly 10 percent of total U.S. production, from April 1974 through March 1975. Such curtailments are expected to increase to nearly 3 trillion cubic feet from April 1975 through March 1976.

If supplies of natural gas decrease at current rates, replacement costs for alternate energy will increase dramatically. For example, the FPC reports that in January 1975 on a Btu basis, utilities paid almost 3½ times more for oil than for gas and nearly 1½ times more for coal. Homeowners and industrial plants are faced with similar or even higher costs.

With deregulation and higher wellhead prices for natural gas, it will pay to drill in marginal areas, to work over marginal wells, to make distant pipeline connections which are not now economically feasible and to drill in the high-risk frontier areas where there is real hope for significant new discoveries. Without higher prices, gas sold in interstate commerce will continue to decline, increasing the unit of cost of pipeline deliveries, creating uncertainties in supplies for businesses and homeowners and requiring the use of high-cost energy substitutes. This, in turn, will further depress the amount of natural gas resources, which have already declined from 22 years' supply in 1955 to currently less than 11 years' supply.

Because of the uncertainties of past price control policy, we must also address the deregulation of "old" oil prices. In doing so, we must keep in mind the dual objectives of increasing domestic oil supply and restraining oil demand.

Because of price controls, about 60 percent of our production is selling at an average price of \$5.25. In 1970, domestic oil production peaked, declined slightly for the next 3 years and accelerated to about a 5-percent decline last year. Oil production today is nearly 500,000 barrels a day below last year's rate and about 1 million barrels a day below 1973.

Decontrolling oil prices will allow the free market to provide the needed incentives to discover new reserves and increase recovery from existing wells which will help reverse this trend. Further, by allowing oil to be sold at the market price, consumption will be reduced. Moreover, allowing oil prices to reach a level reflecting world conditions will also spur investment in alternate energy resources as well as the vigorous expansion of R. & D. programs.

Clearly, the most important element of an effective energy policy is the deregulation of energy prices in order to restore free market forces.

In January, the President proposed immediate decontrol of crude oil prices, and a tax on producers that would assure that no sector of the economy would gain an unfair advantage from decontrol.

Since January, much has occurred to influence the structure of a legislative program for decontrol as well as the tax which should be applied to producers. Taking all of this into account and in a spirit of compromise, today the President has proposed phased, rather than immediate decontrol, with a ceiling on all domestic oil prices. The plan will phaseout price controls on domestic oil by January 1978.

This phased decontrol program, combined with the \$2 increase in import fees already imposed by the President, will reduce demand by almost 900,000 barrels per day by 1977. Such actions, coupled with the President's other proposals contained in the Energy Independence Act of 1975, will reduce our oil imports by 2 million barrels per day by 1977. H.R. 6860, on the other hand, can be expected to reduce imports by only about 300,000 barrels per day in 1977.

Complete decontrol of domestic production, and the \$2 import fee, would raise consumer costs by only about 10 cents per gallon, some of which has already taken effect. The President's phased decontrol program will increase prices of all petroleum products by about 1 cent a gallon by the end of 1975, by about 4 cents by the end of 1976, and by 7 cents when fully in effect by 1978.

In conjunction with decontrol, we are still seeking a reasonable windfall profits tax, which would include a plowback provision. We must recognize that depletion has been removed and that costs of finding and producing oil have continued to rise, further eroding the profitability of oil producers and limiting their ability to increase their investment. As such, we would like to work closely with this committee in structuring a tax which will insure that profits are no more than are needed to increase future supplies.

We believe that the tax should phase out over a period of years to take account of continuing cost increases and to encourage investment in supplies that will come onstream near the end of that period.

Further, it may be most appropriate to impose the tax on only "old" oil—that which is decontrolled under the plan—so that the function of the tax will be to phase in increases in producers' revenues over an acceptable period. Under such a proposal, the tax would not apply to currently uncontrolled oil, on the grounds that net profits on that production have been diminished by the elimination of percentage depletion and the rising costs of discovery and development.

A plowback provision will provide further assurance that price deregulation and added taxes will not serve to discourage needed investment in new domestic supplies. A plowback proposal must be carefully drawn to accomplish the reinvestment objective without encouraging wasteful drilling or other extravagance.

In addition to the decontrol of oil prices, the President proposed in January a progressive increase in import fees on petroleum and petroleum products as well as excise taxes on domestic crude oil and natural gas. The President also proposed that these taxes and fees be rebated to the American people. It is important to emphasize that the President's program is all interrelated. No one part should be considered in isolation.

With respect to the import fee, as you know, a \$2 increase on crude oil imports and 60 cents increase on products are now in effect. The \$2-per-barrel excise tax on domestic crude oil is needed, in part, to recapture from domestic producers the price rise induced by the import fee.

The President's proposal with respect to natural gas is an excise tax of 37 cents per M ft³. On a Btu equivalent basis this is equal to the \$2-per-barrel tax on crude oil. Unlike the oil excise tax imposed on producers to soak up a price increase to consumers, the gas excise tax is imposed at the consumer level to facilitate orderly decontrol of prices, to accelerate adjustments of consumption patterns, and especially to prevent diversion of oil and coal demand to natural gas. Otherwise, the increase in oil prices will encourage a shift of demand to natural gas. After the deregulation of gas prices and with the replacement of old gas under long-term contracts by new gas, the 37 cents tax will serve to prevent unreasonable increases in field prices during the interim period of price adjustment. The tax could be progressively phased out as in the case of the oil excise tax. These measures will prevent windfall profits to gas producers. Even without deregulation of gas prices, the tax is necessary to prevent shifting to lower cost, interstate gas, which would exacerbate interstate shortages.

Accordingly, I urge the Congress to consider enacting such a tax on natural gas, as well as the excise tax on domestic oil, and to enact the

President's proposal to return such taxes to the economy through cash payments and tax reductions.

In addition to the previously mentioned energy proposals, any comprehensive and integrated national energy policy must address the problem of utilities and their need for expansion. The proposals that I shall now discuss follow the recommendations of the President's Labor-Management Committee.

We have said many times that the most fundamental problem of electric utilities is that of adequate rates. Unless users of electric energy are required to pay the full cost of generating it, including a reasonable return on invested capital, investors cannot be expected to invest in the industry. These proposals are designed to provide help through the tax system, but only if the regulatory authorities do their part. These tax proposals provide incentives that will make it easier for State regulatory commissions to take difficult but necessary steps.

The proposed legislation would do the following:

Increase the investment tax credit permanently to 12 percent on all electric utility property except generating facilities fueled by petroleum products. No change of the percent-of-tax limitation is involved. The increase in the credit is allowable only if construction work in progress is included in the utility's rate base and the benefit of the increase is "normalized" for ratemaking purposes. "Normalized" in this sense means reflecting the tax benefit for ratemaking purposes pro rata over the life of the asset which generates the benefit instead of recognizing the entire tax benefit in the year the utility's taxes are actually reduced. In the absence of normalization, the entire tax benefit would flow through immediately in the form of reduced utility rates for consumers, and no real economic benefit would result for the utility.

Give electric utilities full, immediate investment tax credit on progress payments for construction of property that takes 2 years or more to build, except generating facilities fueled by petroleum products, without regard to the 5-year phase-in required by the Tax Reduction Act of 1975. This new provision applies only if the regulatory agency includes construction work in progress in the utility's rate base for ratemaking purposes.

Extend to January 1, 1981, the period during which pollution control facilities installed in a pre-1969 plant or facility may qualify for rapid 5-year straight line amortization in lieu of normal depreciation and the investment credit.

Permit rapid 5-year amortization of the costs of either converting a generating facility fueled by petroleum products into a facility not fueled by petroleum products or replacing a petroleum-fueled facility with one not fueled by petroleum. This amortization is in lieu of normal depreciation and the investment credit, and is available only if its benefits are "normalized."

Permit a utility to elect to begin depreciation, during the construction period, of accumulated construction progress expenditures, generally the same expenditures as those which qualify for the investment credit construction progress payments under the Tax Reduction Act of 1975. Any depreciation taken during the construction period will reduce the depreciation deductions available after the property is completed.

Permit a shareholder of a regulated public electric utility to postpone tax on dividends paid by the utility on its common stock by selecting to take additional common stock of the utility in lieu of cash dividends. The receipt of the stock dividend will not be taxed. The amount of the dividend will be taxed as ordinary income when the shareholder sells the dividend stock and the amount of capital gain realized on the sale will be decreased. Dividend stock is deemed sold before other stock.

The tax costs in connection with these utility measures are approximately \$600 million.

Deferment of tax on stock dividends—\$200 million, and the others are listed.

It is our view that the total tax cost of \$600 million is eminently worthwhile, in view of the likely effect in minimizing severe power shortages in the future.

These proposals are probably not the same proposals we would advance had the luxury of more time, a less critical problem, and the realistic possibility of an overall solution to our country's economic problems. Some have pointed out that these proposals are exceptions to our theoretical goals for a perfect tax system. However, we must be practical, and we must act quickly. These proposals have the support of both business and labor, and are, we believe, the most effective tools at hand to deal with the situation. In the aggregate, they will improve substantially the immediate financial position of utilities and permit them to resume the long-range projects critical to energy independence, greater employment and economic expansion.

We recognize other problems too, including the extraordinary political difficulties of facing those problems squarely in 50 different States, as well as the delays and obstacles which are sure to occur. The proposals are designed to provide help through the tax system, but only if the regulatory authorities and consumers cooperate in doing their part. Several of the tax proposals will provide incentives that will make it easier for State regulatory commissions to take the difficult steps they must inevitably take. The increase in the investment credit will be a cash contribution by the Federal Government for the construction of additional electric powerplants. But, because of the limitation that the credit may be used only to offset tax liability, the regulatory commissions will have to do their part by setting rates that are sufficient to create a reasonable profit and a tax liability against which the credit can be offset. Similarly, most of the benefits of the bill will not be available unless the commissions include that property in the rate base and provide a return on that investment.

In closing, I would like to reemphasize the urgency of the development of a national energy policy. This can only be achieved through cooperation between the Congress and the executive branch. The President has presented to the Congress a comprehensive energy program. His proposed Energy Independence Act of 1975 provides measures to achieve energy conservation, to increase energy supplies, to deregulate natural gas, and to improve our energy preparedness through a system of strategic reserves. In addition, he has asked for oil decontrol, a comprehensive energy tax package, including a windfall profits tax and excise taxes on petroleum and natural gas which will be returned to the American people, and incentives for utility financing.

This provides a complete energy program. It is not the only possible approach, and we are willing to work with the Congress to develop reasonable compromises. However, we cannot compromise our basic objectives: Reducing energy consumption and oil imports while increasing domestic supplies. The bill under consideration would not adequately move us toward those goals. We stand ready to work with you to develop legislation that will achieve our vital energy objectives.

Thank you, Mr. Chairman.

Frank Zarb and Tom Enders are here with statements also, I believe, sir.

The CHAIRMAN. I suggest that, since Mr. Enders has a relatively short statement, we let him either read it or summarize it before we start asking questions.

This is as large an attendance as you will have a chance to speak to in this committee, Mr. Enders. Perhaps you should make your statement or summarize it now, and then we will open the committee to questions.

**STATEMENT OF HON. THOMAS O. ENDERS, ASSISTANT SECRETARY
FOR ECONOMIC AND BUSINESS AFFAIRS, DEPARTMENT OF
STATE**

Mr. ENDERS. Thank you very much, Mr. Chairman and distinguished members of the committee.

I would like to situate our national energy goals in an international context briefly in this statement, if I could, because it is clear that the energy crisis is not only a crisis in our own economy, but it is a fundamental challenge to our security as a Nation and to our role in the world.

At present, the element in our economy most critical to employment and prosperity is subject to manipulation both as to price and as to supply by countries that do not necessarily have an interest in our well-being and success. Just as we are vulnerable, so are all the other major industrial countries. Most of them are far more dependent on oil imports than we are, most have fewer energy resources to develop.

And this has meant that we should cooperate with other industrial countries to overcome our vulnerability, because no single country can get the market powers, through conservation or through the creation of alternative sources, which is necessary to create a new balance in the world market for oil and thus bring the price down. In the next few years, anyway, no single country can successfully defend against a new embargo, if it acts alone, or against massive shifts in petrodollars, if they are used in a predatory manner. And it is finally true that no single country can expect alone to carry out all of the research and development or provide all of the capital required for replacing fossil fuels when they are exhausted.

I think, Mr. Chairman, it is equally true that the industrial countries would all suffer if we collectively fail to restore competitive conditions to the oil market. A degree of national freedom would permanently be lost. It would be far more difficult to restore sustained growth in our economy. The industrial world would begin to split, as each country offered political and economic concessions in an effort to make a separate peace with the oil producers. The future balance of power in the Middle East might be irreparably compromised.

It was this sense of shared interest that led to the U.S. initiative to convene the Washington Energy Conference in February 1974, and the foundation of the International Energy Agency in November of that year. Eighteen countries now belong to that agency, and they are joined together in pursuing three objectives. First, to provide security against a new oil embargo by a coordinated program to build oil stocks, and to share available oil in an emergency; second, to share equitably among the industrial countries the burden of conservation; and third, to coordinate our measures to stimulate the development of alternative sources.

Mr. Chairman, that is what we have been aiming at. Let me report briefly on where we are.

First, on emergency planning. On the basis of the detailed agreement signed in November, the International Energy Agency now has the necessary planning and machinery in a good state of readiness, should we be confronted with a new embargo situation. In order to back them up, each country must have authority to implement quick-acting conservation measures on a coordinated basis, and we need decisions to raise emergency oil stocks in all countries from the present minimum of 60 days of imports to the agreed level of 90 days. In contrast to some other IEA members, the United States has lagged in developing the needed emergency authorities. On the other hand, congressional action to create a 90-day petroleum reserve will put us ahead of our partners in this critical area. However, both emergency powers and more storage are necessary for an effective response to a new embargo. It is clear that instability in the Middle East creates a very real potential for a new interruption in oil supplies.

Second, as to conservation. However necessary, it is painful and costly to restrain demand for oil. And as a matter of simple politics, few other industrialized countries will be willing to sustain a strong conservation program over time unless others join them, and there is thus the possibility of changing market conditions and eventually bringing oil prices down. I think it is obvious, Mr. Chairman, that other countries are not going to do very much in conservation if they think that the United States, where per capita oil consumption is twice Germany's and three times Japan's, are not going to do so. For this reason we proposed, and the IEA adopted, the goal of saving 2 million barrels per day of oil by the end of 1975 for the group of industrial countries as a whole, and distributed the target among countries according to their oil consumption. Since we have half the oil consumption of the group, our target was 1 million barrels per day by the end of the year, as set by the President.

Nearly all the other members of IEA have taken action to decrease oil demand, by passing through increased crude costs to the end user, by new taxation, by such specific conservation measures as fuel switching and lighting and heating regulations.

In contrast, the United States has lagged. So far the only major conservation measure with immediate effect that this country has taken is the oil import fees. Decontrol of old oil over the phased schedule the President will recommend will add very substantially to our conservation effort, bringing us up to the level where other countries are already.

The lagging performance of the United States can be seen in comparisons with other countries' results. Between the first quarter of 1973 and the first quarter of this year, Germany's oil consumption fell by 14 percent, Italy's by 8 percent, Japan's by 8 percent, Britain's by 18 percent, ours by 6 percent. And yet of all these countries the recession, which of course has reduced demand for oil, was far more severe here than elsewhere. We have the world's highest per capita consumption of energy, but we have not been doing our part.

H.R. 6860 would save us an estimated 314,000 barrels per day by the end of 1977 which is, Mr. Chairman, not much more than the program Britain has already undertaken with an economy one-tenth the size of ours.

Third, alternative sources. The basic actions to stimulate the development of new energy must of course be national: the provision of subsidies to high cost or untested energy developments; tax incentives; adequate domestic pricing policies; the removal of unnecessary or undesirable legal obstructions. But there are important contributions to be made internationally.

First, by finding a way to cooperate in R. & D. without jeopardizing proprietary rights. No country has a monopoly on scientific imagination and innovation. Even the United States, with its major public and private industry commitment to energy R. & D., has much to gain through avoiding duplication, by sharing costs, and through scientific cross-fertilization.

Second, by encouraging the flow of foreign capital into areas of energy development where it is needed and wanted. As Secretary Simon has indicated, all of us have capital-short economies; with perhaps a trillion dollars of new capital needed in the energy sector in IEA countries over the next 10 years, we have an interest in finding ways to encourage foreign investment without jeopardizing the achievement of the national energy policy goal of independence.

Third, by assuring that countries that contribute to the welfare of the whole group by developing higher-cost energy sources are protected against possible predatory pricing by the OPEC, and are not penalized, if for other reasons prices fall on the international oil market. This is the purpose of the minimum safeguard price concept, in which each country in the IEA, by means of its own choosing, applies a comparable level of border protection to energy investment. Contrary to what is often suggested, this mechanism would not assure a minimum price to OPEC; it is a guarantee only to our own investors that they will not face competition from imported oil below a minimum, pre-established level well below current world prices.

IEA countries agreed in principle on these three points in March. They are now being elaborated within the Agency with the objective of having a complete package ready for adoption by year's end.

Mr. Chairman, domestically and internationally, we have just begun on conservation and alternative sources. The question we must ask is how far we must go, how fast.

The answer must come, in part, from analysis of the staying power of the oil cartel. In May, OPEC produced 26 million barrels per day as against 32.8 million barrels per day in September 1973, just before the crisis. Despite the soft market the OPEC price structure has come

through largely intact, although quality differentials have been reduced or eliminated, and credit terms lengthened. Now demand will firm, as we go into the winter and out of the recession. Absent additional conservation measures, the OPEC market may rise to pre-embargo levels by the end of 1977. In the late seventies it may begin to fall again as North Sea, Alaskan, Mexican, and Chinese oil comes on the market in large quantities.

Even if there are no new conservation measures, and if OPEC succeeds in raising prices to offset any increased costs of its imports, some oil exporting countries will already have gone into balance of payments deficit during the period of 1975-77. Algeria is in deficit now; so is Libya; Venezuela and Iran may follow. These pressures will intensify in the late seventies as the OPEC market shrinks, when most producers other than Saudi Arabia and Kuwait may go into deficit.

A serious program of conservation—the 2 million barrels per day the President proposed for the United States by end 1977, matched by other IEA members to make 4 million barrels per day—would greatly intensify the pressures on the cartel.

Given the cohesion OPEC has shown this year during the recession, it is not sure that such a conservation program would suffice. To be sure that the cartel loses its exclusive capacity to set oil prices, and does not regain it, we probably would have to compress the OPEC market to somewhat over 20 million barrels per day. In the next decade, this can only be done by a large-scale program of developing fossil fuels. For the United States, this would imply an import level of three to 5 million barrels per day in the mideighties as proposed by the President.

Mr. Chairman, to see the meaning of this, consider the possible price increase OPEC now threatens us with. Each additional dollar on the price of oil might reduce demand by half to 1 million barrels per day, out of a market of a little more than 25 million barrels per day. OPEC can now absorb cuts like that without excessive difficulty. But if we had the President's program in place, the scope for such price increases would be greatly reduced or eliminated in the next 3 years. Not only would they be unjustified, as now; they would not be feasible.

In parallel with our effort to develop effective programs of consumer-cooperation, we are also seeking to establish a basis for productive dialog between consuming and producing nations. The first formal attempt to launch a multilateral energy dialog in Paris this past April did not succeed.

In May, Secretary Kissinger proposed a new approach to the launching of a dialog, broadening it to include the whole range of relations between industrial and developing countries. This would involve the establishment of three separate commissions: One to cover energy, one for raw materials, and one to consider problems of economic development. The reaction to Secretary Kissinger's proposals has been generally positive, and we are optimistic that sufficient consensus can be reached along these lines over the next several weeks to permit agreement to reconvene the Paris meeting in early fall to prepare for the creation of the commissions.

The purpose of this dialog is broader than energy; it is to find a realistic and equitable basis on which decisions affecting the main elements of the world economy can be shared between industrial and

developing countries. The oil producers must understand that unilateral exercise of their power to raise prices at this time would not be consistent with this purpose.

Thank you very much, Mr. Chairman.

The CHAIRMAN. I ask that the Senators limit themselves to 10 minutes in the first round of interrogation, and thereafter, we will have additional questions, if the Senators wish.

Secretary SIMON. Mr. Chairman, Frank Zarb had to go back. He wanted me to assure you he will be up this afternoon. He has other testimony, too, but he will come immediately after that. Eric Zausner, his deputy-administrator-designate, is here, and will respond to any questions.

The CHAIRMAN. I did not think we would have a chance to interrogate Mr. Zarb about his statement this morning, and I told one of the staff to inform him that we will plan to hear him about 3:15 this afternoon.

Now, Mr. Secretary, I want you to know that I have been advising against the suggestion by some of our Democratic colleagues that we ought to send something the President has vetoed down to be vetoed a second time, and down a third time. I think that is just a charade. I think we ought to try to work together on whatever we can agree upon to try to meet this Nation's energy needs. Could you recommend that the President sign the bill that is present before the committee, or would you? Would you recommend that the President sign the bill as it now stands?

Secretary SIMON. No; I would not, Mr. Chairman.

The CHAIRMAN. Well, it passed the House by only 30 or 40 votes. And that means that the bill would not become law, in my judgment. It seems to me that we ought to try to agree on something that has some possibility of becoming law.

Now you said nothing here about one thing that seems to me an essential element of solving this problem. For many years our utilities, particularly electric utilities, have structured their rates in such a way that would encourage waste. The early units of the power, which one has to buy, cost a great deal more than the final units, for one who consumed a substantial amount of energy.

It seems to me that we ought to find some way—I can think of some ways and you might think of some better ones—to bring about a rate structure that would encourage savings rather than one that would encourage waste.

Would you favor something along that line?

Secretary SIMON. I favor anything in the utility area or other areas, Mr. Chairman, that would eliminate needless waste. And the FEA has been looking at the block rate proposal whereby the consumers of the commodity receive a volume discount.

Eric, would you like to comment on what the progress is on that?

Mr. ZAUSNER. Mr. Chairman, I think you are probably referring to what we have called the "lifeline" concept, I believe, which is the idea that perhaps the first portion of energy use is either very cheap or perhaps even free, and then it escalates after that.

We have looked at that some. We will be glad to provide the committee some of the advantages and problems with that. I might also add, Mr. Chairman, that perhaps one of the key things on rate structures is not just this block rate concept, but the question of peak load

pricing, which I am sure you are familiar with, where in fact a major portion of the utility's financing costs are to meet peak needs, as opposed to base load, or the average use during a year. And there is very significant potential for savings there as well.

The CHAIRMAN. Well, if one structures the rates as they have done historically, where you start out with a fee that you pay, whether you are using the power or not, and then you pay at a relatively high cost for the first units and after you use a certain amount then the price goes down to about half the unit price at which you start, that encourages people to leave the air-conditioning on all day, although there is no one in the house. It encourages them not to turn down the thermostat at night and things of that sort. And likewise it tends to retard the sale of insulation, storm windows, and things of that sort, because the energy that is being wasted is the cheap energy, so that a very low cost, below the cost of production and delivery.

It seems to me we might well consider simply initiating a tax on waste, and any rate structure so calculated could just have an excise tax on the energy so delivered. You might suggest a better way that we could do it. But one way or another, I think we would do well to put one item in this package to try to make it very unattractive for anyone to have a rate structure encouraging people to waste energy. And I hope that we can come to some sort of an agreement.

Secretary SIMON. I would like to work with you on something like that. However, the idea of a waste tax presents some problems. Waste to one person might be necessity to another. Furthermore, it is very difficult administratively to design one, I would think, but we would be glad to work with you on this, Mr. Chairman.

The CHAIRMAN. That is all I am going to ask, for the time being, and going by the early-bird rule, Senator Dole is next.

Senator DOLE. Mr. Secretary, you stressed the need for decontrol of domestic oil prices stating on page 16 of your statement:

That foreign crude oil prices are much higher and are expected to go higher still if the OPEC countries do what they indicate they may do around October 1.

I think it might be well to have, for the record, your reactions to higher prices this fall by the foreign producers.

Secretary SIMON. For that reason we also proposed a cap on the level of our domestic oil prices. I did not specify the cap. It is \$13.50, approximately, in anticipation of potential political action on the part of the OPEC nations. And as I have said quite often, there are no economic or financial justifications for the present price of oil, much less an increase. It is a political question and a political consideration, purely and simply.

Senator DOLE. Now is that your reaction to what they may do October 1?

Secretary SIMON. It is my reaction not only to the present price of oil, but also to any future action that they might take to increase the price, totally ignoring the devastating effect it would have on the developing nations, the third world, and the economic impact it would have on the industrialized world as well.

Senator DOLE. Do you see any possibility of it moving the other way, on October 1? Or is the increase already set in concrete?

Secretary SIMON. I really do not know very much more about it than all of the American people who have read the comments, the so-called

phony economic justifications that have been used for a price increase. As I say, we have documented this on many occasions, by a detailed economic and financial analysis of the present prices in terms of trade, inflation, which totally refute those and every other bogus argument that the cartel has used. There is no justification as I say, for an increase.

Senator DOLE. Will the President announce, or have introduced, his specific legislation today, tomorrow, or early this week?

I know he has met with congressional leaders this morning. Maybe you met with him concerning his decontrol compromise?

Secretary SIMON. Yes, sir, that is correct, Senator Dole. I would expect the legislation will be up here this week.

Senator DOLE. Now does that legislation have a windfall profits provision and a plowback provision?

Secretary SIMON. We purposely left the specific details of a windfall profits tax open this time as opposed to the way we proposed it the last time, because, as I said in my prepared statement, much has changed since then. Congress has removed the domestic depletion allowance, which is effectively taxing the industry, and the results are predictable.

Our cursory examination of capital expenditures for exploration and plant replacement indicates since March of this year just four companies have canceled \$1.1 billion in expenditures. And I suspect that a lot more has been canceled.

You know it is really just an illustration that we get seeming pleasure out of doing things to these so-called "guys in the black hats" who have been perceived to have bilked the American people for something that was beyond their control. And in the long run such an attitude is going to come back and bite us.

Senator DOLE. I think, as the chairman indicated, there is a strong bipartisan willingness to try to work something out. I think the presence here of 15 Senators on Monday morning would indicate we are energetically looking toward some solution.

The administration's program has been criticized as being unfair to low-income consumers and moderate consumers, and based on that I have two questions.

As I understand it, those who advocate another approach might have the same impact, would not a high gasoline tax impact with the most severity on the same two groups, the low-income and the moderate-income?

Secretary SIMON. Sure it would and to get the same reduction of our energy consumption, we would need a much higher tax.

Senator DOLE. You are talking about from 7 to 10 cents at the outside?

Secretary SIMON. If you did it equally, it would be 10 cents right across the board on the President's original proposal. These impacts under our present proposal are 7 cents, yes, sir.

But we have also looked at putting a large impact, in the short run, on gasoline and some of the other commodities.

Senator DOLE. There is some justification that it would increase the cost to those income levels. Do you still favor providing some relief to these groups through increases in the minimum standard deduction and reductions in the lowest tax rate bracket?

Secretary SIMON. You see, this is the point that the critics never bring up. They never bring up the fact that the President's proposal redistributed as best we could, with emphasis on the low- and lower-middle-income groups, all of the money that we took from them in taxes. The effort was to make energy more expensive than other goods and services, in our economy.

Senator DOLE. Plus there was an \$80 payment for the nontaxpayer.

Secretary SIMON. That is right, and this would have been a permanent rebate, as long as the taxes were in place. We thought this was a very equitable way to handle it.

Senator DOLE. I know the windfall profits tax has not been spelled out for any number of reasons, but could a portion of these tax reductions be funded by having a windfall profits tax which has a plowback of less than 100 percent? Say it was a 90 percent plowback. You might use the other 10 percent to give tax relief to some of the low-income and moderate-income groups?

Secretary SIMON. It could be. We feel it ought to be geared to—in terms of a timetable—the decontrol itself.

Senator DOLE. Now do I understand correctly that the President proposed a 30-month decontrol?

Secretary SIMON. That is correct, sir.

Senator DOLE. Do you know what the monthly percentages would be?

Secretary SIMON. 3.3 percent per month.

Senator DOLE. Just flat out?

Secretary SIMON. Yes, sir.

Senator DOLE. That is—I might suggest, a rather marked movement from the President's first proposal which was immediate decontrol, which indicated, I think, a willingness on the part of the President to come together with the Congress and attempt to work out a program.

Secretary SIMON. Yes: it is an effort by the President to compromise. Recognizing the economic problems of sudden decontrol, it minimizes these economic problems, and at the same time, it gives the signal to the producers, to those who must find the new energy in this country, the idea that they are going to have free market in which to sell it at the end of 30 months.

Senator DOLE. That is the only thing that I want—to move fast enough to really get the signal out.

Secretary SIMON. I think so.

Senator DOLE. My time is up.

The CHAIRMAN. Senator Ribicoff.

Senator RIBICOFF. Thank you, Mr. Chairman.

Mr. Simon, the two keys to the energy program, as I read your testimony, are conservation and production. You state it will take \$1 trillion to make us self-sufficient on alternate sources of energy, and yet you continuously contend that we have a shortage of capital in this country to invest \$1 trillion over the next decade.

Most of this legislation that is being considered has a stick approach. I have a few sticks of my own in mind.

Could we achieve our results of more conservation and production by a carrot approach, looking forward to an overall conservation and production investment tax credit? I think we would have to be careful to make sure there would not be duplication. The oil producers who now get intangible drilling expenses and still oil depletion allowances,

have you given any thought about the possibility of an overall conservation and production investment tax credit program?

Secretary SIMON. On the production side, yes, indeed, we have, Senator.

Senator RIBICOFF. What would that contain?

Secretary SIMON. We have looked at this. One cannot take the subject of energy and say we are going to give an x -percent investment tax credit for energy. Tax incentives work well. We all know that. They work well if there is a free market. Thus, the prime question is whether the taxpayer should indeed subsidize this particular area in the national interest. Oil, gas, coal, and nuclear energy operate in a fairly efficient market.

The constraints are our public policy. We regulate the price of natural gas, we have land leasing and other policies that are constraints. You ask yourself if tax incentives should be used to offset these public policies.

Then we move to what is going to be our hope in the future—fusion, fission, the more sophisticated nuclear technology, solar, shale oil, gasification, and liquifaction, all have great technological difficulties. We do not know what their development is going to cost. Nobody can say with certainty that a barrel of oil is going to cost \$4 or \$6, as some claim today for oil shale. Others say \$8 and others \$12 to \$16. The same is true in regard with gasification and liquifaction.

So a tax credit or a tax benefit would really be questionable in those areas because we do not know what the cost would be.

Now the President has proposed aid for coal-fired utilities and nuclear plants, through tax incentives designed to do a particular thing, provide us with the necessary electrical generating capacity in the 1980's to meet our needs. We should look at them because they do work well, as I say, Mr. Ribicoff.

Senator RIBICOFF. You say we should look at these but we are trying to write a bill. As I understand it, the chairman's plans are we sit down next week to mark up a bill and since this is of such prime importance, we cannot wait for the future. I mean you have been urging haste and so has the President, and I believe many of us in Congress feel the same way.

Do you think the Treasury Department, Mr. Woodworth, our committee staff, and my personal staff during this coming week could work together to try for an overall conservation and production investment tax credit to submit to the committee next week when we mark up this bill?

Secretary SIMON. We would be glad to look at such a proposal and work with Larry and your personal staff, yes, Mr. Ribicoff.

Senator RIBICOFF. Maybe it cannot work out, but if it can I think we ought to try. I understand the complexity. It is going to mean a lot of work by all concerned during the coming week and I would hope you would give it a try.

Secretary SIMON. I will.

Senator RIBICOFF. Mr. Simon, OPEC has threatened to raise the price of the barrel of oil from \$1 to \$2 in December. The price of OPEC oil is already \$13 a barrel. Every time foreign oil goes up; uncontrolled domestic oil goes up by the same amount, to the greater profit of the oil companies.

At what specific dollar level is the administration prepared to support a ceiling on domestic oil prices? And what specific measures are

you now prepared to support to insure that domestic oil prices and the profits of domestic oil companies do not go beyond this point?

Secretary SIMON. \$13.50 is the specific proposal as far as the cap is concerned, and also the windfall profits tax as well as the excise tax that the President proposed will make sure that no segment of the economy bears a disproportionate benefit for such a politically inspired price increase.

And then, of course, the moneys will be redistributed to the American people.

Senator RIBICOFF. What if OPEC oil goes up beyond \$13.50? Are you prepared to say that the domestic oil price will stay at \$13.50?

Secretary SIMON. The proposal is to put a cap, if you will, of \$13.50 with the windfall profits tax that would be designed to remove the windfall element, and yet at the same time insure that the price incentive is still there to produce the additional needed supplies.

Senator RIBICOFF. The \$2 tariff on oil imports could eventually cost the country as much as \$18 billion to \$24 billion a year in direct and indirect costs, according to figures given me by the Library of Congress. I believe the public has a right to expect that a tariff involving such huge costs will have equally great benefits.

Do you have any specific evidence showing how much these tariffs have actually reduced imports?

Secretary SIMON. It has really been too early to look at what the savings have been in imports. One cannot make more than just a guess, really, as to what the savings have been based on judgments of elasticity. But remember, if you correctly assess the impact, I think every dollar is a little over \$2 billion per year as far as our revenues are concerned, and again, it gets rebated to the American people.

Senator RIBICOFF. I am sorry, Mr. Chairman, my time is up.

The CHAIRMAN. Senator Curtis.

Senator CURTIS. Mr. Secretary, I want to commend you on a good, well balanced statement. I would like to ask you this. If the Congress enacts no legislation of the type that you propose, will it increase our dependence upon foreign oil in the months and years lying ahead?

Secretary SIMON. Yes; it most certainly will, Senator Curtis.

Senator CURTIS. Now as we increase our dependence upon foreign oil, that in itself will tend to cause the price of foreign oil to go up.

Secretary SIMON. Exactly, and this is what we are trying to explain when people resist the notion of higher prices here domestically. If we do nothing, our domestic price is going to go up because of our increased dependence on OPEC sources and because of our importing more of this insecure and uncertain commodity. Uncertain, because OPEC can raise prices any time that they wish because they control 67 percent of the world's proven reserves.

Senator CURTIS. And if we continue to get more and more dependent upon foreign sources, we are then in a situation where arbitrary and capricious action would be more effective and we would have to accept it.

Is that not right?

Secretary SIMON. That is 100-percent correct, Senator. We still can choose to act in our own best energy interest instead of reacting to decisions by foreign countries. We have to start thinking of the energy

crisis in this country as one affecting American jobs, homes, food and financial security.

Senator CURTIS. And the cornerstone of that is to increase domestic production of oil and gas.

Secretary SIMON. Yes; it most certainly is.

Senator CURTIS. Now do you find any provision in the House bill which would increase domestic production of oil and gas?

Secretary SIMON. Do I find what, sir?

Senator CURTIS. Any provisions in the House bill which would increase the production of oil and gas?

Secretary SIMON. Unfortunately not. The actions taken so far do just the opposite, such as reducing the depletion allowance.

Senator CURTIS. In view of the recent gas price increases, do you see any need for a gasoline tax as a conservation measure? Would a small gas tax such as 3 cents a gallon be likely to stimulate any meaningful reduction in gasoline consumption?

Secretary SIMON. No, sir, it would not.

Senator CURTIS. How do you assess the likely impact on employment of the auto efficiency standards in the House bill?

Secretary SIMON. We have not done an employment analysis of that particular proposal, but we will do one and supply it for the record, Senator.

[The following was subsequently supplied by the Department of the Treasury:]

A mileage improvement program affects jobs in the automobile industry and in the service industries associated with motor travel. Cars with low mileage amplify the effects of recent price increases in gasoline and decrease motor travel. This hits the service industries directly as we observed during the oil embargo.

High gasoline prices lower the demand for low mileage cars, and, if high mileage cars are not available from domestic manufacturers, the public will turn to imports. Obviously, domestic employment in the automobile industry decreased from both factors in that case. The case for gasoline mileage improvement is clear, and I note with satisfaction that Detroit is already responding to these market forces by offering cars with greater mileage.

Some data is available on the effect of the voluntary program upon the automobile industry. The Federal Energy Administration has calculated that compared to the business as usual situation (that is no gasoline mileage improvement) the voluntary program will increase new car sales by 0.5 percent in 1977, 2.1 percent in 1980, and 2.4 percent in 1985. Domestic auto production estimates are unavailable so employment effects cannot be determined. But, for the reasons already given, employment would increase.

Senator CURTIS. You do not have a guess at this time whether it will add to employment or decrease it?

Secretary SIMON. It would be really purely a guess. I imagine it would probably have a slight impact but I do not think it would be very great.

Senator CURTIS. Do you agree that price controls on oil and natural gas have discouraged the use of coal as a fuel both by utilities and by other business concerns?

Secretary SIMON. Of course they do. People are always going to substitute where they can get the same results with less money spent.

You know, all of this debate, really puzzles me because in the final analysis, here in the United States, the products which people will be willing to pay for are going to be those produced, as an adequate

price is going to insure an adequate return; and things that people are not willing to pay for, are just not going to be produced. This is not only the essence, this is the genius of our free enterprise system and when we talk about tax policy, it is not taxes that subvert our economic system in this country. It is our political system that subverts our economic system and does not allow it to operate efficiently, purely and simply, and utilities are a perfect example of it.

Senator CURTIS. In reference to utilities, I agree with the premise that our tax benefits, our investment credit, must benefit the company or they will not use it for expansion to meet the needs of our economy.

Is that not correct?

Secretary SIMON. The ultimate beneficiary, and this idea is never explained or understood, is the American consumer, because by expanding the productive capacity in any area will lower prices to the consumer ultimately.

Senator CURTIS. I am talking about the regulated utilities. If we require or permit an immediate passthrough to the consumer, it will not meet the needs of their expansion.

Secretary SIMON. It certainly will not, Senator Curtis, and basically all we are doing then is subsidizing the consumer.

Senator CURTIS. Now, some of these regulatory powers are exercised by the States and some by the Federal Government.

Do you have a comment as to how Congress could compel State regulatory bodies to observe the policy that we write in reference to how the passthrough should take place?

Secretary SIMON. I must admit that I have great trouble with the Federal override or with the Federal Government overdirecting the States. Our proposal is the carrot, if you will, Senator, that allows them to make these difficult choices, we hope, more easily.

Senator CURTIS. I agree with your premise and it seems to me in drafting the increased investment credit for utilities that this whole problem of passthrough is something to which we should give particular attention.

Secretary SIMON. Yes, it is. Of course, if they do not have a tax liability, all of these proposals are useless.

Senator CURTIS. That is correct.

Now, I think most everybody would agree, too, that for the near future our principal energy resources are oil and gas and nuclear energy and coal. It is not too early, however, to plan and provide for the research for other alternate energy sources.

Secretary SIMON. Oh, it certainly is not. That is why we are going ahead with such great amounts of money for research and development. As I say, over \$3 billion in 1976 will be spent on R. & D. which is the ultimate answer.

Senator CURTIS. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Talmadge?

Senator TALMADGE. Mr. Secretary, I judge from your testimony there is very little in the House bill you support?

Secretary SIMON. That is correct because it just does not go far enough in meeting the goals that we must meet.

Senator TALMADGE. I find some of it quite inaccurate. I may say also, it seems to me that what we must do is concentrate on trying

to use the energy source that we have in abundance; and that is coal. And we must also concentrate, it seems to me, on trying to conserve the energy that is nonjob productive. At least some 5 or 6 million barrels a day is used by automobiles, is that not a fact?

Secretary SIMON. Six million currently.

Senator TALMADGE. Six million?

Secretary SIMON. Yes, sir.

Senator TALMADGE. How much of that is in useless joyriding?

Secretary SIMON. That is difficult really to qualify. I think the increase in price has discouraged some percentage of useless joyriding, but there are other considerations because of some very important industries in this country. During the gas lines and the embargo, the tourist industry landed on everybody in this room, including myself. If we weighed too heavily on gasoline, it would have quite an economic impact.

Senator TALMADGE. Why could we not do a lot to eliminate the needless use of energy in automobiles by vigorously enforcing the 55 mile speed limit—we have the law but it is not enforced—by canceling credit cards for gasoline and by closing filling stations on Sunday?

Secretary SIMON. Well, as far as the 55-mile-an-hour speed limit, some States are enforcing it rigorously and I am told, although I have no firsthand knowledge of this, others are not. I think that it should be enforced.

There again, the role of the Federal Government in telling the State to enforce the 55 mile-an-hour limit is unclear to me.

As far as closing gas stations on Sunday, that is of limited utility because people can buy gasoline on Saturday and indeed they did, on Saturday and Monday instead.

Senator TALMADGE. That is quite true but it would create a sense of emergency I think that would cause people to know that we are in an emergency and cause them not only to conserve gasoline but to conserve it in other areas.

Now, what can this committee do to try to mandate the use of coal for electric utilities and boiler fuel wherever practical? We have lots of gas and petroleum being used in that regard now, as you know. Petroleum and gas we are short of and coal we are not.

Secretary SIMON. That is correct and the President's proposals are directed to giving incentives to assure more coal would be used. To amend the Clean Air Act—

Senator TALMADGE. You would do it by an incentive method in the tax system?

Secretary SIMON. Yes, that we consider extremely useful and there again, as I said in my prepared statement, Senator Talmadge, if we had the luxury of time, these proposals would probably not be what we would come forth with because we do not want to mess up the tax system with special incentives to special industries. The lead time to construct a facility, especially a nuclear plant, is long and its cost, is great. Many nuclear and coal-fired plants were canceled and deferred during the past year, well over 200. We have to get those back on the drawing board. It is going to be years before they are on-line.

Senator TALMADGE. I could not agree more. A few years ago, you know, when we overreacted with some of our legislation, we caused many utilities to convert from coal to petroleum.

And now, it seems to me, we are going to have to go 180 degrees in the opposite direction and require them to convert back to coal. Would you agree with that?

Secretary SIMON. Yes, sir, I would.

Senator TALMADGE. Does the Federal Energy Administrator now have that authority?

Secretary SIMON. I do not believe any Federal authority exists, except the temporary authority of the Emergency Allocation Act.

Senator TALMADGE. I do not know if this committee has jurisdiction, but if we have, should we not try to approach it on that basis?

Secretary SIMON. Well, there again, we are talking about a Federal override of the States with all of their different environmental agencies that have presented quite a problem in utility switching.

I was involved in that problem during last winter's embargo when we encountered great resistance from some States as well as and their local EPA boards. And those that did shift to coal shifted right back again the minute the embargo ended.

Senator TALMADGE. We have overridden the States in practically every other area of energy; in clean air, water pollution—

Secretary SIMON. The administration has a siting proposal, on which Congress has not yet acted, providing that States give the Federal Government plans for nuclear plants and refineries siting and indicating when they are going to come on-stream. If in a reasonable period of time—I think it was a year and a half or 2 years—they had not come forth with plans then the Federal Government would do it.

But, we ought to give the States the freedom to plan their own futures and decide their own priorities. But, there should be a stick, if you will, in the proposal. If the States do not do what is in the national interest themselves, then somebody else will do it for them, unfortunately.

Senator TALMADGE. One other area that offers hope in the field of energy, I think, is nuclear plants. You mentioned in your testimony that in Europe and in Japan they can go from the drawing board to a plant on-stream in about 4½ years. And yet here it takes what—10 to 11 years?

Secretary SIMON. Yes, sir, it does. And that is purely and simply the regulatory problem—getting through the massive paperwork, the environmental problem, the siting, the fear of nuclear plants, if you will, the rising costs during such delays. When you compound at 8.5 or 9 percent a year and it takes 11 years to build a plant—you are more than doubling the cost of such a plant.

Senator TALMADGE. What can we on this committee do to try to shorten that time?

Secretary SIMON. The President is working on that part of the regulatory process. We have to remove these regulatory impediments and put a reasonable time-frame on them if we expect industry to build such plants.

Senator TALMADGE. It is incomprehensible and inconceivable that that much time could be wasted here when the future of this country and the industrialized world is imperiled by these exorbitant prices we are having to pay for energy. And yet no one seems to want to do anything about it.

Secretary SIMON. I could not agree with you more. You know it has been 30 years since the end of World War II and nuclear energy provides us with 1 percent of our domestic energy supply. And that is a shame. Japan is building their first nuclear park right now and we do not have one in the United States.

Senator TALMADGE. My time has expired, thank you.

The CHAIRMAN. Senator Haskell?

Senator HASKELL. Thank you, Mr. Chairman.

I was interested, Mr. Simon, in your reaction to the chairman's suggestion on utility rates and particularly the peak load pricing. Has the Treasury Department made any estimates of capital cost savings if some kind of off-peak pricing were adopted by utilities?

Secretary SIMON. I would like FEA to comment on that, they have been working on that, Mr. Haskell.

Mr. PASTERNAK. Mr. Haskell, Bruce Pasternak, Deputy Assistant Administrator for policy at FEA. We have been doing a lot of work on off-peak pricing, peak-load pricing. As you probably know, we just held a major conference here in Washington in the month of July in which we had something like 1000 people from around the country interested in this problem.

We feel that there are some potential savings from off-peak pricing. But, there are also some problems that have to be investigated in terms of the ability of the poor to conserve energy in some of the inner city areas where they may not have the thermostats or the ability to conserve.

So, we think it is a very lucrative area and one which we are pursuing very carefully.

Senator HASKELL. I wonder if you would submit, for the committee's consideration, your analysis of the effect of adopting offpeak pricing for industrial and commercial users, particularly on capital requirements of off-peak pricing. I recognize the difficulties involved with adopting off-peak pricing for residential users.

Could you do that?

Mr. PASTERNAK. We would be very happy to.*

Senator HASKELL. Mr. Simon, I was interested in your suggestion on the deferral of taxes for reinvestment of dividends on utilities and I presume this is somewhat comparable to the plowback provision suggested for the energy industry.

You were before the committee the other day, I believe, testifying on the difficulties of financing the public debt. I wonder if you had considered the possibility of plowback interest on Government bonds and notes and the like?

Secretary SIMON. I do not think that we have ever considered it. I believe at one time in history, U.S. Government securities were fully tax exempt.

Senator HASKELL. Merely reinvesting the interest in Government bonds—I was wondering whether that would be the equipment of a plowback and I was wondering what effect that would have?

Secretary SIMON. Of course, the result of that, depending on the interest that was indeed plowed back on a deferred or exempt basis

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

during fiscal year 1976, would amount to \$36 billion. That is a rather expensive subsidy.

Senator HASKELL. Well, as you know, Mr. Simon, the housing industry is in difficulty and there is always the possibility of adopting a plowback on savings and loan interests, or on bank interests, if people reinvested in their savings account. And I wondered if you had explored carrying this plowback theory beyond the energy industry and the utility industry?

Secretary SIMON. We looked at the exemption or partial exemption with a cap on saving and loans and other thrift institutions and indeed, we are sympathetic to their problems during the period of disintermediation. But, our economic analysis showed, and I will supply it for the record, Mr. Haskell, that it would not cause a net increase in savings. It would cause some great shift, which Congress perceived as a benefit to the rich because people in the 20 to 40 percent tax bracket—20 to 30 percent tax bracket—would benefit very little.

Senator HASKELL. You see, Mr. Simon, that is where I part from your line of thinking. I would consider a reinvestment in utility dividends a benefit to the rich and I would consider a reinvestment by the energy folks as a reinvestment for the rich and I just wanted to make this point. I think they fall into this category.

I would like to ask you one other question. The chairman mentioned one omission in your statement and I observed another one. You did not talk very much about conservation except by letting the price rise. Mr. Enders did talk about conservation. Mr. Enders, the last fellow in the administration to talk about conservation lost his job.

Mr. ENDERS. I will watch it.

Senator HASKELL. The Senator from Georgia, Mr. Talmadge, referred to the automobile fuel efficiency provisions. The House has what I consider a very modest stick to the folks in Detroit and I wondered how you reacted to that portion of the House bill?

Secretary SIMON. On purpose I omitted talking about conservation. I directed my detailed statement to the area of Treasury's greatest interest. Frank Zarb is going to direct himself to conservation when he appears this afternoon.

Senator HASKELL. Do you have any views in view of the fact that you are interested in energy generally, obviously from the stimulating of sources aspect. The other side of the coin is conservation. Do you have any personal views on that particular section of the House bill?

Secretary SIMON. I think that the voluntary agreement that we have with the automobile industry which is going to increase the efficiency of automobiles by 40 percent before the end of this decade is the way that we should approach it, Mr. Haskell.

Senator HASKELL. On the voluntary basis.

Well, that is all I have, Mr. Chairman. I might say, Mr. Simon, when I practiced law and somebody said they would do something, I always said, "Put it in writing." So, the way I look at it as far as Detroit is concerned, if they say they are going to do something, I would prefer to have it in writing in legislation.

Secretary SIMON. We have a written agreement with them, Mr. Haskell, it was signed with the Secretary of Transportation.

Senator HASKELL. Thank you, but I would prefer it in the form of legislation that may be a little bit more binding.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Packwood?

Senator PACKWOOD. Bill, as you know, I prefer to work backwards from where we want to go, and then see what steps are necessary to get there. So follow along with me while I make some statements, and ask if you at least agree with where we are trying to go.

It seems to me there are three things that are needed. One is to reduce imports, and we need to do that both from a balance of payments standpoint and a national security standpoint, regardless of whether we have adequate energy in total. Are you okay on point one?

Secretary SIMON. Yes, sir.

Senator PACKWOOD. All right.

Two is increased production of energy in this country. Three is to conserve the use of energy in this country.

Secretary SIMON. I agree with all three, Senator.

Senator PACKWOOD. It seems to me that you and the House bill agree on all three of the goals, but you differ on means, and you substantially differ in your assessment of the effect of the House bill. And I am inclined to agree with you on almost all aspects as to the effect of the bill. As far as the imports are concerned, they use the quota system, and then they have so many exceptions as to make the quota almost meaningless. But if by chance it did work, as you very well said in your testimony, they have not taken into account as to what they are going to do with the shortfall. They have no rationing program. They assume no price increase, despite the fact we have a shortfall of oil. Is that correct?

Secretary SIMON. Yes, sir, that is correct.

Senator PACKWOOD. Okay.

Secretary SIMON. You know, there are not any easy options, Senator Packwood, unfortunately. I wish there were, but they went by long ago, due to the inaction of the past 20 years. The energy decision is a tough decision right now, but we have to make this tough decision and pay the necessary price to put us in command of our own economic destiny. I mean this purely and simply.

Senator PACKWOOD. Your difference on the tariffs is—and again, I agree with you—we go the tariff route rather than the quota route in attempting to reduce imports.

Secretary SIMON. The quota, as I said in my testimony, does the same thing as the tariff.

Senator PACKWOOD. I agree. Now, on the production of energy, the House has a whole variety of tax incentives to produce energy. The administration says that their tax incentives are better, but again—and I agree with you, we are both pointing in the same direction.

Secretary SIMON. Yes, sir.

Senator PACKWOOD. On conservation, the House has a variety of tax credits which, in my mind, will not work. They are not going to conserve very much energy. The principal one, as far as the tax credit is concerned, is the home insulation credit, and then they pretty much rely on price for the rest of the conservation.

Secretary SIMON. Yes, sir.

Senator PACKWOOD. I find both the House bill and the administration's bill weak from the standpoint of conservation, because I am not

sure the price mechanism alone is going to result in the conservation we want.

Secretary SIMON. We have building standards as well.

Senator PACKWOOD. Pardon me. I had forgotten the building standards. I guess what bothers me about your position is that you want to conserve energy only because we are temporarily short. I do not sense any commitment to the conservation of energy from the standpoint of the environment or ecology. Just because we are energy-short, we have to conserve to get us over a hurdle I think that is a short-sighted view to which the House addresses itself even less, and you do not need to answer on that, because that is just my personal opinion of what we ought to do with energy.

Let us go to gasoline in particular. You figure that the \$3 import fee and the \$3 excise tax will increase gas 9 to 10 cents a gallon?

Secretary SIMON. It is the \$2 import fee. The whole President's program would have been 10 cents across the board. But, as we said, we were looking at ways to, in the short run, put more on gasoline.

Senator PACKWOOD. I was talking about \$3, as we looked at it last February, and what we were projecting it would cost if we put the entire package into effect, 9 to 10 cents a gallon. Now, do you seriously think that 9 to 10 cents a gallon will substantially reduce the consumption of gasoline?

Secretary SIMON. We believe it would reduce it by the amounts that we projected. The longer run elasticity, as far as gasoline is concerned, is greater. When people demand more efficient automobiles, Detroit is going to produce them, as indeed they are producing them right now. As far as home insulation, building of homes, and all of the rest of our building standards and others are going to be affected, because your percentage increase on the other commodities—on distillate, on home heating oil and the rest—your percentage increase is larger, because that is cheaper than a gallon of gasoline.

Senator PACKWOOD. Well, the argument that the executives in General Motors, Ford, and Chrysler made last week was the same as this: the market is pushing us in that direction. We are voluntarily going to achieve the 40-percent increase. But I am intrigued with something in Frank Zarb's testimony. On page 24 and 25, he says:

We believe that the voluntary fuel efficiency agreements made by the major manufacturers and announced by the President continue to be the most effective way to achieve increased automobile fuel efficiency without placing such a burden on manufacturers so as to increase possible unemployment.

Let me stop there for a moment. The House bill, at least through 1980, is imposing by law the same standards, or very close to the same standards, as the voluntary agreement that you already have. Is that not correct?

Secretary SIMON. Yes; that is essentially correct.

Senator PACKWOOD. So you should not have any substantial burden on unemployment, at least through 1980, unless the voluntary standards that we have already agreed to are going to be a burden on unemployment.

Secretary SIMON. If we start down the path, Senator Packwood, of the Government legislating various segments of our economy, you know what the next step is going to be. It is predictable.

Senator PACKWOOD. I understand. But I just want to make sure that, at least through 1980, the House legislation or the voluntary agreement produces roughly the same thing.

Secretary SIMON. That is correct.

Senator PACKWOOD. And then Frank continues:

A 40-percent increase in automobile fuel efficiency is expected to result by 1980 from the agreements and interim goals. * * * Should the automobile manufacturers fail to achieve the goals announced by the President, the Administration will seek appropriate legislation at that time.

Can you speak for him? Is what he is saying that if along the way, if the manufacturers fall by the wayside, if the market does not push it to that level, we will then consider legislation to make sure we get to that.

Secretary SIMON. That is correct, Senator.

Senator PACKWOOD. All right.

Last question, a two-part question. One, considering all of that, if you could have an energy program exactly as you wanted, with all of the President's powers on tariff intact, with all of the tax incentives that you want, with all of the energy conservation matters that you want, would you in addition support legislatively a substantially higher gasoline tax?

Secretary SIMON. Well, when you say substantially, we favor, especially in the short run, a higher gasoline tax than the rest of the barrel.

Senator PACKWOOD. I am talking about a 20- to 30-cent tax, in addition to everything else?

Secretary SIMON. I do not think we would need it to reach our goals.

Senator PACKWOOD. Last question. Would you support a sticker tax at the time of purchase on so-called gas guzzling automobiles?

Secretary SIMON. I have always been intrigued with that idea, but we think that just increasing the price of gasoline is going to accomplish the same thing. People who want a 15-mile-per-gallon car, or people with a 25-mile-per-gallon model say, all right, I will buy the one at 15; I do not drive that much, so I am not going to use that much gasoline. You know, you are talking about something pretty fundamental in our country, and it is called freedom of choice. And if you feel that that is a precious commodity, or that we do need Government to make up the minds for the American people, super. I do not.

Senator PACKWOOD. But you intrigue me, Bill, in this sense. You do not mind using the price mechanism to enforce conservation—

Secretary SIMON. Take utilities, for example. Sooner or later, people are going to find out, that we are going to have brownouts and blackouts. I discussed it a little while ago, in response to Senator Curtis. It is a political problem, not an economic, financial, or tax problem. So we will have brownouts and power shortages and blackouts and two or three Secretaries of the Treasury from now, we will be up here explaining that we will have to have a higher price. And then we will recognize that a higher price is needed to pay for it, or we are going to nationalize it or regulate it and subsidize it. These are your options. It is pretty simple.

Senator PACKWOOD. Your time is up.

Secretary SIMON. I am sorry. You are on my favorite subject.

THE CHAIRMAN. Senator Gravel?

SENATOR GRAVEL. Mr. Secretary, you have got some more time here. The House Ways and Means Committee passed a recycling credit that failed on the floor of the House, because some felt it would create a loophole. There are substantial energy savings to be made in recycling paper, bauxite for aluminum, iron ore for steel, rubber, glass, and what have you. Also, there are obvious benefits, because we are going to be faced with cartel pricing in many of these resource areas. So there are economic benefits to recycling not to speak of the obvious environmental benefits. What counsel would you give us here in the Senate committee in order to realize these energy benefits to recycling? Recycling has a disadvantage with respect to virgin materials, because we have tax loopholes. For example, we have depletion and capital gain treatment for timber. What counsel would you give us? Should we either wipe out all of the existing loopholes, which would equalize the situation for recyclables, or should we pass a tax credit to give recyclables the same advantage in the economic marketplace as virgin products?

SECRETARY SIMON. Of course, we look at recycling, and we think that the present price and anticipated price in the future, as uncertain as that is, will accomplish the recycling itself without the need for additional incentives, if you will. It is administratively, Senator Gravel, extremely difficult to look at each particular commodity that operates in the particular dynamics of its own market place and own substitution, some of it being quite expensive and some it, indeed, unknown, such as the shale and gasification, liquefaction that I talked about before, to really put a tax like that into place. But we would be willing to look at it with you; yes.

SENATOR GRAVEL. I would like to do a little bit more than just look at it. If we recycle aluminum, we can probably save 80 percent of the energy that goes into the processing of bauxite. It is not a very complicated matter. We have a depletion allowance for bauxite, so why can we not turn around and give a similar tax credit to arrive at that equivalency for recycled aluminum? That would make it economical to pick it up and recycle it?

SECRETARY SIMON. Bruce knows something on this subject. I do not pretend to be an expert on the recycling side.

SENATOR GRAVEL. Please.

MR. PASTERNAK. Senator, my first assignment when I came to Washington 2 or 3 years ago, to the Council of Environmental Quality, was to work on a recycling tax credit. And in fact, the economics have changed over the past few years. In those days, way back in 1972 and 1973, recycling and resource recovery was not economic. It was more expensive than just traditional ways of doing things in solid waste recovery. As the price of energy has increased, as the availability of landfills for getting rid of the solid wastes has been harder to get, recycling has become more favorable, and I think the economics show that the change is progressing and continuing. Our feeling is that—

SENATOR GRAVEL. Senator Nelson is pointing out to me we are still not focusing on the question. I am prepared to give credit to the Arabs for helping us think of recycling, but what have we done ourselves

with respect to the tax advantage that virgin bauxite, iron ore, and timber have against recycled materials? We can write a law saying we will give them a certain advantage, equal to iron ore. Now, would you rather have us create that credit, or would you rather have us wipe out the tax advantage that iron ore already has? That would certainly hasten the day we do more recycling and save more energy.

Secretary SIMON. I would be glad to go to work with you on that, as far as the tax benefits are concerned, specifically.

Senator GRAVEL. I am not looking to go to work on it. To me it is very simple. Are you prepared to say that we can wipe out the depletion for iron ore, and therefore give recycled scrap iron the same advantage; or are you prepared to say that we should pass a tax credit for scrap iron?

Secretary SIMON. Well, the credit system again may not be the best system to employ. No; I am not prepared, without looking at it very carefully, to say we ought to wipe out the existing depletion on other minerals in this country.

Senator GRAVEL. Well, I am rather upset, since this is something the administration has been working at. In fact there have been a lot of organizations working on it. It is not a new subject. It will save considerable quantities of energy. It has been debated in the House, and essentially you are telling me that you will think about it. I think, for a promising area, that is somewhat inadequate.

Moving to another subject, I notice in your statement that you are treating the whole trust fund concept lightly. There is no question that it does guide certain quantities of money in one direction. But it helps create the assurance of those funds.

Now, let me give you an example. The ERDA budget was cut about \$100 million in solar by OMB. It was cut another \$100 million in end-use conservation, which everybody beats their breast about but does very little about in terms of putting up the money. I got from the Corps of Engineers a figure of \$500 million that we could use to accelerate our hydro development for power in this country. That is \$700 million right there that could be added onto the budget to guide us toward greater independence in energy. Yet it was stopped by the actions of the administration and OMB.

Now, if we had a trust fund, we could do as we did with the highways. We could meet the need for a period of time. The fact that it may have outlived its usefulness certainly is no reason to not undertake this trust fund for at least a decade to get us out of our difficulty.

Secretary SIMON. Of course, the priorities--and where the R. & D. money should be spent, and the amounts of money that should be spent, are determined by the experts; Bob Siemons and his group and the line people are going to have disagreements that more money should be spent in one area than another. But that is their expertise.

Senator GRAVEL. I wish it were the experts, because the solar decision was made at OMB, and not by Siemons and his people. In fact, at a lower level, the technicians felt that they could spend the money. Now there is no money, essentially, for end-use conservation.

Secretary SIMON. You are going to have disagreements at the lower level, Senator Gravel, constantly on the difficulties.

Senator GRAVEL. Would the trust fund not help obviate that? If we are really in a crisis situation with the energy crisis, would a trust fund not permit this to vector the resources necessary to do the job?

Secretary SIMON. I do not think that would change the underlying difference of opinion that might occur as to where these moneys should be spent: no.

Senator GRAVEL. Would there be a quarrel about \$500 million more to accelerate all of the hydrodams and facilities that are being built in the Nation today?

Secretary SIMON. It is a matter of what your priorities are. As far as coal gasification and liquification versus solar, that might be 10 years away. We should get moving on the ones that are more near term; while continuing to work on the others at the same time, but recognizing that even if we spent a hell of a lot more money on it, it would not come on that quickly.

Senator GRAVEL. End-use conservation, Mr. Secretary, is something that could be realized tomorrow, and the administration has literally no budget in that area.

The CHAIRMAN. Just in the event that an objection is heard from the Senate as to the committee meeting, I am going to order that the reporter sees that at this point Mr. Frank Zarb's testimony is printed and that it appear at the appropriate place in the record.

Senator Mondale.

Senator MONDALE. Mr. Secretary, the theory of the administration's energy package is clearly that higher prices will both conserve energy and spur new domestic production. For over a year now new oil produced in this country has been priced over \$11 a barrel, while price controlled so-called old oil has been selling at \$5.25, and yet our figures show the production of new oil has dropped by 750,000 barrels per day, while production of old oil has actually remained constant. Why has not the price incentive been working during this period of time and what indications do we have that it will work better in the future?

Secretary SIMON. It is just a lag time, Senator Mondale. Exploration has increased 20 percent last year, and it takes 3 to 4 years before it is realized in tangible energy production in this country. Production is going to decline, even if we continue to have an increase in exploration over the next few years because it does take time to bring it on-stream.

Senator MONDALE. In other words, the figures that indicate that the higher priced oil has dropped over the past year by 750,000 barrels a day, while the lower priced old oil has remained constant, do not bother you?

Mr. PASTERNAK. It should be noted, though, that in fact drilling of new oil wells has gone up 45 percent the first quarter of this year, as compared to previous years, so I think it is a problem with lead times. It takes time to bring on the new wells; even if you started drilling today, it would take 3 to 5 years to bring them around.

Secretary SIMON. That is an impressive figure, that 45 percent. Depending on what percentage are successful you will see the whole thing turn around, but not for several years.

Senator MONDALE. There is a pretty clear consensus that we must get more domestic oil produced through secondary and tertiary re-

covery, and the administration has indicated that only if we decontrol the price of oil would we be able to realize these production gains and, yet, figures indicate that we can expect only 350,000 barrels per day of additional oil production by 1980 through secondary and tertiary methods, which works out to about \$180 a barrel. Is this not a rather high price to pay for greater domestic energy production and are there not less expensive means of getting at the same end?

Secretary SIMON. I would like the FEA to comment on the secondary and tertiary aspects.

Mr. PASTERNAK. I think that is, again, the same problem of lead time. While your number is pretty accurate for 1980, by 1985 you could increase domestic oil production by over 1.5 million barrels a day from advanced recovery, tertiary recovery techniques, and it is somewhat misleading to try to put a marginal barrel price on the increased production of oil that you get from each new barrel because, in fact, there are reductions in domestic energy demand that occur and in imports as well, that occur from the higher prices. I think you will have to look at those too.

Senator MONDALE. This is a question I might put to both Secretary Simon and Mr. Enders. The administration has imposed a \$2 per barrel oil import tariff on all imported crude oil, including that imported from Canada. Mr. Zarb with the FEA has been most cooperative, as has been the State Department, in attempting to work out arrangements with the Northern Tier States to enable our refineries to continue to import Canadian crude oil by changing it to domestic crude.

As you know, most of those refiners in that Northern Tier are totally dependent on the Canadian crude. They were established for that purpose, yet does not the import tariff work contrary to this purpose by, in effect, telling the Canadians that we want less of their oil in spite of the fact that we have in other ways indicated a desire to keep the level of Canadian imports up?

Mr. ENDERS, Senator, it does not tell the Canadians that we want less of their oil. What it does is say that Canadian oil, which is imported into the United States, will not get a windfall advantage, vis-a-vis all other oil. Therefore, it is necessary to keep from discriminating in favor of a set of exporters or a set of importers who otherwise could clean this \$2 off themselves, vis-a-vis all other competitors.

We have seen that the Canadian Government is quite active in making sure that its prices are at or above the world level so that this is a consideration for us. That is different from the matter of finding a way to take account of the future needs of the Northern Tier refineries, which as you indicated, Senator, we are pretty encouraged that we can do.

Secretary SIMON. That would be pretty much my response to that, Senator.

Senator MONDALE. One final question, Mr. Simon. The administration has proposed, but not defined, a windfall profits tax. Would you be willing to consider rebating that tax to consumers by way of increasing the individual dependents credit now found in the tax law, that is \$30 a dependent?

Secretary SIMON. We proposed various mechanisms in the original proposal. I would say that we would be willing once it is structured to take a look at any part of our tax system to determine the most efficient way and equitable way of rebating. I have no closed mind on this.

Senator MONDALE. You would not rule out that possibility?

Secretary SIMON. No, sir.

Senator MONDALE. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Byrd.

Senator HARRY F. BYRD, Jr. Thank you, Mr. Chairman. Mr. Secretary, to follow up one of Senator Packwood's questions, the price of gasoline has been increased roughly 50 percent in the last 2 years. What effect has that had on consumption?

Secretary SIMON. I want FEA to give the specific figures because there is a mistaken impression that the increased prices across the board have not resulted in any saving. Others say erroneously that the recession has accounted for all of the savings. So let us look at the period before the recession starting September 1974, really had its impact, and compare what our energy growth was before and after the energy price was quadrupled. There had been about 7 or 8 percent increase overall in the economy. Energy use had been growing a little in excess of 4 or 5 percent, but in that 6 months before the recession really hit and after prices quadrupled the growth rate dropped to between 2 and 3 percent.

The CHAIRMAN. If I might just ask the Secretary to suspend for just a moment. The Senate is in session and objection has been heard to the committee meeting, so I now declare this meeting adjourned, and we will now meet as a group of Senators discussing the energy problem. Senator Byrd, you go right ahead. You are now advising a group of Senators.

Secretary SIMON. I liked the first part of your statement, Mr. Chairman.

Senator CURTIS. There are no rules now. It is a free for all.

The CHAIRMAN. You are advising a group of Senators who happen to be members of the Senate Finance Committee about energy, Mr. Secretary.

Senator HARRY F. BYRD, Jr. Mr. Secretary, would you delay just a moment, Mr. Chairman. I regret that I am in the position of asking the questions at the moment because I subscribe to the Senate rule that if the Senate is in session we should not have committee meetings if there are objections, so I am in the position of going against my own philosophy on this.

The CHAIRMAN. Senator, we are not meeting as a committee as of now, so I think I protected you.

Senator HARRY F. BYRD, Jr. All right. We will proceed temporarily. Will you proceed, Mr. Secretary.

Secretary SIMON. Yes, due to the higher price, not only do we save the approximately 2½ percent but we also stopped the growth of over 5 percent a year, so we have saved and there is elasticity admittedly.

Senator HARRY F. BYRD, Jr. Well, let us get some figures as to the use. Has the use of petroleum decreased?

Secretary SIMON. Yes, and I would like FEA to give you the exact figures.

MR. PASTERNAK. In fact, Senator Byrd, the gasoline consumption in 1973 during the summer, for example, which is where we are today, was about 7 million barrels a day, roughly. It was less than 7 million barrels a day last summer; it is about 6.9 to 7 million barrels a day right now. If we had not had the increased energy prices it is our estimates—and we have checked them with all of our previous forecasts—that we would be consuming about probably 8 million barrels a day right now. So, in fact, there has been roughly a 10 percent decline from where it would have been had we not had the increased prices, and that is true across all petroleum products. It is the growth curve that we have knocked off completely over the last 2 years.

Senator HARRY F. BYRD, Jr. It took the 50 percent increase to do that?

MR. PASTERNAK. It took probably a little less than 50 percent increase, but that is about the kind of elasticities that we are talking about, and that is one of the things that I think sometimes get confused. We are not assuming that a 100 percent increase in the price of gasoline would amount to a 50 or 100 percent decline in demand. We are assuming that a 100 percent increase in the price of gasoline would amount to roughly a 10 or 15 percent.

Senator PACKWOOD. How much?

MR. PASTERNAK. About a 10 to 15 percent.

Senator PACKWOOD. You say for a 100 percent increase?

MR. PASTERNAK. For short-run elasticity, yes. In the longer run that builds up; that builds up to about 20 percent, .2 or .3 elasticity over a few years.

Secretary SIMON. That is what is going to happen. As Detroit increases the efficiency of automobiles, we go from an average of 12 $\frac{1}{2}$ miles per gallon presently, or 13, up to 20.

Senator HARRY F. BYRD, Jr. Well, insofar as the use of gasoline is concerned, we are using the same amount now, 7 million per day.

Secretary SIMON. 6 million per day.

Senator HARRY F. BYRD, Jr. You said roughly 7 million.

MR. PASTERNAK. In the summer peak of close to 7 million.

Senator HARRY F. BYRD, Jr. Mr. Secretary, to follow up Senator Talmadge's question with regard to coal, I am not clear as to what is being recommended as an incentive to convert to coal.

Secretary SIMON. Well, of course, the incentives are there for the utilities to convert from oil fired to coal facilities through the tax incentives. The strip mining legislation that we are all familiar with, the siting legislation, the 12 amendments to the Clean Air Act, all encourage the use of coal.

Senator HARRY F. BYRD, Jr. Well, the strip mining bill, as such, does not encourage the utilization of coal. The veto of the bill would encourage it.

Secretary SIMON. An acceptable bill would. I think that the measures that have been taken, including, of course, the increased price per ton of coal, have been a significant incentive because we have seen Pittston Co. and I am sure there are others, increase their capital expenditure programs very significantly.

Senator HARRY F. BYRD, Jr. But on the surface mining legislation, I want to be sure we are clear on this, it was the veto of the surface min-

ing legislation that helps and not the surface mining legislation, is that correct?

Secretary SIMON. The veto helped, yes, but, of course, a proper strip mining mill would, indeed, act as an incentive when they would know what the ground rules are.

Senator HARRY F. BYRD, Jr. But the surface mining legislation that was enacted and then vetoed—that would not—

Secretary SIMON. No, sir, it would not.

Senator HARRY F. BYRD, Jr. It was the veto that helped insofar as that particular piece of legislation is concerned.

Secretary SIMON. Yes, sir.

Senator HARRY F. BYRD, Jr. Thank you. I wanted that point to be clear. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Nelson.

Senator NELSON. Mr. Simon, one quick question—some moments ago, I think in response to some question of Senator Packwood's, you said there were no easy answers to the energy problem, that they disappeared because of inaction over the past few years.

Secretary SIMON. I said 20, Mr. Nelson.

Senator NELSON. Oh, you said 20.

Secretary SIMON. Yes, sir. You know what I meant by that really, Senator Nelson, was that due to the quadrupling of oil of the OPEC nations the economic impact of such a dramatic price increase in such a basic commodity on our consumer's and our industry in this country is apparent to everybody. If we had removed all the impediments and been allowed to bring on all the alternate sources of energy the last 20 years, the increase in price would have been more gradual. That is why I say it is a tough energy choice today.

Senator NELSON. I do not want to quarrel about that. I do not quite agree with that. Who is handicapping anybody on the price of oil? As a matter of fact, we kept out imports, in order to keep the domestic price higher than the world price.

Secretary SIMON. But the problem—just take the natural gas area, where for 21 or 22 years, we effectively controlled the price of natural gas, at uneconomic prices, with the expected results.

Senator NELSON. But we did not do it with oil. But that is not a question I wanted to get into.

Everybody in the Administration, or out of the Administration, in Congress, editorial writers, have all agreed, that the OPEC price was arbitrary, inflationary, that it was not related to cost of production or free market. And during your testimony, you said today that there was no economic justification and the argument of the OPEC nations was bogus. But if the price is inflationary all over the industrial world, and if it is a disaster for the industrial world, as Secretary Kissinger stated, when he was in Europe a couple of months ago, and the arguments in support of the price are bogus, why in heaven's name is the President insisting on sticking \$2 on top of the worldwide inflationary price, at a time when we are trying to control inflation in this country? It absolutely baffles me.

Secretary SIMON. What we wish to do is to transfer the decision-making from the OPEC nations that have a monopoly to our domestic economy. A higher price is going to result in A, the conservation

and B, the increased supply that is needed to do this. Unfortunately, it does take a period of time to do it.

Senator NELSON. I do not swallow that response. You already said the OPEC price is arbitrary. The argument is, it is political, it is inflationary, that the price ought to be lower and that inflation is creating a disastrous situation in this country, and then, plink, you put \$2 on top of it, and now the OPEC nations are saying—

Secretary SIMON. But you neglect, Mr. Nelson—

Senator NELSON. Let me finish. And now the OPEC nations are saying, well, after all, our price is not unreasonable at all; the President has added \$2 on top of what has been attacked as an unreasonable price. We are going to add some more. And I have not heard any reasonable response to that.

One of your arguments has to be wrong—either it is not inflationary, and you are not worrying about it, or it is inflationary and you are making it worse.

Secretary SIMON. It has got a one-time inflationary impact, but you neglect to mention, Mr. Nelson, and most critics do, that the money is going to be rebated, and the consumer price index does not take into consideration the fact that the consumer is no worse off than he was before, because he has the money in his pocket that was removed through the higher price of oil and gas, of energy in this country. And he can make the freedom of choice, then, as to what he wishes to spend it for.

Senator NELSON. There are not any economists in this Nation that are going to support that statement. When you put that price up, it is going to go into wage contracts throughout the country; it is going to go into the increase in the cost of living, it is going to go into an increased cost of producing every product in this country; it is going to increase the cost of fertilizer, manufacturing, transportation, everything. You cannot rebate all of that.

Secretary SIMON. The one-time economic or inflationary impact, and I stress that it was one-time, was 2 percent, and that is pretty generally agreed to by most economists.

Senator NELSON. I do not see what is one-time about it. I do not know whether Ribicoff's figures are correct or not. He said \$20 billion a year. It is \$20 billion every single year.

Secretary SIMON. The money gets rebated every single year.

Senator NELSON. But the cost of the product—you are not rebating to the manufacturer.

Secretary SIMON. It is not a continual increase. The price does not go up. If bread goes to 25 to 30 cents, and just stays there, you do not count inflationary impact each year. That is one-time.

Senator NELSON. The cost of manufacturing, the cost of that product going into manufacturing has increased, permanently. You are not rebating that price. Now, you are attempting some Rube Goldberg device of getting back to the people some kind of a rebate, which I do not think is very practical and workable—but it just absolutely baffles me to see the administration attacking the OPEC price as irrational, and then adding to the irrationality.

Secretary SIMON. The indirect cost impact, was taken into consideration, in our arriving at the 2-percent effect on the CPI, and also in the rebate process.

Senator NELSON. Those are the funniest answers I have ever heard. OPEC is irrational, but the President is rational by putting \$2 on top of the irrational price. I guess I will get a copy of the record for distribution to my constituents in order to define the President's position, but it certainly does not make much sense to me.

On the question of the automobile, that was raised by Senator Packwood, you have repeatedly said, and I generally agree, that if we can have a free market operate, that is what we ought to do. But when you have got monopolies involved, the free market does not work very well. And that is what we have had in oil, monopolistic influences in oil, and in coal. We allowed the free market to operate on the automobile, incidentally, and that destroyed mass transportation in this country. My question on the automobile—your proposals are to let the free market handle everything, and yet, when it comes to mandating any activity by anybody, the administration opposes it. The voluntary agreement with the automobile industry to increase fuel efficiency by 40 percent is not anything. They can do that tomorrow. There is no new technology. It is just a lighter automobile. That is all, less power. And if they simply drop all of their big models, they would reach that standard tomorrow.

I think the problem faced here is, this is not a crisis; it is a disaster. The public does not understand that. I do not think the leadership in the administration understands it. But if you are going to do something about a disaster, it seems to me, you have got to interfere in the marketplace. If we mandate doubling the mileage of the automobile, which can be accomplished, by the time the automobiles were all in line, on the highways, with double the mileage, we would have savings of 40 billion gallons of gasoline a day, a little less than that. We would save 3 million barrels a day. We would have 11% better than 11% Alaska pipelines. It would be dramatic. Now, it would be an interference with people's choice, as General Motors said the other day, and Ford and Chrysler; there is no doubt about that. But there is going to be a dramatic interference with everybody's choice in this country in the next 10 years if we do not do something dramatic to resolve this problem. And what we are doing, it seems to me, is totally inadequate.

Why do we not face up to this as a disaster, which it is, and mandate that we are just going to get rid of that huge, gasoline-consuming automobile, that would cut in half the consumption of gasoline in this country, which would be more dramatic than anything the administration or anybody else that I have heard of has suggested thus far.

Secretary SIMON. I disagree on one thing. I think that you and I do have an understanding of the problem. I think that we have a very fundamental difference of opinion in the approach that should be taken to attack the problem.

The automobile industry is going to make automobiles that American people are going to buy. Automobile manufacturers have made or attempted to emphasize smaller automobiles. We have had a big automobile society, and we have tried to educate the people since the embargo, and the escalating costs, that this was an inefficient way indeed to be spending their money. We have a written agreement that is going to increase by 40 percent the efficiency of the American automobile before the end of this decade, which is going to accomplish a 40-percent savings in gasoline.

We think we are accomplishing the same thing and still maintaining the freedom of choice and avoiding the bureaucracy, that always forms a further encroachment on freedoms. And as I say, I think this is just a fundamental difference of opinion, but it does not mean we do not understand the problem. We think we do. We know we do, and we know you do, too.

Senator NELSON. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Hansen.

Senator HANSEN. Thank you, Mr. Chairman.

With respect to legislative solutions to produce dramatic results, Mr. Secretary, it occurs to me that one of the best examples I can think of that illustrates the point being made by my good friend from Wisconsin is to observe that, when we were all cranked up on pollution here, a few years ago, and we were not yet aware of the extent of the emerging energy crisis, we took some pretty dramatic action. We forced the automobile manufacturers to install pollution devices. And about the most we got accomplished with those was a very dramatic drop in gasoline mileage. Is that not a fact?

Secretary SIMON. Yes.

Senator HANSEN. As far as this Senator is concerned, I would just as soon read a little more of the testimony from experts before we take any more dramatic action. I think it might be indicated.

Secretary SIMON. I agree with that, Senator.

Senator HANSEN. I have before me a copy of the U.S. News & World Report, June 16, and I would like to read from it a little bit. The senior vice president of the First National Bank in Midland, Tex. says:

The loss of depletion not only took a lot of money out of the industry, it showed people that Congress is still in a vindictive mood toward the oil industry. When it should be encouraging exploration, it warned oilmen that they had better wait and see what happens next, before they proceed.

I have a copy of a letter from Dave True, the immediate past chairman of the National Petroleum Council, and he points out that in the 3 months since the President signed into law H.R. 2166, the Tax Reduction Act of 1975, the average number of drilling rigs active in the State of Wyoming has decreased from 129 to 99, which is a decrease of over 23 percent. During this same period last year, the average number of drilling rigs in operation increased by 13 percent. The Society of Independent Professional Earth Scientists, a very sophisticated group of petroleum geologists, tells the same story in a report they made that resulted from inquiring of the different drilling companies in America what was going on, and the number of drilling rigs has dropped, the number that is working now, compared to a year ago.

The backlog on the number of wells has dropped dramatically. In other words, there are not as many wells that people want to drill now as there were awhile ago.

I make these observations because it seems to me they underscore the point that you make, that we have a twofold dilemma facing us. One, how to achieve conservation; and No. 2, how to do something about increasing supply. And if I understand you correctly, I think that you are saying that the President, in taking the action he has so far intended to discourage further importation of foreign oil, which creates balance of payment problems for America. It results in an increase in unemployment here in this country by discouraging domestic ex-

ploration. I mean, what has been done absent the President's action has had the effect of that, and if by increasing the cost of imported oil, we will, as I am certain—I agree with you and the President—encourage domestic production, we will be creating jobs here in America. We will be increasing the percentage of our total energy that comes from petroleum, domestically, by that action. Do I read your testimony to imply this?

Secretary SIMON. Yes, sir.

Senator HANSEN. Well, now, we have been talking about Canada, and what has been done there. I understand the Canadians have already said that they are going, despite the assurances given us a few years ago by our good friends to the North that we could always count on them—to do what is in their own best national interest. Is it not a fact that a few years ago, Canada was exporting oil from its western provinces and importing oil for those people in the eastern provinces where most of the consumption takes place, the cost of the imports being considerably less or being less than the value of their exports? Was that not the case here a few years ago?

Secretary SIMON. Yes; that is correct, sir.

Senator HANSEN. And did that situation not turn around when they found that they were selling oil for less than it was costing them to import it, and as a consequence, they raised the price of oil very dramatically, and now, they have even gone further in saying that it will not be too long until they intend to use most, if not all, of their oil, to satisfy their own energy requirements?

Secretary SIMON. They have the same domestic energy policy that we do, in attempting to achieve self-sufficiency. And they are building this Montreal-Sarnia pipeline to supply the eastern provinces, that presently are supplied from Venezuela and other potentially insecure sources.

Senator HANSEN. Now, the House, instead of biting the bullet as I think it should have, has tried to waffle all around the real critical issue of increasing supply, and has done a little bit about trying to discourage consumption, and has talked about quotas, and one thing or another. What would be the impact of quotas on Canadian imports, as you view their situation now today?

Secretary SIMON. I do not have any numbers, I do not have the numbers that would relate to Canada or any other country.

Mr. ENDERS. Senator Hansen, the Canadians have made very clear that they are going to decrease their exports to us on a quite sharp schedule and, on the basis of decisions that they have taken, we have no expectation at this moment that we will be importing oil from Canada in 1980. That may conceivably change, but the outlook at the present time is that it probably will not. On that basis, it means that the Canadian exporters, if there were a quota system, would have a smaller and smaller portion of it. I think probably the availability of Canadian oil rather than the size of the quota would be governing.

Senator HANSEN. If I could be permitted just one final question, Mr. Chairman, let me ask—is it not a fact that the Canadians probably intend to cut back their exports at a sharper rate than would result from the imposition of quotas by Congress?

Mr. ENDERS. That is correct, sir.

Senator HANSEN. Thank you, Mr. Chairman.

The CHAIRMAN. I have been advised that the Secretary of the Treasury is due to make a speech at 12:30. I believe we should permit him to make his speech.

What time do you think you might be able to return, Mr. Secretary? There are three Senators, Senators Roth, Brock, and Fannin that have not had an opportunity to ask any of their questions. I would like to accommodate them if we can.

Secretary SIMON. I could come back at approximately 1:45 p.m., for awhile, Mr. Chairman, and then I have a lot of appointments this afternoon that are going to have to get rejigged if I do that.

The CHAIRMAN. 1:45, would that be all right with these three Senators?

Senator BROCK. I wonder if somebody else could just answer the questions, Mr. Chairman?

The CHAIRMAN. Pardon me?

Senator BROCK. I would not mind asking my questions to his assistant if that is going to strain his schedule too much.

Senator ROTH. Or could we submit our questions in writing? *

Secretary SIMON. Sure, I would be glad to do that, Senator Roth.

Senator FANNIN. Mr. Chairman, we do have legislation on the floor. I think it would be fine if we could submit the questions. The only request I would make is, in consideration, if I could have assurance from the Secretary that he will read the chapters I have marked in this book on solar energy because I think it will give him a different picture as to the potential we have on solar energy.

With that understanding, I will be very glad—

Senator BROCK. Inasmuch as it applies to Arizona, of course.

Senator FANNIN. And the Nation and the world.

The CHAIRMAN. Well then if we have an understanding then that the Senators can submit their questions and I believe that Senator Brock would like to ask his questions and let whoever you care to designate respond for you, Mr. Secretary, we will proceed on that basis.

You will be excused and I hope you can make your speech. If you have got a magic carpet, you might make it, you have got 4 minutes to get there.

Senator HASKELL?

Senator HASKELL. Mr. Chairman, I would merely like permission to insert in the hearing record letters from the presidents of GM, Ford and Chrysler which embodies the so-called commitment that was made by the automobile companies with the U.S. Government.

The CHAIRMAN. Fine.

[The material referred to follows:]

GENERAL MOTORS CORP.,
Detroit, January 10, 1975.

Hon. ROGERS C. B. MORTON,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: We are pleased to respond to your letter of January 8 as chairman of the Energy Resources Council and assure you that General

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

Motors has committed itself to an all-out effort to improve automotive energy efficiency and to meet or exceed the 1980 fuel economy objectives stated in your letter.

This commitment is being carried out in a number of ways. Our research and engineering programs to improve the fuel economy of all our cars are running full tilt. Also, we have committed ourselves to large investments in facilities to build a much greater percentage of smaller, more energy-efficient cars. To meet the growing small car demand, we have spent about \$2 billion since the beginning of the program for the Vega, introduced in 1971. Additionally, we have greatly expanded our capacity to build smaller engines.

As we advised Secretary Brinegar on December 20, we have committed ourselves to provide passenger cars in 1980 with weights, engine sizes and mechanical improvements such that the sales-weighted fuel economy will average 18.7 miles per gallon, assuming carryover of 1975 emissions standards, no additional weight for safety or damageability standards and the market mix of cars that we anticipate (using the EPA city and highway test cycles).

In response to your January 8 request, we reiterate this commitment.

We must emphasize most strongly the need for a productive pause in new safety regulation, as well as the need for Congressional action in the retention of 1975 vehicular emission standards, if we are to attain the fuel economy goal. Our letter of December 20 to Secretary Brinegar therefore suggested that 1975 standards for both emissions and safety be continued in order to achieve the desired result.

Obviously, for example, if we were to be required to meet emission levels of 0.9 gr./mi. hydrocarbon, 9.0 gr./mi. carbon monoxide and 3.1 gr./mi. nitrogen oxides—rather than carry over the 1975 standards—the resulting fuel economy would accordingly be less than what would be attained at higher levels of these same exhaust constituents. Moreover, the cost to the customer would be increased.

Additionally, we must also indicate that such restrictions on emissions will limit our choices in the development of requisite engines and control systems. Some qualified technical experts are on record in support of this view. They assert that more stringent emissions standards would serve only to narrow the methods of accomplishing control objectives, with minimal improvement to the environment and substantial cost to consumers.

Similarly, the addition of any weight to the vehicles to meet new safety standards will adversely affect our efforts in achieving the desired fuel economy. As we advised Secretary Brinegar on December 20, weight additions due to safety-related items will cause fuel economy reductions on the order of 11 gallons per 10,000 miles per 100 pounds of additional weight—or approximately 1% loss in fuel economy per 100 pounds of additional weight.

Each 100 pounds of mandated safety weight effectively can add as much as an additional 100 pounds to the car for needed support structure and other requirements. Thus, the assumption in your January 8 letter of new federally mandated safety standards requiring, on the average car, not more than 100 pounds between the 1974 and 1980 model years could result in appreciable additional need for imported fuel oil.

As to the remaining points raised in your letter:

(1) We would expect to continue to participate in voluntary fuel economy labeling, such as the 1975 program, and to work with appropriate agencies to improve, as possible, presentation of information to consumers to allow them to make meaningful comparisons of fuel economy.

(2) We assume the Presidentially-appointed task force to study and recommend emissions and safety standards and fuel economy objectives beyond 1980 would work with the industry in developing such standards and objectives.

(3) We assume that the fuel economy monitoring program including semi-annual reviews of fuel economy improvement plans and progress would be one that is mutually satisfactory to the government and the industry. However, we ask that consideration of this proposal be deferred until details of the program are delineated. Such a program would have to give recognition to the competitive factors in the auto industry and the need for confidentiality in treatment of information acquired through such a process.

Moreover, the mandatory fuel economy standards which could evolve from such a monitoring program have potential in themselves for being less effective than the market forces of a voluntary system in reaching the fuel consumption objectives of the total program.

It should be noted that such standards could have the effect of placing restrictions on the availability of certain cars—regardless of consumer needs or intended use of such vehicles. Moreover, it is frankly conceivable that the customer demand for a mix of various cars that would emerge in any particular model year would be quite different from the mix which a manufacturer would be required to produce in order to conform his production to a fuel economy standard. The probability is that the manufacturer would be faced with the requirement to reduce his output of a particular type of passenger car to redress the balance and come within the standard. One consequence of this could very well be the development of a quasi-black market for that particular type of car during the latter months of a production year.

An additional consequence would be to delay the removal of older, less fuel-efficient cars of this type from the road rather than to replace them with more fuel efficient, safer, low emission vehicles, since these proposed standards would discourage the production and sale of these cars.

In conclusion, we must emphasize that we share fully with you the desire to produce and market more fuel-efficient automobiles that will aid the nation in reducing its dependence on imported fuel oil. We assure you of our commitment to do the engineering, employ the technical advances and make the capital investments to accomplish our objective of a GM sales-weighted passenger car average fuel economy of 18.7 miles per gallon.

We are sure that you recognize that certain unforeseen events beyond our control could cause variation in the outcome. For example, our products, facilities, production and distribution planning will, of course, be in conformance with our commitment.

However, in any model year conditions in the economy or the market may not make it possible for us to sell the mix of products that would be required to meet our commitment. Nonetheless, we will do our best to meet this important objective.

We stand ready to work cooperatively with whomever you designate in developing details of those items which will require study and agreement in the interest of achieving a program that will serve the nation.

Sincerely,

E. M. ESTES, *President.*

THE SECRETARY OF THE INTERIOR,
Washington, D.C., January 8, 1975.

Mr. E. M. ESTES,
President, General Motors, Detroit, Mich.

DEAR MR. ESTES: The Administration requests that General Motors Corporation make a public commitment to achieve, by the 1980 model year, a sales-weighted fuel economy for all its passenger car fleet of at least 18.7 miles per gallon (using the EPA city and highway test cycles). Such an improvement by 1980, with appropriate year-by-year progress before 1980, would represent a 53% gain over General Motor's 1974 fleet average of 12.2 mpg.

For vehicle emission requirements, the Administration intends to propose to Congress that Federal emission standards be modified for 1977-80 model years to the levels of the present stricter California standards for emissions of hydrocarbon and carbon monoxide (i.e., 0.9 grams per mile and 9.0 grams per mile, respectively). Nitrogen oxide emission standards, which are now recognized to have been originally set on the basis of faulty data, will be proposed to remain at present Federal levels (i.e., 3.1 grams per mile) pending development of proper data and analysis. Test requirements for these standards would be proposed to be on the same or similar basis as for 1975 cars. Our studies indicate that the above combination of emission levels and fuel economy represents a reasonable balance to meeting the essential National objectives of clean air and energy conservation.

For purposes of computing potential fuel economy improvements, it has been assumed that new Federally mandated safety standards will not require, on the average car, more than 100 pounds between the 1974 and 1980 model years.

It is our judgment that, through a combination of engine modifications, weight reductions, transmission improvements and various other actions, General Motors can achieve these fleet average fuel economy gains while contributing to our other National goals.

To recommend proper levels and timing of emission standards, safety standards, and fuel economy objectives beyond 1980, we will propose that the President appoint a Federal task force which would include the Secretary of Transportation, the Administrator of the Environmental Protection Agency, and the Director of the National Science Foundation. This task force would be charged with conducting necessary studies and making specific recommendations to the President by January 1, 1976.

We also request General Motors agree to a fuel economy monitoring program which would include semi-annual reviews of fuel economy improvement plans and progress. Details of the monitoring program would be developed jointly between your Company and the Secretary of Transportation so as to be mutually satisfactory. If this monitoring program shows that there is likely to be a significant short-fall in meeting the above fuel economy objectives, the Administration would then propose that Congress enact mandatory fuel economy standards.

Finally, we would expect General Motors to continue to participate in the EPA/FEA Fuel Economy Labeling program. This is a continuing program anticipated to have full and uniform participation by the 1976 model year cars.

We would appreciate being advised as soon as possible if General Motors will commit to these objectives.

Sincerely,

ROGERS C. B. MORTON,

Chairman, Energy Resources Council.

FORD MOTOR CO.,

Dearborn, Mich., January 10, 1975.

Hon. ROGERS C. B. MORTON,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: This is in response to your letter of January 8 that proposes, among other things, more strict vehicle emission standards and requests a commitment from Ford Motor Company that with increase average car fuel economy to at least 18.7 miles per gallon by 1980.

Ford is deeply committed to fuel economy improvements, both in the national interest and for competitive reasons. Our commitment is evidenced by the introduction in the past two model years of all new, more fuel-efficient products, as well as major manufacturing changes to increase our small car capacity. Our aim, however, is to fulfill the commitment to better fuel economy and adequate emission control at the lowest possible cost to the consumer. To do otherwise would add to the depth of the recession in the near-term and help to rekindle inflation in the long term.

As your letter recognizes, the presently established automotive emission standards for 1977 and beyond must be changed if the ambitious fuel economy goals you propose are to be achieved. Maximum fuel economy gains can be achieved at lowest cost to the consumer by a carry-forward of the 1975 49-state control levels for HC and CO (1.5/15). The nationwide application of the stricter California standards (.9/9) would, in our view, delay fuel economy progress and add to consumer costs and inflationary pressures—without producing appreciable air quality benefits as compared with a carry-forward of 1975 standards. In addition, it would sharply reduce any possibility of system redesign to remove catalysts—an action that could permit substantial reductions in new car cost and increase refinery yield of gasoline through the use of lead additives.

We can, of course, meet the .9/9 emission levels, as we do so today on production units sold in California. It is abundantly clear however, that today's California cars cost more and give less fuel economy than today's 49-state cars. Regardless of what fuel economy improvement can be attained at your proposed standards, *more* fuel can be saved, *more* quickly and with *less* cost and *less* investment if the standards are held at present 49-state levels. At issue, then, is whether the incremental gains in emission control levels warrant these negative trade-offs. We believe they do not. We find no evidence that the proposed tightening of HC and CO standards for 1977-80 production will have a significant effect on national air quality.

In these circumstances, we must reiterate our view that the optimum course of action is a carry-over through 1980 of today's 49-state standards, and we shall continue to advocate this position as vigorously as we can. We urge the Administration to continue its review of this issue so that final legislative proposals may

be passed on the best possible assessment. In this regard, we strongly endorse your determination to utilize a voluntary compliance program in the pursuit of our common goals. Selection of a voluntary program—rather than a mandated legislative route with its go/no-go inflexibility, costly and frustrating administrative burdens and the inherent adversary relationship between government and the private sector—is most encouraging to us. This decision will put competitive forces fully to work in the public interest.

With respect to the other points in your letter, we endorse uniform fuel economy labeling, the provision for fuel economy monitoring by the Department of Transportation and I wish to commend your recognition of the need to establish, as soon as practicable, optimum long-range emission control levels that will reflect a reasonable balance between the costs and benefits of improving the nation's ambient air quality.

In summary, Ford Motor Company believes it can, by the 1980 model year, achieve a sales-weighted average passenger car fuel economy of 18.7 miles per gallon, as measured by the present EPA city/highway test procedure, assuming that the 1977-80 emission standards are set no lower than 0.9 gpm hydrocarbons, 9.0 gpm carbon monoxide and 3.1 gpm oxides of nitrogen. It is our considered judgment, however, that the imposition of more strict HC and CO control is contrary to the public interest and a most regrettable additional burden to place on new car customers who ultimately must, through higher prices, pay for what we view as the totally unnecessary and not insignificant capital investment and product costs that will be incurred. I hope you will recognize that we are speaking not only for the account of our customers but for the welfare of our employees as well, thousands of whom are without employment, victims already of the depression-inflationary spiral that will be fed further by this ill-timed proposal.

Your desire to increase passenger fuel economy is no greater than ours. To ask us to achieve it in a manner that is wasteful of both capital and energy supplies is enormously disturbing to us.

On the other hand, it is even more disturbing that we find ourselves continually in a year-by-year adversary relationship with the Federal government over constantly changing standards. Accordingly, in the interest of seeking an accommodation that should be in our common interest because it holds the promise of stability for planning purposes, we pledge that we will work in good faith toward achievement of the fuel economy goal at the emission levels set forth in your letter.

Very truly yours,

LEE A. IACOCCA,
President.

THE SECRETARY OF THE INTERIOR,
Washington, D.C., January 8, 1975.

Mr. LEE IACOCCA,
*President, Ford Motor Co.,
Dearborn, Mich.*

DEAR MR. IACOCCA: The Administration requests that the Ford Motor Company make a public commitment to achieve, by the 1980 model year, a sales-weighted fuel economy for all its passenger car fleet of at least 18.7 miles per gallon (using the EPA city and highway test cycles). Such an improvement by 1980, with appropriate year-by-year progress before 1980, would represent a 30% gain over Ford's 1974 fleet average of 14.4 mpg.

For vehicle emission requirements, the Administration intends to propose to Congress that Federal emission standards be modified for 1977-80 model years to the levels of the present stricter California standards for emissions of hydrocarbon and carbon monoxide (i.e., 0.9 grams per mile and 9.0 grams per mile, respectively). Nitrogen oxide emission standards, which are now recognized to have been originally set on the basis of faulty data, will be proposed to remain at present Federal levels (i.e., 3.1 grams per mile) pending development of proper data and analysis. Test requirements for these standards would be proposed to be on the same or similar basis as for 1975 cars. Our studies indicate that the above combination of emission levels and fuel economy represents a reasonable balance to meeting the essential National objectives of clean air and energy conservation.

For purposes of computing potential fuel economy improvements, it has been assumed that new Federal mandated safety standards will not require, on the average car, more than 100 pounds between the 1974 and 1980 model years.

It is our judgment that, through a combination of engine modifications, weight reductions, transmission improvements and various other actions, Ford can achieve these fleet average fuel economy gains while contributing to our other National goals.

To recommend proper levels and timing of emission standards, safety standards, and fuel economy objective beyond 1980, we will propose that the President appoint a Federal task force which would include the Secretary of Transportation, the Administrator of the Environmental Protection Agency, and the Director of the National Science Foundation. This task force would be charged with conducting necessary studies and making specific recommendations to the President by January 1, 1976.

We also request Ford agree to a fuel economy monitoring program which would include semi-annual reviews of fuel economy improvement plans and progress. Details of the monitoring program would be developed jointly between your Company and the Secretary of Transportation so as to be mutually satisfactory. If this monitoring program shows that there is likely to be a significant short-fall in meeting the above fuel economy objectives, the Administration would then propose that Congress enact mandatory fuel economy standards.

Finally, we would expect Ford to continue to participate in the EPA/FEA Fuel Economy Labeling program. This is a continuing program anticipated to have full and uniform participation by the 1976 model year cars.

We would appreciate being advised as soon as possible if Ford will commit to these objectives.

Sincerely,

ROGERS C. B. MORTON,
Chairman, Energy Resources Council.

CHRYSLER CORP.,
Detroit, Mich., January 10, 1975

HON. ROGERS C. B. MORTON,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: Chrysler Corporation is pleased to commit itself to an all-out effort to meet or exceed the 1980 fuel economy objective under the terms and conditions you outlined in your letter of January 8, 1975.

We are sure that you recognize that certain events beyond our control, such as inability to sell automobiles in the projected mix, could cause some unforeseen variation in the outcome. We think it only fair to point out, moreover, that we continue to believe that the public interest would be best served by a carryover of the 1975 federal standards rather than the more stringent standards contained in your letter, because of the following beneficial effects: 1) it would cause no measurable sacrifice of air quality; 2) it would yield additional fuel savings; 3) it would be less costly; and 4) it should obviate any need for removing sulphur from gasoline.

However, if the decision must be made on the basis of the emission standards cited in your letter, we commit ourselves and our resources to this effort.

We stand ready to cooperate with whomever you designate in developing the program details.

Sincerely yours,

JOHN J. RICCARDO,
President.

THE SECRETARY OF THE INTERIOR,
Washington, D.C., January 8, 1975.

MR. JOHN J. RICCARDO,
President, Chrysler Corp.,
Detroit, Mich.

DEAR MR. RICCARDO: The Administration requests that the Chrysler Corporation make a public commitment to achieve, by the 1980 model year, a sales-weighted fuel economy for all its passenger car fleet of at least 18.7 miles per gallon (using the EPA city and highway test cycles). Such an improvement by

1980, with appropriate year-by-year progress before 1980, would represent a 35% gain over Chrysler's 1974 fleet average of 13.8 mpg.

For vehicle emission requirements, the Administration intends to propose to Congress that Federal emission standards be modified for 1977-80 model years to the levels of the present stricter California standards for emissions of hydrocarbon and carbon monoxide (i.e., 0.9 grams per mile and 9.0 grams per mile, respectively). Nitrogen oxide emission standards, which are now recognized to have been originally set on the basis of faulty data, will be proposed to remain at present Federal levels (i.e., 3.1 grams per mile) pending development of proper data and analysis. Test requirements for these standards would be proposed to be on the same or similar basis as for 1975 cars. Our studies indicate that the above combination of emission levels and fuel economy represents a reasonable balance to meeting the essential National objectives of clean air and energy conservation.

For purposes of computing potential fuel economy improvements, it has been assumed that new Federally mandated safety standards will not require, on the average car, more than 100 pounds between the 1974 and 1980 model years.

It is our judgment that, through a combination of engine modifications, weight reductions, transmission improvements and various other actions, Chrysler can achieve these fleet average fuel economy gains while contributing to our other National goals.

To recommend proper levels and timing of emission standards, safety standards, and fuel economy objectives beyond 1980, we will propose that the President appoint a Federal task force which would include the Secretary of Transportation, the Administrator of the Environmental Protection Agency, and the Director of the National Science Foundation. This task force would be charged with conducting necessary studies and making specific recommendations to the President by January 1, 1976.

We also request Chrysler agree to a fuel economy monitoring program which would include semi-annual reviews of fuel economy improvement plans and progress. Details of the monitoring program would be developed jointly between your Company and the Secretary of Transportation so as to be mutually satisfactory. If this monitoring program shows that there is likely to be a significant short-fall in meeting the above fuel economy objectives, the Administration would then propose that Congress enact mandatory fuel economy standards.

Finally, we would expect Chrysler to participate in the EPA/FEA Fuel Economy Labeling program. This is a continuing program anticipated to have full and uniform participation by the 1976 model year cars.

We would appreciate being advised as soon as possible if Chrysler will commit to these objectives.

Sincerely,

ROGERS C. B. MORTON,
Chairman, Energy Resources Council.

The CHAIRMAN. Mr. Secretary, it may be that some of the other Senators might want to ask further questions. If they do, perhaps you might be able to visit with them later on in the day, after Mr. Zarb has testified. What is your situation after 5 o'clock?

Secretary SIMON. I have to fly up for an engagement that has been on my calendar to Buffalo this evening and fly back late tonight. I am leaving later this afternoon for that.

The CHAIRMAN. I see. For the time being then, we will excuse you, Mr. Secretary.

Secretary SIMON. I will be glad to come back anytime, Mr. Chairman.

The CHAIRMAN. Mr. Zarb will be here this afternoon.

Senator Brock?

Senator BROCK. Are we going to stay now?

The CHAIRMAN. Well, you said that you would be satisfied to ask your questions of one of his assistants. Mr. Parsky is here.

Senator BROCK. Yes, if the Senator from Colorado is going to leave I wanted to ask one question relating to his earlier question.

Senator HASKELL. Certainly.

Senator BROCK. Mr. Parsky, earlier in the hearings Senator Haskell suggested that the proposed deferment of tax on dividends would be an incentive or an advantage to the rich. Now, if I understand the proposal, it is that instead of cash dividends that the utilities would be allowed to issue stock.

Mr. PARSKY. That is correct.

Senator BROCK. And the stock would not be taxed until sold? But at the time it was sold it would be taxed at ordinary income rates?

Mr. PARSKY. That is correct, it is just a deferment.

Senator BROCK. Then there is no possibility of the so-called rich being given a tax break by this device because if they had gotten their tax dividend they would have paid a tax?

Mr. PARSKY. That is right.

Senator BROCK. And they would have had the cash remaining. If they do not sell that stock, they do not pay the tax but as soon as they sell it they pay the full tax at ordinary rates?

Mr. PARSKY. At ordinary income rates and I do not have the breakdown, Senator, of the ownership of utility stocks and who would benefit and who would not from that. But, in any event, it is not a tax that would at no point be recovered. It is just a deferment.

Senator BROCK. My point is that there is no advantage to a stockholder in this system. The advantage lies in the maintenance of capital level for the utilities for investment purposes but the individual gets no benefit whatsoever?

Mr. PARSKY. That is correct.

Senator BROCK. Because if he wants the cash so he can spend it for his own consumption he has to sell the stock at which point he pays the regular income tax rate?

Mr. PARSKY. That is right.

Senator HASKELL. Would the Senator yield for just one comment?

Senator BROCK. Yes.

Senator HASKELL. I have suggested that possibly the same treatment be given on interest on Government bonds and on savings accounts and the Secretary responded that that might be interpreted as a benefit to the people in the 20-40 percent bracket who he characterized as the rich. And I merely stated that I felt this fell into the same category.

Senator BROCK. Well, let me make this point. I think I agree with both of you, that may sound confusing, but I think if you will study the tables of those who own stock you will find that the average income of a stockholder in this country is about \$16,000 a year. That can hardly be categorized as rich in today's society.

Now, the owner of bonds, in contrast, would have a considerably higher—and I have forgotten the figure but Mr. Parsky can supply it.

Mr. PARSKY. Sure.

Senator BROCK. But the owner of Federal and in particular tax-exempt bonds, the municipal securities, is a much higher income type of person and he would benefit by your proposal.

Senator HASKELL. I was referring to the holders of Federal Government bonds and also savings accounts.

Senator BROCK. In that case I think you will find—at least I believe that it is true—that even there the average income of those individuals is higher than the average stockholders. But, the point I am trying to make is, in this particular instance there is, no advantage to the stockholder, be he rich or poor, because when he gets that income in a cash form he pays a tax on it at the ordinary income tax rate.

So, there is no advantage to him unless he postpones it to retirement age and at that point his tax level is lower because his income is lower. In that case you could have a point.

Let me just make a couple of other points—maybe Mr. Parsky, you would supply for the record if you have these figures, the average income level of utility stockholders and of stockholders in general. I would be most interested in seeing those figures.

Mr. PARSKY. Certainly we will supply those.*

Senator BROCK. Just a couple of other points and, Mr. Chairman, if I might continue—you say, or Secretary Simon said that we will get a response to this increase of say, 9 or 10 cents a gallon because the automobile manufacturers will produce lower consumption cars and that houses and buildings will have better engineering, better insulation.

I think that is probably true but, does not that statement presuppose adequate capital inventories to make capital investments as opposed to consumer investments? Because when you do \$1,500 or \$2,500 worth of insulation on your house that is a today purchase, it drains the capital formation market much more than the payment of an additional \$12 a month on utility bills.

So, what you are requiring then is a sizable increase in capital formation in order to achieve a reduction in consumption. And I find that strange because Mr. Simon has made quite a point in recent months of the concern that he has with the adequacy of capital formation in this society.

Mr. PARSKY. Well, I think there are several points I would make.

First of all, you have to take into account both the short- and long-term energy savings and you have to also take into account the proposals we would have with respect to energy taxes and use of the price mechanism which would affect, to some extent, an increased willingness on the part of industry to invest and other tax reform measures which Bill has outlined, that would increase the willingness on the part of industry to invest.

I think that use of the investment tax credit, looking at the possibilities for integrating the corporate and individual income tax and a number of other mechanisms, will increase the emphasis on capital formation and savings.

Senator BROCK. My time has expired, Mr. Chairman.

The CHAIRMAN. The committee will meet again. I will say at 3:15, when Mr. Zarb is available to us this afternoon.

Thank you very much.

[The prepared statements of Secretary Simon and Mr. Enders follows:]

*The information referred to was not available at presstime. In order to expedite the printing of these hearings, the information requested will appear in appendix B of these hearings.

STATEMENT OF THE HONORABLE WILLIAM E. SIMON, SECRETARY OF THE TREASURY

Mr. Chairman and members of this distinguished Committee:

I appreciate the opportunity to appear before you today to comment on H.R. 6860, which you are now reviewing, and to discuss a number of other considerations relating to the development of energy policy.

INTRODUCTION

At the outset, I would like to reemphasize the urgent need to establish a national energy policy and a comprehensive and integrated legislative program to help achieve it. Energy policy simply cannot be approached on a piecemeal basis.

In formulating a sound national program, we must address both the supply and the demand aspects of the energy equation. The shortfall in domestic supply, of course, has to be accommodated through imports. The urgency of the import problem is highlighted by the fact that, during the first quarter of 1975, we imported about 37% of all the oil we used, at a value of \$25.8 billion annually.

The President has already determined that our current imports of oil are of such volume and under such circumstances as to threaten to impair our national security. He has acted within his authority to constrain demand through the imposition of an additional license fee on crude oil and products. This limited action is an initial step, but we need to get on with further energy measures without delay.

As you know, our current domestic production of crude oil and natural gas has been declining. In spite of a 20% increase in exploration and drilling activity during the last year, the decline in production has not yet been reversed. In the wake of declining production, we are not well prepared to withstand another embargo. For example, domestic crude oil production for March 1975 was 9.6% less than in October 1973, and natural gas production had declined by 5.6%.

While energy demand declined by slightly over 2% in 1974, recent indicators, particularly in the area of motor gasoline, are that consumption is moving up again. As the economy continues to recover, we expect demand for petroleum and natural gas to increase in the last half of this year.

The anticipated consequences are clear—demand, in the absence of new legislation, is expected to move up, the production will continue to decline: and we anticipate an inevitable increase in imports, with the resulting adverse impacts on national security and balance of trade.

CURRENT STATUS ON ENERGY LEGISLATION

Since the President submitted his legislative proposals for a national energy policy last January, the Congress has not enacted any legislation which would address our energy problem in a comprehensive and balanced way. On the contrary, the Tax Reduction Act of 1975, while it was essential to help stimulate the economy, will negatively affect our domestic energy program through the changes in the depletion allowance.

Altering the percentage depletion allowance has the net effect of withdrawing \$1.6 billion from oil producers this year and about \$2 billion per year thereafter. The reduction in depletion is, in effect, a permanent tax increase on the oil producer at the very time we need additional investment in domestic exploration and development. It has already had a significant adverse effect on exploration. To remove this incentive without a compensating decontrol of prices will substantially impede reaching our national goal of greater energy independence.

ENERGY ALTERNATIVES

While alternate energy sources, such as solar energy, oil shale, nuclear fusion and synthetic fuels are promising after 1985, the greatest energy potential for the next ten years is from our conventional oil, gas and coal resources. Today, almost 77% of our energy consumption comes from oil and gas and about 18% from coal. These are our basic sources of energy. Our distribution facilities as well as our plants and equipment are designed to use these sources. Substantial conversions of our plants, our industries and our homes to use other energy forms is not likely within the next ten years.

Recently, the U.S. Geological Survey released estimates of undiscovered oil and natural gas resources in the range of 50-127 billion barrels of oil and 322-

655 trillion cubic feet of gas. While these new estimates are lower than the previous ones, they are significantly larger than existing proved reserves of 40.6 billion barrels of oil (including natural gas liquids) and 233 trillion cubic feet of gas.

In addition, there are in known fields enormous quantities of oil that have not been produced as a result of inadequate technology and uneconomical prices. In fact, by present methods we are able to produce only about 30 percent of oil which has been found. This means that almost twice as much remains in the ground as has been produced and is included in known proved reserves. There are promising technological developments which may improve the recovery rate, and increased prices make it economical to develop these technologies and to produce these more difficult reserves.

Clearly, a potential exists for additional production through additional exploration and secondary and tertiary recovery; but only if there are sufficient financial incentives. The Project Independence Report estimates that, by 1985 at \$11 per barrel equivalent prices, domestic oil production will increase from current levels of about 8.5 million barrels per day to 13.1 million barrels per day, and that natural gas production will rise from 21.3 trillion cubic feet to 24.6 trillion cubic feet.

I have emphasized the need for increased domestic oil and gas production because these sources provide real potential in the near term for significant quantities of additional energy. In addition, we must look to coal and other sources.

Today, this nation has about a third of all the recoverable coal reserves in the world. We are the largest exporter of coal in the world, and at 1973 levels of consumption we have enough coal to burn for 800 years. Yet coal production in the United States today is lower than it was thirty years ago. In 1960, coal represented 23% of our energy consumption; last year this dropped to 18%. This trend has to be reversed. Our goal of 1.2 billion tons per year of production by 1985 will not be reached if we do not remove government impediments and create incentives for expanded production. This must include improved transportation facilities as well as the opening of new mines.

In the remaining areas, nuclear power is also a very promising source of energy. By 1985, it is expected to furnish 13% of our total domestic supply, up from 2% in 1975. There are, however, limitations in its use. It is confined to electricity generation, and its development is plagued by construction, regulatory and siting delays. This country was a pioneer in the development of nuclear power; yet today it can take up to 11 years to build a power plant in the United States while only 4 to 4½ years in Europe and Japan. Why? Because of excessive governmental regulations.

While there has been some progress in developing synthetic fuels, substantial volumes of these fuels are years away. So, for the next ten years, our main focus for expansion of energy resources must be on oil and gas, coal and nuclear energy. We must continue to recognize, however, that the chief barriers to all new energy production lie at our own doorstep, right here in Washington, D.C., in the problems created by the Clean Air, the moratorium on coal leasing as well as price and supply regulation affecting oil and gas. This Administration is firmly in favor of protecting the public health through balanced clean air standards and protecting the environment. At the same time, while never losing sight of our environmental and safety concerns, we must strive to ensure that our policies are properly balanced to meet our expanding energy needs.

FINANCIAL REQUIREMENTS

I have previously discussed the extraordinary need for capital investments to meet future energy demands. The capital requirements for energy alone will approximate \$1 trillion in the next decade. The required investments for domestic petroleum are variously estimated to range between \$12 and \$20 billion a year through 1985, based on 1973 dollars.

The availability of such capital funds will depend on the profitability of the oil industry. Recent reports indicate that, during the first quarter of 1975, the earnings of major oil companies fell off sharply from the level for the first quarter of 1974. This has been due to nationalization moves abroad and low margins on servicing foreign operations as well as the lack of price incentives at home. Concurrently, the major companies have announced substantial investment cutbacks. Since there is a direct relationship between the supply of energy

and the investment made to secure that supply, the availability of capital will largely determine whether we receive the energy we need. Unless we recognize the need to increase investment and capital formation and realize that profitability is essential to this, we will not be able to develop needed supplies of energy and our reliance on foreign sources will increase.

COMMENTS ON H.R. 6860

With that background in mind, I will turn to the bill on which you have asked me to comment. H.R. 6860, the Energy Conservation and Conversion Act of 1975, consists of four titles:

Title I—Import Treatment of Oil

Title II—Other Energy Conservation Programs

Title III—Energy Conservation and Conversion Trust Fund

Title IV—Encouraging Business Conversion for Greater Energy Savings

I will limit my comments primarily to tax issues, because I know that Frank Zarb, the Administrator of the Federal Energy Administration, will comment in detail on other issues. I would, however, like also to comment upon the difficult problems associated with a quota restriction on imports.

TITLE I

There have been suggestions that, instead of increasing oil prices to reduce oil consumption, we should simply reduce the supply of oil available by placing a quota on the amount of oil that can be imported. Proponents of quotas argue that we could not consume oil that was not available.

That sounds simple. However, such an argument leaves off in midair, and does not consider what happens after the quota is imposed. One of two things is possible: prices of oil will rise, just as in the case of an import fee; or, alternatively, shortages and/or rationing will occur.

QUOTA WITHOUT FURTHER CONTROLS

If we put a quota on imports, the price of oil will rise unless we take further action to prevent that rise. If we knew for sure that a 10-cent-a-gallon price increase would reduce consumption by 1 million barrels daily, we could be equally sure that an import quota that reduced consumption by 1 million barrels would increase U.S. prices by the same 10 cents. We are dealing with the same supplies and the same demand and they will balance out at the same place. Thus, an import fee and a quota are likely to have identical price implications.

A quota system, however, has two disadvantages. First, a quota normally leaves the additional price increase in the hands of importers and producers, rather than in the hands of the government.

Second, a quota would probably be more disruptive of economic activity, because the expectation of quota reductions would create new business uncertainties.

QUOTA WITH CONTROLS

Some proponents of a quota would introduce controls to prohibit the price increases that would normally follow from it. But such controls would, in turn, create shortages. At artificially low prices, the quantities demanded will exceed the supply. The shortages could then be distributed across the population by a system of allocation or rationing. We might embark on an era of chronic shortage and maladjustment, without the incentives to develop more sources of supply and to accept substitutes. I do not think the public would tolerate such a system.

An allocation program is sometimes cited as a solution—primarily, I think, on the mistaken notion that it would avoid rationing. But allocation is itself a system of partial rationing which occurs at the business rather than consumer level. An allocation program would deny businesses some of the supplies they need to continue functioning, and would lead to business dislocations and the loss of jobs. Further, much of the impact will be felt by small and growing businesses. The established and large enterprises can reduce, but others do not have such flexibility.

We could find a continuation of the situation that occurred last winter when plants closed because they could not get a sufficient "allocation" of natural gas. Undoubtedly thousands of jobs would be lost. At the retail level, quantities would be rationed by queueing, as was gasoline last winter. Nor would all of this

necessarily prevent consumer prices from rising. To fully ensure that prices will not rise due to shortages, we would ultimately have to ration gasoline, fuel oil, fertilizers and petrochemicals.

Rationing is certainly one way of curbing demand and a number of national leaders have proposed it. We could perhaps live with rationing in a period of temporary emergency. But as a way of life, I suggest it is fundamentally inconsistent with our system and with the spirit of the American public.

Even in times of emergency, rationing has never worked fairly or efficiently. To cut a million barrels a day from our consumption by rationing only gasoline for private households, we would have to hold drivers to an average of less than 9 gallons per week—a reduction of about 25% from today. To reach a 2 million barrels a day reduction by 1977 would require a second 25% reduction. Some persons would obviously need more, which means that the basic ration for ordinary persons would have to be even less. But gasoline accounts for only part of each barrel of oil, and we would clearly need to ration the remaining products, too—fuel oil, jet fuel, diesel fuel, refinery products going into petrochemicals, etc. Who would decide which persons needed more and which needed less of each of these things? Every family, every car and motorbike, every store, school, church, every manufacturer—everything and everybody—would have to obtain a permit for a certain quantity of gasoline, electricity, natural gas, etc. Those allocations would have to be changed every time someone was born or died or moved or got married or divorced, and every time a business was started, merged, sold out or bought another, or the church or school added on a new room. And some government official would have to approve it.

Last year, when we considered the feasibility of rationing gasoline, we concluded that while it could be implemented, it would take four to six months to set up, employ about 15 to 20,000 full-time people, incur \$2 billion in federal costs, use 40,000 post offices for distribution, and require 3,000 state and local boards to handle exceptions. When we consider the problems of just getting the mail delivered, are we really ready to trust an army of civil servants—however able and well intentioned—to decide who deserves just what of this basic commodity?

People should ask themselves which they prefer: an increase in prices, or a system in which someone else could tell them now and for the indefinite future where and when they might drive or how warm they might keep which rooms.

Does anyone honestly believe that the American public is willing to trade these basic freedoms—in perpetuity—for 10¢ a gallon?

The President has proposed instead that we reduce consumption of oil by the most neutral and least bureaucratic system available—through the price system. The energy proposals would raise the price of oil. At the same time, income tax cuts would increase the disposable incomes of every household. Taxpayers could, if they wish, continue to purchase more expensive oil and oil products. And they would have extra money to do it with. The question they would face is whether they wish to spend that extra money for more expensive oil or whether they wish to use it for some other purpose—but the choice will be theirs. Imposing quotas as Title I does and instituting rigid allocations or rationing will move us in exactly the wrong direction.

Another undesirable feature of Title I is that it eliminates the President's current authority to impose import fees and tariffs, and replaces it with set duties on imported oils and authorities to raise these duties to a fixed level. We believe that this will severely hamper our domestic program by removing needed flexibility to maintain adequate price protection for domestic supplies.

TITLE II

Title II of H.R. 6860 provides, along with a nontax measure relating to auto efficiency standards, for the repeal of certain excise taxes on buses used in intercity public transportation, and on radial tires and rerefined lubricating oil. The Administration itself has proposed a comparable change in the tax treatment of rerefined lubricating oil, but we oppose the selective or discriminatory repeal of excise taxes. While repealing excise taxes on intercity public transportation might save some energy by reducing the use of private transportation, our policy with respect to excise taxes that flow into the Highway Trust Fund has been that all highway users should bear the cost of highway maintenance, and we believe that the potential energy savings here do not warrant a change in this policy.

Title II also gives tax credits to individuals who install home insulation or solar energy equipment, or who buy electric cars. In January, the President proposed a tax credit for home insulation. It is a relatively inexpensive item, with proven energy-saving qualities. By contrast, solar equipment and electric cars are expensive items, years away from development and the cost effectiveness of which has not been satisfactorily proven. We do want to encourage solar energy and we should do so through Federal support of R&D; but not attempt to develop such long-term energy sources through tax incentives, we oppose these tax credits to consumers because they appear to be premature.

TITLE III

Title III provides for an Energy Conservation and Conversion Fund, for the purpose of promoting research and development. We oppose such a Fund. All trust funds reduce flexibility in managing the national budget. Furthermore, trust funds make available large sums of money without first defining needs and priorities, encouraging the Federal government to overtake and supplant private sector efforts. When potential sources of revenue are set aside for special purposes, we do not have access to those sources, which may not continue to be needed for the original purposes. The Highway Trust Fund, which the President has recently announced he will reduce, offers a good example of why such funds should be approached with great caution. Consequently, we resist the proliferation of trust funds, although we are prepared to discuss various ways in which to promote needed commitments to the development of new energy resources.

With respect to this Fund, for research and development, I would add that the new Energy Research and Development Administration (ERDA) has undertaken, and the Congress has approved, a major acceleration of Federal energy R&D programs, including a 63% increase in funding in FY 1975. The Trust Fund would seem to ignore these developments, and indeed earmarks amounts of funds that may bear little relationship to the need for spending or the ability to spend wisely.

Title III also provides for a Trust Fund Review Board of five members appointed by the President, and whose duties would include evaluating projects for which expenditures are made and recommending changes to Congress. Although the Board would help select ERDA priorities, it would have no direct responsibility for ERDA activities. Such a role could possibly duplicate duties of other government agencies and fragment the management effort.

TITLE IV

Title IV aims to encourage businesses to use fuels other than petroleum and natural gas. Part I imposes taxes, beginning in 1977, on the business use of petroleum and natural gas. There are two weaknesses here.

First, the bill exempts from tax the oil and gas used by firms engaged in transportation, agriculture, mining, electric generation in existing plants, textile and glass manufacture, or in rental housing or lodging. Additionally, certain tax-exempt organizations would not have to pay the tax on purchases of oil and gas. The result would be an exemption for many major, industrial users of oil and gas, causing serious efficiency losses in the business sector.

Secondly, even if the tax on oil and gas used by business were to cover all businesses, the result would be an undesirable distortion in petroleum usage. Prices of products would be tilted in favor of gasoline for private cars, fuel oil and gas for home heating and other non-business uses. Yet one of the main purposes of the President's program is to reduce consumption; and the individual consumer often offers the best scope for such reduction.

Ultimately, the best way to cut down consumption of oil and gas will be to raise prices across the board, as was intended by the President's program, rather than to impose most of the conservation burden on one or two sectors of the economy.

Part II of Title IV introduces a set of five-year amortization provisions for investment in "energy use property" including certain facilities used to produce coal or shale oil, to liquify or gasify coal, to use solar energy, and to burn solid waste to produce thermal energy. Part II also provides for five-year amortization for investment in certain railroad equipment and facilities and extends for four additional years the amortization provision of section 184(e) relating to railroad rolling stock. Part III extends the investment credit to solar energy equipment

and denies use of the investment credit for investment in electric generating plants fueled by petroleum or natural gas.

We do not feel that the five-year amortization and investment credit proposals should be enacted. Whenever the economics are favorable, there is no need for a tax subsidy for coal mining or for utilizing solid waste as a fuel. Instead, we should concentrate on removing the governmental impediments. When the technologies for such things as solar energy utilization and shale oil production exist, the economics of business decision-making should suffice to induce their adoption. Where the technologies are lacking, what is needed is research and development—not an investment subsidy.

Whatever the merits of a policy of curtailing the construction of oil and gas-fired electric generating facilities, I would urge the Committee to reject the proposal to deny the investment credit for such facilities and to accept our approach to assist utilities which I will discuss in a moment. There may be cases where utility companies will be forced to use oil or gas, either because they are required to meet environmental standards, or because they are situated where coal supplies are not available at reasonable prices. Denying investment credit would be another unavoidable capital cost that would be reflected in higher prices for selected groups of consumers. Thus, this proposal is inequitable.

More importantly, however, this proposal would, for the first time, introduce extraneous selective criteria for investment credit qualification. The economic and tax policy justification for our investment tax credit are somewhat more complex than other incentives for business investment, but its neutrality is a highly desirable characteristic.

The Administration has recognized the advisability of easing the capital cost of converting to facilities *not* fired by oil or gas. Accordingly, we proposed to increase from 10 to 12 percent the credit for such facilities. However, denying the credit entirely so as to increase the capital cost of certain investments on the grounds that they are "unworthy" is quite a different matter. In that sense, the H.R. 6860 proposal is an unacceptable departure from the general neutrality of the investment credit. Accordingly, I urge this Committee to reject the changes in the investment credit proposed by H.R. 6860.

Finally, in connection with all the provisions of Title IV, it is important to note that tax subsidies generally address the results of the problem, not the causes. We must clear away the regulatory and price disincentives to energy development first. Further, tax subsidies generally benefit only persons with tax liabilities. However, new and unprofitable businesses also should be encouraged to convert to alternative energy sources to conserve, or to increase supply.

The government could better direct its efforts to encourage conservation and conversion directly, such as the programs initiated by FEA and ERDA. The government is already spending much money for energy research and development. Total outlays for ERDA for example, are expected to exceed \$3 billion during fiscal year 1976. Following further progress in technology and after identifying those energy areas which offer the best potential, it may become clear that we should step up government efforts in well-defined areas.

In summary, we find that we cannot support most of the tax aspects of H.R. 6860, particularly in view of the unsatisfactory energy savings that we can expect from the bill. Likewise, these disappointing expectations make it difficult to justify estimated revenue losses from H.R. 6860 of \$768 million for 1976 and over \$1 billion for 1980. More important, gross revenue gains from H.R. 6860 would go into the Trust Fund and would be spent. However, the revenue losses from the bill must also be taken into account in assessing the full impact on the Nation's budget. Doing so, the ultimate effect of the bill would be to increase the deficit by more than \$2 billion in fiscal 1976 and more than \$3.5 billion in fiscal 1980.

COMMENT ON THE DECONTROL OF PRICES FOR NEW NATURAL GAS AND OLD CRUDE OIL

Having commented on the specific provisions of the bill under consideration (H.R. 6860), I would like to direct your attention to omissions which the Administration feels are essential to the development of a comprehensive energy policy.

We need a definite plan to deregulate the prices of new natural gas and old oil—that part of domestic oil production which is still subject to price controls. Decontrolling prices and eliminating allocations are, perhaps, the most important parts of the President's program. Keeping a dual price system for crude oil and

the oil entitlements program creates distribution and economic problems which could permanently distort that marketplace. Such distortions change the basis of decision-making from one based on cost effectiveness to one based on political considerations. Retaining such a system will threaten the efficiency of the economy, and ultimately result in higher prices to the consumer.

DECONTROL OF NEW NATURAL GAS

A failure to increase prices will surely accelerate the already alarming decline in supplies of natural gas. On June 6, the Federal Power Commission released preliminary 1974 statistics indicating a further decline in natural gas resources committed to interstate pipelines. Dedicated reserves dropped from 134.3 trillion cubic feet at the end of 1973 to 120.4 tcf at the end of 1974, the seventh consecutive year of decline.

The FPC also released a staff report showing net curtailments of firm service by interstate pipelines of over 2 trillion cubic feet (roughly 10% of total U.S. production) during the period April 1974 through March 1975. Such curtailments are expected to increase to nearly 3 trillion cubic feet for the period from April 1975 through March 1976.

If supplies of natural gas decrease at current rates, replacement costs for alternate energy will increase dramatically. For example, the FPC reports that in January 1975 on a BTU-(heat) basis, utilities paid almost 3½ times more for oil than for gas and nearly 1½ times more for coal. Homeowners and industrial plants are faced with similar or even higher costs (because of heating plant modification) for substitute energy, if natural gas supplies continue to decline.

With deregulation and higher wellhead prices for natural gas, it will pay to drill in marginal areas, to work over marginal wells, to make distant pipeline connections which are not now economically feasible and to drill in the high-risk frontier areas where there is real hope for significant new discoveries. Without higher prices, gas sold in interstate commerce will continue to decline, increasing the unit of cost of pipeline deliveries, creating uncertainties in supplies for businesses and homeowners and requiring the use of high cost energy substitutes. This, in turn, will further depress the amount of natural gas resources, which have already declined from 22 years' supply in 1955 to currently less than 11 years' supply. I do not believe we should place homeowners and industry in such jeopardy.

ELIMINATION OF THE TWO-TIER PRICE SYSTEM FOR CRUDE OIL

Because of the uncertainties of past price control policy, we must also address the deregulation of "old" oil prices. In doing so, we must keep in mind the dual objectives of increasing domestic oil supply and restraining oil demand.

Because of price controls, about 60 percent of our production is selling at an average price of \$5.25. In 1970, domestic oil production peaked, declined slightly for the next three years and accelerated to about a 5 percent decline last year. Oil production today is nearly 500,000 barrels a day below last year's rate and about 1 million barrels a day below 1973.

Decontrolling oil prices will allow the free market to provide the needed incentives to discover new reserves and increase recovery from existing wells which will help reverse this trend. Further, by allowing oil to be sold at the market price, consumption will be reduced. Moreover, allowing oil prices to reach a level reflecting world conditions will also serve as an incentive to investment in alternate energy resources and to the vigorous expansion of R&D programs.

Clearly, the most important element of an effective energy policy is the deregulation of energy prices in order to restore free market forces.

In January, the President proposed immediate decontrol of crude oil prices, and a tax on producers that would assure that no sector of the economy would gain an unfair advantage from decontrol.

Since January, much has occurred to influence the structure of a legislative program for decontrol as well as the tax which should be applied to producers. Taking all of this into account and in a spirit of compromise, today the President has proposed phased, rather than immediate decontrol, with a ceiling on all domestic oil prices. The plan will phase out price controls on domestic oil by January 1978.

This phased decontrol program, combined with the \$2 increase in import fees already imposed by the President, will reduce demand by almost 900,000 barrels per

day by 1977. Such actions, coupled with the President's other proposals contained in the Energy Independence Act of 1975, will reduce our oil imports by two million barrels per day by 1977. H.R. 6860, on the other hand, can be expected to reduce imports by only about 300,000 barrels per day in 1977.

Complete decontrol of domestic production, and the \$2 import fee, would raise consumer costs by only about 10 cents per gallon, some of which has already taken effect. The President's phased decontrol program will increase prices of all petroleum products by about 1 cent a gallon by the end of 1975, by about 4 cents by the end of 1976 and by 7 cents when fully in effect in 1978.

In conjunction with decontrol, we are still seeking a reasonable windfall profits tax, which would include a plowback provision. We must recognize that depletion has been removed and that costs of finding and producing oil have continued to rise, further eroding the profitability of oil producers and limiting their ability to increase their investment. As such, we would like to work closely with this committee in structuring a tax which will ensure that profits are no more than are needed to increase future supplies.

We believe that the tax should phase out over a period of years to take account of continuing cost increases and to encourage investment in supplies that will come on stream near the end of that period.

Further, it may be most appropriate to impose the tax on only "old" oil—that which is decontrolled under the plan—so that the function of the tax will be to phase in increases in producers' revenues over an acceptable period. Under such a proposal, the tax would not apply to currently uncontrolled oil, on the grounds that net profits on that production have been diminished by the elimination of percentage depletion and the rising costs of discovery and development.

A plowback provision will provide further assurance that price deregulation and added taxes will not serve to adversely discourage needed investment in new domestic supplies. A plowback proposal must be carefully drawn to accomplish the reinvestment objective without encouraging wasteful drilling or other extravagance.

EXCISE TAXES ON NATURAL GAS AND DOMESTIC CRUDE OIL

In addition to the decontrol of oil prices, the President proposed in January a progressive increase in import fees on petroleum and petroleum products as well as excise taxes on domestic crude oil and natural gas. The President also proposed that these taxes and fees be rebated to the American people. It's important to emphasize that the President's program is all interrelated. No one part should be considered in isolation.

With respect to the import fee, as you know, a \$2 increase on crude oil imports and 60¢ increase on products are now in effect. The \$2 per barrel excise tax on domestic crude oil is needed, in part to recapture from domestic producers the price rise induced by the import fee.

The President's proposal with respect to natural gas is an excise tax of 37¢ per m.c.f. On a BTU equivalent basis this is equal to the \$2 per barrel tax on crude oil. Unlike the oil excise tax imposed on producers to soak up a price increase to consumers, the gas excise tax is imposed at the consumer level to facilitate orderly decontrol of prices, to accelerate adjustments of consumption patterns, and especially to prevent diversion of oil and coal demand to natural gas. Otherwise, the increase in oil prices will encourage a shift of demand to natural gas. After the deregulation of gas prices and with the replacement of old gas under long-term contracts by new gas, the 37¢ tax will serve to prevent unreasonable increases in field prices during the interim period of price adjustment. The tax could be progressively phased out as in the case of the oil excise tax. These measures will prevent windfall profits to gas producers. Even without deregulation of gas prices, the tax is necessary to prevent shifting to lower-cost, interstate gas, which would exacerbate interstate shortages.

Accordingly, I urge the Congress to consider enacting such a tax on natural gas, as well as the excise tax on domestic oil, and to enact the President's proposal to return such taxes to the economy through cash payments and tax reductions.

ELECTRIC UTILITY PLANTS

In addition to the previously mentioned energy proposals, any comprehensive and integrated national energy policy must address the problem of utilities and their need for expansion, the proposals, that I shall now discuss follow the recommendations of the President's Labor-Management Committee.

We have said many times that the most fundamental problem of electric utilities is that of adequate rates. Unless users of electric energy are required to pay the full cost of generating it, including a reasonable return on invested capital, investors cannot be expected to invest in the industry. These proposals are designed to provide help through the tax system, but only if the regulatory authorities do their part. These tax proposals provide incentives that will make it easier for state regulatory commissions to take difficult but necessary steps.

The proposed legislation would do the following:

- Increase the investment tax credit permanently to 12 percent on all electric utility property except generating facilities fueled by petroleum products. No change of the percent-of-tax limitation is involved. The increase in the credit is allowable only if construction work in progress is included in the utility's rate base and the benefit of the increase is "normalized" for ratemaking purposes. "Normalized" in this sense means reflecting the tax benefit for ratemaking purposes *pro rata* over the life of the asset which generates the benefit instead of recognizing the entire tax benefit in the year the utility's taxes are actually reduced. In the absence of normalization, the entire tax benefit would flow through immediately in the form of reduced utility rates for consumers, and no real economic benefit would result for the utility.
- Give electric utilities full, immediate investment tax credit on progress payments for construction of property that takes two years or more to build, except generating facilities fueled by petroleum products, without regard to the five-year phase-in required by the Tax Reduction Act of 1975. This new provision applies only if the regulatory agency includes construction work in progress in the utility's rate base for ratemaking purposes.
- Extend to January 1, 1981, the period during which pollution control facilities installed in a pre-1969 plant or facility may qualify for rapid five-year straight-line amortization in lieu of normal depreciation and the investment credit.
- Permit rapid five-year amortization of the costs of either converting a generating facility fueled by petroleum products into a facility not fueled by petroleum products or replacing a petroleum-fueled facility with one not fueled by petroleum. This amortization is in lieu of normal depreciation and the investment credit, and is available only if (i) its benefits are "normalized" for ratemaking purposes, and (ii) construction work in progress is included in the utility's rate base for ratemaking purposes.
- Permit a utility to elect to begin depreciation, during the construction period, of accumulated construction progress expenditures, generally the same expenditures as those which qualify for the investment credit construction progress payments under the Tax Reduction Act of 1975. Any depreciation taken during the construction period will reduce the depreciation deductions available after the property is completed. This early depreciation will be available only if the ratemaking commission includes construction work in progress in the utility's rate base and "normalizes" the tax benefits for ratemaking purposes. Construction of generating facilities which will be fueled by petroleum products will not qualify for such depreciation.
- Permit a shareholder of a regulated public electric utility to postpone tax on dividends paid by the utility on its common stock by electing to take additional common stock of the utility in lieu of cash dividends. The receipt of the stock dividend will not be taxed. The amount of the dividend will be taxed as ordinary income when the shareholder sells the dividend stock and the amount of capital gain realized on the sale will be decreased (or the amount of capital loss increased) accordingly. Dividend stock is deemed sold before other stock.

The tax costs in connection with these utility measures are approximately \$600 million. The breakdown is as follows:

- The increase in investment credit to 12%, and the credit for progress payments on construction—\$100 million
- Extension to 1981 of the credit on pollution control facilities and the rapid five-year amortization of conversion costs—negligible
- Allowance for depreciation of facilities under construction—\$300 million
- Deferment of tax on stock dividends—\$200 million

It is our view that the total tax cost of \$600 million is eminently worthwhile, in view of the likely effect in minimizing severe power shortages in the future. These proposals are probably not the same proposals we would advance if we

had the luxury of more time, a less critical problem, and the realistic possibility of an overall solution to our country's economic problems. Some have pointed out that these proposals are exceptions to our theoretical goals for a perfect tax system. But the fact is that we must be practical and must act and act quickly. These proposals have the support of both business and labor, and are, we believe, the most effective tools at hand to deal with the situation. In the aggregate, they will substantially improve the immediate financial position of utilities and permit them to resume the long-range projects critical to energy independence, greater employment, and economic expansion.

We recognize that other problems exist. We recognize, too, the extraordinary political difficulties of facing those problems squarely in 50 different states, as well as the delays and obstacles which are sure to occur under those circumstances. The proposals are designed to provide help through the tax system, but only if the regulatory authorities and consumers cooperate in doing their part. Several of the tax proposals are designed to provide incentive that will make it easier for state regulatory commissions to take the difficult steps which must inevitably be taken. The increase in the investment credit will be a cash contribution by the Federal government for the construction of additional electric power plants. But, because of the limitation that the credit may be used only to offset tax liability, the regulatory commissions will have to do their part by setting rates that are sufficient to create a reasonable profit and a tax liability against which the credit can be offset. Similarly, most of the benefits of the bill will not be available unless the commissions include that property in the rate base and provide a return on that investment.

CONCLUSION

In closing, I would like to reemphasize the urgency of the development of a national energy policy. This can only be achieved through cooperation between the Congress and the Executive Branch. The President has presented to the Congress a comprehensive energy program. His proposed Energy Independence Act of 1975 provides measures to achieve energy conservation, to increase energy supplies, to deregulate natural gas and to improve our energy preparedness through a system of strategic reserves. In addition, he has asked for oil decontrol, a comprehensive energy tax package (including a windfall profits tax and excise taxes on petroleum and natural gas which will be returned to the American people), and incentives for utility financing.

This provides a complete energy program. It is not the only possible approach, and we are willing to work with the Congress to develop reasonable compromises. However, we cannot compromise our basic objectives: reducing energy consumption and oil imports while increasing domestic supplies. The bill under consideration would not adequately move us toward those goals. We stand ready to work with you to develop legislation that will achieve our vital energy objectives.

STATEMENT BY THOMAS O. ENDERS, ASSISTANT SECRETARY OF STATE FOR ECONOMIC AND BUSINESS AFFAIRS

Mr. Chairman, my statement is short:

I

The energy crisis is not only a crisis in our economy. It is a fundamental challenge to our security as a nation and to our role in the world.

At present, the element in our economy most critical to employment and prosperity is subject to manipulation both as to price and as to supply by countries that do not necessarily have an interest in our well-being and success.

Just as we are vulnerable, so are the other main industrial countries. Most of them are far more dependent on oil imports than we are; most have fewer energy resources to develop.

And the industrial countries have a strong interest in cooperation with each other to overcome their vulnerability. Alone, no single country can through conservation and the creation of alternate sources create a new balance in the world market for oil, and thus bring the price down. In the next few years no country can successfully defend alone against a new embargo, or massive shifts in petrodollars. Finally, no single country can alone carry out all the

research and development or provide all the capital required for replacing fossil fuels when they are exhausted.

But it is equally true that the industrial countries would all suffer if they failed to restore competitive conditions to the oil market. A degree of national freedom would permanently be lost. It would be far more difficult to restore sustained growth. The industrial world would begin to split as each country offered political and economic concessions in an effort to make a separate peace with the oil producers. The future balance of power in the Middle East might be irreparably compromised.

It was this sense of shared interest that led to the U.S. initiative to convene the Washington Energy Conference in February 1974. As a consequence the International Energy Agency was founded in November 1974. Eighteen countries now belong to it. The IEA's objectives are:

- To provide security against a new oil embargo by a coordinated program to build oil stocks, and to share available oil in an emergency;
- To share Equitably among industrial countries the burden of conservation; and
- To coordinate our measures to stimulate the development of alternative sources.

II

That is what we are aiming at. What has so far been accomplished?

First, emergency planning. On the basis of the detailed agreement signed in November, the IEA now has the necessary planning and machinery in a good state of readiness, should we be confronted with a new embargo situation. In order to back them up, each country must have authority to implement quick-acting conservation measures on a coordinated basis, and we need decisions to raise emergency oil stocks in all countries from the present minimum of 60 days of imports to the agreed level of 90 days. In contrast to some other IEA members, the U.S. has lagged in developing the needed emergency authorities. On the other hand, Congressional action to create a 90-day petroleum reserve will put us ahead of our partners in this critical area. However, both emergency powers and more storage are necessary for an effective response to a new embargo. It is clear that instability in the Middle East creates a very real potential for a new interruption in oil supplies.

Second, conservation. However necessary, it is painful and costly to restrain demand for oil. And as a matter of simple politics, few other industrialized countries will be willing to sustain a strong conservation program over time unless others join them, and there is thus the possibility of changing market conditions and eventually bringing oil prices down. For this reason we proposed and the IEA adopted the goal of saving 2 MMBD of oil by the end of 1975, and distributed the target among countries according to their oil consumption. Since we have half the oil consumption of the group, our target was 1 MMBD by the end of the year.

Nearly all the other members of the IEA have taken action to decrease oil demand, by passing through increased crude costs to the end user; by new taxation, by such specific conservation measures as fuel switching and lighting and heating regulations.

In contrast, the U.S. has lagged. So far the only major conservation measure with immediate effect that this country has taken is the oil import fees. Decontrol of old oil over the phased schedule the President will recommend will add very substantially to our conservation effort, bringing us up to the level where other countries are already.

The lagging performance of the United States can be seen in comparisons with other countries' results. Between the first quarter of 1973 and the first quarter of this year Germany's oil consumption fell by 14 percent, Italy's by 8 percent, Japan's by 8 percent, Britain's by 18 percent, ours by 6 percent. And yet of all these countries the recession, which of course has reduced demand for oil, was far more severe here than elsewhere. We have the world's highest per capita consumption of energy—twice Germany's—but we have not been doing our part.

H.R. 6860 would save us an estimated 314,000 bd by the end of 1977—not much more than the program Britain has already undertaken with an economy one-tenth the size of ours.

Third, alternative sources. The basic actions to stimulate the development of new energy must of course be national: the provision of subsidies to high

cost or untested energy developments; tax incentives; adequate domestic pricing policies; the removal of unnecessary or undesirable legal obstructions. But there are important contributions to be made internationally.

—By finding a way to cooperate in R & D without jeopardizing proprietary rights. No country has a monopoly on scientific imagination and innovation. Even the U.S., with its major public and private industry commitment to energy R & D has much to gain through avoiding duplication, sharing costs, and scientific cross-fertilization.

—By encouraging the flow of foreign capital into areas of energy development where it is needed and wanted. All of us have capital-short economies: with perhaps a trillion dollars of new capital needed in the energy sector in IEA countries over the next 10 years, we have an interest in finding ways to encourage foreign investment without jeopardizing the achievement of the national energy policy goal of independence.

—By assuring that countries that contribute to the welfare of the whole group by developing higher cost energy sources are protected against possible predatory pricing by the OPEC, and are not penalized if for other reasons prices fall on the international oil market. This is the purpose of the minimum safeguard price concept, in which each country in the IEA, by means of its own choosing, applies a comparable level of border protection to energy investment. Contrary to what is often suggested, this mechanism would not assure a minimum price to OPEC; it is a guarantee only to our own investors that they will not face competition from imported oil below a minimum, pre-established level, well below current world prices.

IEA countries agreed in principle on these three points in March. They are now being elaborated within the Agency with the objective of having a complete package ready for adoption by year's end.

III

Domestically and internationally, we have just begun on conservation and alternative sources. The question we must ask is how far we must go, how fast.

The answer must come, in part, from analysis of the staying power of the oil cartel. In May OPEC produced 26 mmbd as against 32.8 mmbd in September 1973, just before the Crisis. Despite the soft market, the OPEC price structure has come through largely intact, although quality differentials have been reduced or eliminated, and credit terms lengthened. Now demand will firm, as we go into the winter and out of the recession. Absent additional conservation measures, the OPEC market may rise to pre-embargo levels by the end of 1977. In the late 1970's it may begin to fall again as North Sea, Alaskan, Mexican and Chinese oil comes on the market in large quantities.

Even if there are no new conservation measures, and if OPEC succeeds in raising prices to offset any increased costs of its imports, some oil exporting countries will already have gone into balance of payments deficit during the period 1975-77. Algeria is in deficit now; so is Libya; Venezuela and Iran may follow. These pressures will intensify in the late 1970's as the OPEC market shrinks, when most producers other than Saudi Arabia and Kuwait may go into deficit.

A serious program of conservation—the 2 mmbd the President proposed for the U.S. by end 1977, matched by other IEA members to make 4 mmbd—would greatly intensify the pressures on the cartel.

Given the cohesion the OPEC has shown this year during the recession, it is not sure that such a conservation program would suffice. To be sure that the cartel loses its exclusive capacity to set oil prices, and does not regain it, we probably would have to compress the OPEC market to somewhat over 20 mmbd. In the next decade, this can only be done by large-scale program of developing fossil fuels. For the U.S., this would imply an import level of 3 to 5 mmbd in the mid-1980's, as proposed by the President.

To see the meaning of this, consider the possible price increase OPEC now threatens us with. Each additional dollar on the price of oil might reduce demand by half to one mmbd, out of a market of a little more than 25 mmbd. OPEC can now absorb cuts like that without excessive difficulty. But we had the President's program in place, the scope for such price increases would be greatly reduced or eliminated in the next three years. Not only would they be unjustified, as now: they would be infeasible.

IV

In parallel with our effort to develop effective programs of consumer cooperation, we are also seeking to establish a basis for productive dialogue between consuming and producing nations. The first formal attempt to launch a multi-lateral energy dialogue in Paris this past April did not succeed.

In May Secretary Kissinger proposed a new approach to the launching of a dialogue, broadening it to include the whole range of relations between industrial and developing countries. This would involve the establishment of three separate commissions: One to cover energy, one for raw materials, and one to consider problems of economic development. The reaction to Secretary Kissinger's proposals has been generally positive, and we are optimistic that sufficient consensus can be reached along those lines over the next several weeks to permit agreement to reconvene the Paris meeting in early Fall to prepare for the creation of the commissions.

The purpose of this dialogue is broader than energy; it is to find a realistic and equitable basis on which decisions affecting the main elements of the world economy can be shared between industrial and developing countries. The oil producers must understand that unilateral exercise of their power to raise prices at this time would not be consistent with this purpose.

For two years we have all been trying, in the United States and among industrial countries, to build agreement around the tougher energy policies we must all adopt. We have so far achieved far less than we require. But it would be wrong to judge what now can be done by what has been done. It has always been true that the great democracies are extraordinarily difficult to get moving. But when they do, they go very far. I think both our friends and our adversaries should keep that in mind, Mr. Chairman. So should we, for it is high time that we get on with it.

[Whereupon at 12:30 p.m. the committee recessed to reconvene at 3:15 p.m., the same day.]

AFTERNOON SESSION

Senator TALMADGE. The Committee will please be in order.

I expect the chairman momentarily. I have not heard from him, but I will take the liberty, as ranking majority member, to call the meeting to order. We have with us the distinguished Administrator of the Federal Energy Administration, the Honorable Frank G. Zarb.

Mr. Zarb, we are delighted to have you back before our committee. You may insert your statement in the record in full, if you desire, and summarize it and proceed in any way you see fit, sir.

**STATEMENT OF HON. FRANK G. ZARB, ADMINISTRATOR,
FEDERAL ENERGY ADMINISTRATION**

Mr. ZARB. Thank you, Mr. Chairman.

I will, with permission, insert my entire statement for the record and take only a few minutes to summarize, so you can get on with your questions.

Senator TALMADGE. Without objection, it will be inserted in full.

Mr. ZARB. You have heard from Secretary Simon this morning, and I am familiar with his statement. A great deal of what he said is a duplicate of that which I will raise here today.

I have been evangelizing on the subject, Mr. Chairman, since January of this year. We have had any number of opportunities to testify,

and I am sorry to say that since January our situation has worsened as a Nation and unless we do something pretty quickly, it will be materially worsened in the year or two ahead.

Our imports are continuing to increase as our domestic production decreases. We have witnessed the nature of the cartel and the fact that it will take advantage of that situation wherever it can, whether it be in the rising of prices, or inducement of others to do so. Even our good friends to the north, the Canadians, charge us something above the world cartel prices.

So, as a Nation, in these 7 months of debate, we have perhaps crystallized some of these issues better. Indeed, we have all perhaps learned something and benefited. But, as we have done so, our national condition has worsened.

The President has put forward a program, Mr. Chairman, that outlines a formula for this Nation to come to grips with both conservation and the bringing on of additional supplies. We did not start, nor are we now, of one fixed mind, not willing to look at and consider other options and alternatives. We have been doing just that for the last several months. However, we do urge and ask rather desperately that we get on with the job and enact necessary legislation; legislation which will let us begin the process both of becoming independent as a Nation and demonstrating both to the producers and the rest of the world that we have the will and the courage. The rest of the world already knows we have the resources to take the necessary steps to bring down our consumption of oil production and bring on our own substitute products.

Mr. Chairman, my statement is comprehensive and complete. I know that there are special areas that the committee wants to get into, so I will terminate my remarks at this point so that we may get to the questions.

Senator TALMADGE. Mr. Zarb, thank you very much.

I find some difficulty with the President's program, because as I see it, it is predicated on the assumption if you raise the price of a product high enough, the utilization will fall off, and therein you have a reduction in the consumption of petroleum. I am certain that that is true, but I find it most inequitable. For instance, if someone wants to tour from Miami to Maine and various other points in the country has the financial resources, the increased price of gasoline and petroleum means nothing. But it means a great deal to working people—and working people live all around me; a good many of them are blue collar workers and some white collar workers. I live 25 miles south of the city of Atlanta, the heart of Atlanta. Virtually all of my neighbors work in Atlanta. That means a 50-mile round trip daily, 5 days a week; 250 miles a week. Getting about 12 miles to the gallon, they would use a little more than 4 gallons of gasoline daily. In 5 days, they would use 20 gallons of gas. With the \$3 tariff raise in price—I believe Secretary Simon said they will be paying an additional 10¢ per gallon for gasoline.

Mr. ZARB. The import tariff is in some places \$2, Mr. Chairman, and that has the effect of about 3¢ a gallon.

Senator TALMADGE. It is 3¢ now.

Mr. ZARB. Yes, sir.

Senator TALMADGE. That would be a considerable burden on working people that are already hard pressed by inflation. Ours is a mobile society throughout the country. The illustration I gave you about my neighbors is true all over America.

What is your response to that?

Mr. ZARB. Mr. Chairman, let me start by saying that there is no free lunch in this business. What we do is going to cost.

Senator TALMADGE. Will you yield at that point. I do want to announce we will follow the chairman's rule that he invoked this morning of 7 minutes for each Senator's interrogation. I hope you have started the clock with me and let it ring on time.

Go ahead, sir.

Mr. ZARB. The obtaining of our independence, as far as reducing consumption and bringing up supplies, is going to cost this Nation from \$6 billion to \$800 billion over a 10-year period. Unfortunately, no matter what we do in Congress, no matter what we do as a Nation, the cost cannot help but fall on the individual consumer. If we do nothing, and continue down the path that we have been following until now, our domestic production will continue to decline. It is declining now at the rate of 6 to 8 percent a year. Our consumption will increase, and with decreasing domestic production, our imports will increase. The producing nations have already demonstrated a capability to raise prices without any economic rationale. I am sure that they will feel free to do so in the future, particularly if we do not have what it takes to put our energy house in order.

I am sure you realize that the policy choice of a price mechanism to achieve conservation was not an easy decision for the President. It is not a political answer for a President or anyone else to talk in terms of high prices. We examined the various alternatives, particularly with respect to equity, especially for those in our society who have the smallest economic voice. We looked hard, as the House looked hard, at a quota control and allocation system, and we came back to the methodology of price as the only means of getting this job done, both short term and long term. We need to have an incentive for energy conservation in our free-enterprise economy: where homeowners make different decisions on cooling and heating units; insulation, and storm windows, automobile drivers make different decisions with respect to automobiles, and plant managers make different decisions with respect to the kind of equipment and processes they use in their factories.

An energy ethic needs to be entered into this decisionmaking process. Over a 10-year period we hope the American people will learn to use, appreciate, energy as a valuable commodity in our society.

The impacts of the other programs, such as allocation and price control, are rather serious on those who can least afford this program. I can point to the horrible disadvantages to this group during the embargo. They certainly were more neglected than those who could afford to make special arrangements with their seller, or appeal for special treatment under the law.

The price mechanism does indeed raise prices, but the President's program provides for those dollars to be collected by the Government

and then returned to the people, with an extra amount going to people in the middle and lower income tax table portion.

And for the life of me, Mr. Chairman I do not understand why some of it has not been done already. Thus far, we have collected about \$800 million in tariffs. We proposed this at the outset since we are going to impose a tariff on import oil. Because new oil follows the oil market, an increase of new free domestic oil would occur, simply because of our tariff on the imports side.

We proposed a simple excise tax that simply would have severed that much away from the producers, back to the Treasury, and recycled to the American consumer.

At this point in time, if an excise tax had been enacted and that is a very small provision and has nothing to do with the windfall mechanism, we could have collected since February 1, about \$1.5 billion. If the President's program, or that portion of it, were enacted, we could be refunding that to the American people today. Those of us that are concerned with the economy, as I know we all are, and the equity situation with respect to low income people, must keep in mind that any mechanical means we use is going to have some inequity.

We have looked at various approaches, Mr. Chairman. We went through this with the House side for 3 months, and they brought in their economists. They looked at quota controls and allocations and what that would do to the economy. The only meaningful way to get this job done, so that we have a long-range impact or even a short-range impact, is to readjust the value of energy in our society.

Senator TALMADGE. I agree with you. It is absolutely imperative that we do something. And I think this is the most serious crisis that our Nation has been confronted with perhaps since World War II. And in my judgment we have got to mount an operation similar to the Manhattan project to develop alternative sources of energy supply.

And that is long range. Short range, it seems to me, we can take a few simple actions which would be quite effective and no cost to the taxpayers.

You and I have discussed this on one or two occasions. You were not overly impressed.

The Secretary this morning stated that we were using I believe about 6 million barrels of petroleum a day on automobile traffic. Do you have any idea how much of that is purely pleasure driving.

Mr. ZARB. Our estimates are at least one-third of that is for so-called pleasure driving.

Senator TALMADGE. I would guess one-third also. And that is based on purely a guess, with no statistics, if you have been to any college campuses—my time is expired.

The CHAIRMAN. Go ahead, finish your statement.

Senator TALMADGE. If you have been to any high school or college campuses recently, and I go to them quite often, you will find acres and acres of automobiles there.

Unfortunately, most of them have credit cards and parents that are billed once a month. If those credit cards were cancelled I think that within itself would stop lots of this nonsense.

Also, I think that we must vigorously enforce the 55-mile speed limit, and you can do that, if you let the States know in no uncertain

terms, that if they did not comply, their Federal highway funds would be withheld. Then we should close filling stations on Sunday—not that it would save so much gasoline, it would save some—of course, you and I know they can buy it on Saturday, but such closings would create a sense of emergency which, I think, would prevail throughout the whole country. The people would be conscious of this emergency.

They are not conscious of it now as long as they can drive up to a gasoline tank and get fuel. They think it is just an oil company rip off.

I hope you will give serious consideration to those things. It would not cost anything to enforce it. You would be in business if you took the action tomorrow before sundown.

And I am convinced that would save an enormous amount of petroleum. Thank you, sir.

The CHAIRMAN. Senator Haskell?

Senator HASKELL. Thank you, Mr. Chairman.

Mr. Zarb, when Mr. Simon was here this morning. I observed that his statement did not make any reference to conservation. Of course, I would hope that you and I would agree that the problem is increasing supply and also diminishing usage, and he said that your statement would address itself to conservation. But I have gone through your statement, and I do not see it. Maybe it is because one of your predecessors talked about conservation, and he finds himself now elsewhere.

Do you have any thoughts on conservation?

Mr. ZARB. Well, Senator, as you must know by now, I am not reluctant to talk about issues concerning energy conservation. When you refer to conservation, I assume you mean voluntary conservation?

Senator HASKELL. No, that is not really what I meant. I notice that on page 24 of your statement, you say, "We believe that the voluntary fuel efficiency agreements made by the major manufacturing, announced by the President, continue to be the most effective way to achieve increased fuel efficiency." Now, I assume, therefore, that you rely on these agreements, and that you would object to mandating certain fuel efficiency levels over a period of time in a statute. I gather I have to be correct on that, or you would at least have spoken up in favor of the very mild House provision that is in the bill.

Mr. ZARB. My answer is in reference to the mild House provision that was in the bill. If the bill had other remedies that we thought were essential, we would not object to them, and I will dare to make a statement that we would not have objected to that particular provision. But I really do want to point out what appears to be—

Senator HASKELL. May we stick with this. I think it is important. You would not object to a statutory direction to Detroit on an increasing level over a period of years to bring up the fuel efficiency of the American automobile. Am I correct? Have I stated your position correctly?

Mr. ZARB. I suppose you are stating it correctly. I do want to point out my feelings on the matter, though. I said we would have accepted without strenuous objection that position in the House bill, if other things were provided to get the job done. Senator, we have sometimes overemphasized what we are accomplishing in some of these activities,

such as legislation. In Detroit, we feel that we are really getting to an issue which has caused some of our problems.

Senator HASKELL. Mr. Zarb, if I might interrupt—you see, Mr. Simon said, let us rely on these voluntary agreements. Now I have these voluntary agreements before me, and I do not think they are agreements. Perhaps I do not know how to read a letter. But here is a letter from the president of General Motors, addressed to former Secretary Morton, dated January 10, saying that they are going to raise their mileage by 40 percent. At the end of the letter is this phrase “However, in any model year, additions in the economy or the market may make it not possible for us to sell the mix of products that would be required to meet our commitment.”—which is an out if I ever saw one.

Then, there is a letter from the president of Ford Motor Co., also addressed to Secretary Morton, and he says—well, I cannot find the exact sentence. But he has an equally large loophole. And this is why I hate to hear the administration say, yes, we have commitments from the motor companies, when they do not appear.

Now, would you like us to get some statutory commitments, and if so, what form should they take?

Mr. ZARB. Senator, we need to effect conservation across the board, and we need to do it strongly. That means that we cannot focus exclusively on gasoline and fuel, as though we can achieve a gasoline savings and have done the job, because that will not do the job. Gasoline production is only 40 percent of a crude barrel. In response to your second question, we ought to keep in mind that when we talk about readjustment of the automobile fleet, that this should be done on an orderly basis starting in 1977-78, and then phased in.¹ Now, keep in mind that our fleet turns over every 7 to 10 years, so that whatever begins in 1977-78 has an impact on the total energy question some years before it really has a bearing. So, we should not calculate that once this is done, it has really done a magnificent job in conservation in the short-term. The House, having gone through the same analysis that we did, and talking to the same people we did, finally came to the conclusion that the 40-to-45 percent improvement average fleet mix was the right way to go in the effectively legislated voluntary program that the President has achieved.

Frankly, my view is that if we get any reasonable increase in gasoline prices, as we have, and sustain that for some period of time, the market is going to more than overtake both of those provisions, because the American people make the final decision there. They made a decision when gasoline reached 19.9 cents a gallon, and they got a free set of glasses with each fill-up. They ordered chromium-plated gunboats from Detroit, and that is what Detroit produced.

Now, if you look around you, and examine the kind of advertisements that we see, you'll notice that luxury cars are advertising their improved mileage per gallon. That trend is going to increase, and because of the marketplace, the minimum will pick up. So, in answer

¹ The need for this gradual process was established even by the House from their hearings with economists, engineers, and organized labor from Detroit.

to your question, when all was said and done, we had other aspects of the House bill that were effective. We would have accepted the legislation knowing all along that, (A) it is not going to have a meaningful impact short-term; and (B) that the market forces were probably going to overtake whatever was legislated in that particular division.

Senator HASKELL. My time has expired. Thank you, Mr. Chairman. The CHAIRMAN. Mr. Dole?

Senator DOLE. In conjunction with the line of questioning just engaged in between Senator Haskell and Mr. Zarb, I would like to place in the record at this point a telegram from the plant manager of the GM assembly division plant in Kansas City, Kans., strongly objecting to any statutory regulation requirement.

[The material referred to follows:]

General Motors just telephoned the following "Urgent Rush Wire"—A copy will be mailed to us.

From: Fairfax plant in Kansas City, General Motors Corp.
To: Senator Dole.

Important that you know of the potential damaging impact that stringent mandatory fuel economy standards legislation could have on new car sales and auto related employment in the State of Kansas. Both S. 1883 reported by the Senate Commerce Committee and H.R. 6860 now before the Senate Finance Committee would set such standards including a requirement that average fuel economy of new cars sold in 1985 be at least 28 mpg. These bills would be especially injurious to plants and employees engaged in the production of full-sized motor vehicles. A recent employment survey of GM plants showed that 2,600 employees work at jobs related to the production of full-size cars. Further recent data shows approximately 2,267 GM employees in Kansas on indefinite layoff equal to 47.8% of November 1973 hourly employment. Difficult fuel economy standards, particularly the 28 mpg requirement for 1985 could result in further unemployment and severe personal economic problems to auto workers in Kansas whose jobs depend on full size car production. Strongly urge you to oppose and work to defeat these unnecessary and potentially damaging bills especially at this time of high unemployment in the auto industry. Fuel economy improvement objectives are being met in response to the demands of new car buyers. Thus, mandatory fuel economy standards or fuel efficiency taxes are unneeded and could further disrupt the industry and have severe impact on U.S. auto industry employment and prevent achievement of full economic recovery.

E. D. HAMILTON,
*Plant Manager of GM Assembly Division Plant,
Fairfax, Kansas City, Kans.*

Senator DOLE. Mr. Zarb, if the price of old oil is decontrolled, approximately how much additional oil could be recovered by 1985?

Mr. ZARB. Approximately 1.4 million barrels a day.

Senator DOLE. Do I understand that the President's plan would be available sometime this week?

Mr. ZARB. Approximately, within a week.

Senator DOLE. Is the President's 30-month decontrol mechanism 3.3 percent a month? Is that accurate?

Mr. ZARB. That is correct. It has one additional feature, which was not in this original program, and that was the ceiling to be placed on new and released oil.

Senator DOLE. That is \$13.50.

Mr. ZARB. Approximately \$13.50; it would average to be \$13.50.

Senator DOLE. And that would be whether or not the price of OPEC oil was as high as \$16 a barrel. It would still be an average of \$13.50?

Mr. ZARB. Yes, sir.

Senator DOLE. Is there any reason the administration is not sending, along with the decontrol plan, a windfall profits section?

Mr. ZARB. Well, we have submitted windfall tax legislation for so long now, we have thought that we really had enough done. Typically, with Ways and Means, we testified, in favor of a windfall tax program, giving the principles to adhere to, and do not draft legislation as we do in other forms of legislation. So much depends on the direction that Congress moves in. If it moves in favor of this excise tax that I just described earlier, that will change the formula windfall. If it decides it does not want an excise tax, than the windfall will change.

Depletion has changed the plowback thinking that was in the original testimony. I think that we have said a lot on the subject. We have testified many, many times on the question. I think that all of our comments are in the record.

Senator DOLE. So the administration still favors the windfall profits tax with a plowback provision?

Mr. ZARB. Yes, sir.

Senator DOLE. In line with Senator Talmadge indicating what we can do to save some fuel without any additional cost, how much fuel would a Federal right-turn on a red light save? Would that amount to anything?

Mr. ZARB. We just do not have that. It is something we would have to do some work on. I notice that someone introduced a bill last week, and perhaps there is someone else's that we can build upon. It is probably a drop in the bucket, but it is one of the painless solutions that does, in politics—might appeal to those in politics.

Senator DOLE. Apart from the conservation effects of higher energy prices, is there any alternative method to increase domestic production without increasing the price of petroleum products?

Mr. ZARB. Well, there really is not, over the long term. We had to insure that the time of return would make people invest their dollars in further development and exploration and subsequent research for resources. There is just no way to escape the price crush. As I said earlier, if we do nothing we will be just paying—

Senator DOLE. I think that Secretary Simon indicated this morning, I think the overall cost of the administration program would be an average of 10 cents per gallon?

Mr. ZARB. Yes, sir.

Senator DOLE. That is to decontrol.

Mr. ZARB. And it has.

Senator DOLE. That is, as opposed to the gas tax, which that would reach the range of 20 to 23 cents. But I think the point I want to make, and the point you have made very well many times, is there simply are not any painless solutions, are there?

Mr. ZARB. No, sir, there are not, and Senator, I would just point out that Senator Haskell raised some questions about mandatory steps that could be taken, where those are essential, and we did not think they were needed in the automobile area, because we thought that they were legitimately building standards, so on a very narrow range would have some formal efficiencies that we are not happy with the

relationship between the marketplace. The relationship between buyer and seller construction is substantially different.

We proposed building standards, but that title has not been passed. We asked for appliance labeling legislation, so that consumers can make a judgment, one appliance against another, with respect to energy efficiency. That is somewhat of a mandatory approach. This title also has not been passed. We asked for special authorities to assist poor people to winterize their homes, using voluntary help in Federal funding. That title has not been passed.

So even those approaches that are not based on a price mechanism, but on a mandatory kind of approach, will get the job done. It does take a mix, and as you point out quite well, although every little bit that counts, every little bit does not do the whole job.

Senator DOLE. Do you favor any provision in 6860 other than the tax credit for insulation that is the House passed bill?

Mr. ZARB. Well, I would say not, Senator Dole. That is probably the one area to which we could subscribe. There were some excise taxes in the original form which had a meaningful conservation effect, but in the hearing process and so on, they were watered down to something that we think would be deceiving. Our total problem with the bill is that it just does not do the job. It says so very, very little.

The CHAIRMAN. Mr. Ribicoff.

Senator RIBICOFF. Mr. Zarb, what would your reaction be to a windfall profits tax which cycles much of the revenue from the tax back to the consumers who pay the higher oil prices in the form of credits against their income tax?

Mr. ZARB. Senator, I would say that, in principle, that is exactly in line with the President's thinking, and I say in principle, because the next step, once you have gotten by the principle, is the calculation of the revenue distribution system. Remember, when the President first submitted a windfall profits tax we did not have a depletion change, so that discussion was somewhat easier. At this point, we have to have a whole new look at that, but we are subscribing principally to exactly what you just stated.

Senator RIBICOFF. That is very complex. Let us say you wanted to do, and needed a lot of help. Are you in a position or the administration, before we finish our work next week, of coming up with a recommendation along that line, to be put into this bill?

Mr. ZARB. Yes, sir.

Senator RIBICOFF. Then we can expect that the early part of next week the committee will have a look at that proposal?

Mr. ZARB. Now, I assume that we are going to connect that to a decontrol proposal—the President's decontrol plan.

Senator RIBICOFF. Let us see what your plan is. I mean, I think it could have a great effect upon all of us. I think it could effect my thinking. If I felt that the windfall profits tax would be—the whole decontrol would be cycled back to the consumer, that could make a difference in my vote, and I do not know, it could affect other votes too. So I think that is important.

Mr. ZARB. All right, sir, we will go ahead with it. I just want to point out that, when we look at the total decontrol revenue recycling to the consumer over a period of time, we must realize that it is going

to be more and more costly to develop oil. Ways and Means' original bill had this in mind to acknowledge the fact that it would be more costly so that windfall taxes became lesser and lesser and, had a phase-out period over a certain period of time.

Senator RIBICOFF. But I assume you have a formula computerized, and your economist who works on it. It is complex, but I think a lot of us would like to take a look at it.

Now, there has been a lot of talk about the prospect of another shortage of gasoline, as denied, keeps bouncing back again. Do you expect such a shortage, and how do present inventories of gasoline stand?

Mr. ZARB. The present energy sources are substantially lower than they were last year at this time, Senator Ribicoff. As you know, we realized some weeks ago that gasoline inventories were down under 200 million barrels and that gave us some concern. We raised that concern with the industry and asked for a report from the industry, a report that we have obtained, and an indication of what their plans are for additional refining.

In each instance they reported that they are increasing their refining, had at that moment a higher level of crude stocks than they had a year ago, and, in our opinion, sufficient refining capacity to insure that we avoid shortages this summer. It is still my view that if this increase is sustained in production, and we do not have an outlandish increase in consumption, we will not have a major shortage of gasoline this summer.

Senator RIBICOFF. Although on a nationwide basis, one-third of our energy requirements are met by oil, in New England 85 percent of our energy needs are met by oil and much of this is imported. As a result, our New England utilities pay twice as much as the national average for energy.

Now, if you decontrol the price of oil, New England consumers will suffer the most and I am assuming Minnesota too, Wisconsin. Do you have any specific proposals on how to protect the New England area from disproportionate suffering as a result of decontrol?

Mr. ZARB. Senator, apart from the winter, I do not think there will be unfortunate suffering in New England. I think, as you point out, New England uses oil for 85 percent of its energy generating as compared to some 20 percent across the Nation.

The important feature in New England is that they now depend upon hike-priced imported oil for a good portion of their consumption. The successful decontrol of all oil prices will have a more meaningful impact on the rest of the Nation and close the gap that is now between New England and other parts of the Nation. This will have an equalizing effect so far as New England is concerned.

Senator RIBICOFF. The equalizer will be that the price to everyone will go up.

Mr. ZARB. It will go up severely in other parts of the country as compared to New England, because of their high imports at this time. New England now generates all of its electricity with oil that is imported. A good part of their fuel oil is imported, so, the fact that New England relies so heavily on imports right now, indicates that their prices would go up less with a national decontrol program affecting domestic production.

We have an analysis as to how it affects various parts of the country. We will submit it to you and submit it for the record.

Senator RUBINOFF. Now, as you and Mr. Simon have testified, a very large proportion of petroleum used is for gasoline, for pleasure driving and automobiles. Does the administration support the use of taxes to force significant improvements in the gas efficiency of cars as quickly as possible?

Could you tell us what were the advantages and disadvantages of the measures that the House Ways and Means Committee considered to increase efficiency of cars?

Mr. ZARB. First of all, gasoline is indeed a sizable consumer, 40 percent of total crude barrel, and as you point out, pleasure travel is a good portion of that percentage. But, I hasten to add because it is going to come back to visit us at some point, that somebody's pleasure is oftentimes somebody else's business.

As we look at the tourist business in some parts of the country, and realize that some States are dependent upon tourism for a substantial part of their income, we have to decide how to recognize such in any calculation on the importance of the so-called pleasure driving category.

If the House passed a bill on automobile efficiency that was almost identical to the President's agreed to program with Detroit, I would find it hard to be against legislation that I think legislates what the President intended to do in the first place.

But, to repeat what I said earlier, I really believe that with the way the market is working now, the market is doing what we said needed to be done by legislation. In my view, the workings of the market will far exceed any objectives that we try and set up by legislation.

The CHAIRMAN. Mr. Packwood?

Senator PACKWOOD. Given normal circumstances, what kind of reduction in gasoline consumption do you expect as gasoline taxes increase?

Mr. ZARB. We do not have a gasoline elasticity chart with us but June numbers are about ready to be finalized. It looks like our June consumption this year will be equal to June consumption last year, and, equal to the 1973 June consumption which is a phenomenal event.

So, with some disclaimers, as we do not know the effects of the recession, the fact is that prices already have a meaningful impact.

Senator PACKWOOD. Run that by me again, the prices have a meaningful impact even though the consumption is the same as last year.

Mr. ZARB. Yes, sir, because our consumption of gasoline has risen this year. Our own analysis was that our rise in consumption would be from 7 to 8 percent. Not having such a rise in the rate seems to indicate that we have curtailed consumption.

Just look at the advertisements of the major automobile producers and the kinds of merchandising they are doing on miles-per-gallon basis.

Senator PACKWOOD. If it has that effect, and if the rebate can be used to return money spent for higher energy, why not increase the gasoline tax 20 or 30 cents, draw down the consumption, alleviate the difference and achieve a substantial savings with no harm to middle and lower income.

Mr. ZARB. I agree with everything you have said. The whole series of processes that you have just described except for the 20 to 30 cents gasoline tax. When we talk about 20 to 30 cents gasoline tax, we think we are going to take all of our conservation out of that one product. It does not work that way. We have 60 percent crude barrel that is not gasoline.

The second problem and condition in not getting the job done, is that it is terribly unfair when you visit an oil well in various parts of the country. In Massachusetts and Manhattan we drive so much differently than we do in Nevada and when you take oil or gasoline you do not save 60 percent of crude barrel and you are not being very equitable to various parts of the country.

Senator PACKWOOD. I should preface my question as I did earlier. Take your present fuel rates to the \$3 tariff that you want combined with a \$3 excise tax on each barrel of oil and add 20 to 30 cents gasoline tax. Mr. Zarb, in my view, that would be somewhat overkill as required to achieve the results that we think should be begun on a normal basis. We are talking about self-sufficiency by 1985 and curtailment of extra consumption by 1½ to 2 million barrels per day by the end of 1977. That is curtailment from what it would be if we do not get busy and do something. It is growing at that rate and it will all come from the Mid East.

We think that that would be a more excessive conservation program than is required to get the job done on that basis. But a \$2 tariff, a \$3 excise tax, a reasonable excise tax on natural gas, and believe me, next winter we are going to wish we had moved this summer on natural gas conservation, would end decontrol, would bring us the elasticity that we need and at the same time, various policies of production that we require.

So, while I am always in favor of more extreme conservation, I just do not think that an extra 20 cent gasoline tax on top of these other measures is required.

Senator PACKWOOD. I think you are unduly optimistic as to how gas will go down. Even at \$3 tariff and \$3 excise, you are only talking about roughly 9 to 10 cents a gallon.

Mr. ZARB. There are two effects, Senator, at which we continue to look. One is the 10 cents a gallon tax and that is because of elastic properties of gasoline as compared to heating oil where we have to go so much slower.

You have that effect plus you have the normal inflation factor in terms of just costing more, not only to develop it, but to store it, pipe it, and to pump it.

I can only point to our experience in the last year and the changes that are occurring in the market, changes that we see in the automobile market. I am confident that we are going to look back on this period 2 years from now, if we take some of these other measures, and see that we made a very meaningful impact on all the energy consuming devices in our society using price and using rebate mechanisms to minimize the hardship and economic impact.

Senator PACKWOOD. Even if we were guaranteed to continue to supply oil to communities, if we had it, do you think we ought to be conserving energy anyway?

Mr. ZARB. Yes, sir. I do not know what a guarantee is anymore.

Senator PACKWOOD. I do not either, that is why I preface it that way. But, if you could have one, if you could buy all the oil you wanted at a rational price, whatever that might be, you would still support conservation measures?

Mr. ZARB. You bet.

Senator PACKWOOD. No other questions.

The CHAIRMAN. Mr. Roth?

Senator ROTH. Mr. Zarb, as you well know, many of the east coast States, including my State of Delaware, are being threatened by a severe natural gas shortage this fall and I understand it has been anticipated that the commercial firms may lose as much as 70 percent. And with the only option being to close down, this is going to cause unemployment.

I wonder what proposals you or your Agency have to help out in this area? There was an editorial the other day in the Washington Post spelling out the sources of the problem. I wonder what your Agency would propose to do about this immediate problem?

Mr. ZARB. Senator, the first thing we ought to do is take the controls off of that product and that would give us the prospect of some relief 2 or 3 years away.

Senator ROTH. I am talking about next winter, now.

Mr. ZARB. OK, I am just pointing out that if we do not take some measures now in that direction the winter after this one coming will be even more serious and we will be looking at alternative measures. In the meantime, we are now in the process of completing an analysis, making fairly accurate judgments, I think, of how short we are going to be in the future.

And you are quite right, we are going to have a more severe impact this winter than we did last winter. Our alternatives are very small. We have to be in a position to allocate what we have available to us, and you cannot allocate natural gas like we did oil.

The transportation, the whole matrix of distributions, makes a difference. It is not easy to allocate natural gas, if you will. Second, you allocate substitute fuels. We allocate fuel oil replacements and sometimes propane where we can, although, there is not nearly enough propane to make up the difference.

We have this funny system right now where in some States natural gas is relatively inexpensive and as a result it is not being used in any degree of conservation, but only two States away they cannot get at an official price. People are going to be unemployed because of this situation. We need to have, in my view, an excise tax on natural gas which would bring it up to the value of oil.

Because there is no such tax, we have those who do not switch from natural gas to another product because, for them, natural gas is cheap. It is intolerable.

I would also point out, Senator Roth, that our authorities to mandate conversion of coal expired June 30, and as yet have not been renewed by the Congress, although we have got an adequate head start on that program. To mandate conversions from both gas and oil to coal for our generator plants we certainly need that authority renewed.

Senator ROTH. You mentioned the allocation, Mr. Zarb. Pasternack is doing natural gas studies. He might want to point out something to you.

Mr. PASTERNAK. Senator, as Mr. Zarb indicated, we have a major interagency task force going right now to evaluate the natural gas shortage and to recommend policies to the President for dealing with this winter's problem, not next winter's or the year's after, but this winter.

We are right now in the process of first identifying the economic impact on very localized spaces because it is a local problem, even though it is a national problem as a whole, it has local impacts. And so we have identified a number of States which are in the worst shape and, of course, the east coast in particular, is very hard hit.

Second, there are a range of alternatives we can look at dealing with increased availability of alternate fuel, suggesting propane, naphtha, and some other fuels. We are looking to provide incentives in a number of ways, to conserve natural gas in efficient uses.

There was a very good example last year in Danville, Va. Several plants in the town were about to shut down, did shut down in fact, so industry and residential users got together through a cooperative program. The residential users cut back on their natural gas consumption to enable the industry to keep functioning.

We are in the process of building a very substantial public education program, starting this summer to educate the American public and industry and consumers alike how these programs can work.

We are also looking at programs where any State, interstate pipelines can purchase natural gas from the producing States if it is available in excess from those States.

There are a whole range of alternatives. We will be making our conditions to the President on this very shortly.

Senator ROTH. I would just like to say that it is important that we have plans. And I congratulate you for what you are doing.

I think that it is absolutely imperative that we get plans now and not before it hits us.

I would just like to point out that if you come and ask me for deregulation, you tell me at the same time that consumers are going to end up paying more, but we are going to have no assurance that gas is going to be available for Delaware. And there is going to be unemployment. That is a pretty hard bargain for me to take. And I insist that we find some answers.

Let me ask you this. I noticed that in the Washington Post editorial, they proposed that industry should be allowed to go and buy gas at the interstate rate, that is one question I have: Why could you not deregulate insofar as business is concerned to make sure that plants do keep going and that you do not have unemployment that we are threatened with these days?

Mr. ZARB. Part of that is the rolemaking that the FTC is considering right now to allow this kind of negotiation to go on. Over the long term, it is going to incentivise the development of more natural gas.

Senator ROTH. No, I am talking about the short range prospects. Would you support legislation to get that authority of FTC?

Mr. ZARB. I believe FTC has the authority now.

Mr. PASTERNAK. In short-term situations they have that authority.

Senator ROTH. They could permit industry that is threatened with shutdowns to pay interstate rates, in effect, deregulation of that gas, for that purpose?

Mr. PASTERNAK. They could put interest rates—pipelines to purchase gas for that purpose.

The CHAIRMAN. Senator Mondale.

Senator MONDALE. Sir, you could submit for the record gas prices that you do not have with you?*

Mr. ZARB. Yes.

Senator MONDALE. As you know, and we have discussed it personally in the past, the upper Midwest is very concerned about United States-Canadian relations, the problems related to that matter, and short-term and long-term questions of moving oil and gas across the border.

Can you comment on that? Where we are.

Mr. ZARB. There has been no change in the Canadian position. I do not see anything on the horizon which would prompt them to change that point of view, if that is true. And I expect to be out sometime before the end of the year having some discussions with Canadian officials.

But if that is true, that means that we are going to have to take some steps to insure that the northern tier has sufficient crude to keep themselves supplied, which is going to mean a matter of changed pipelines, in some cases, so that we can have it delivered to one part of the country. It is going to require some domestic readjustment to see that we get sufficient crude up in these areas.

We are now, probably, in the final stages of discussion on this question. And I am hopeful that in a few more months we will have it resolved. We have a little bit of time in that they are not moving overnight.

Senator MONDALE. I thought a few weeks ago they indicated there had been some temporary tentative announcement by our government and theirs, that they would be willing to encourage exchanges between companies.

Mr. ZARB. That is correct.

Senator MONDALE. That is a new development, is it not?

Mr. ZARB. I am not sure whether it is a new announcement. The bottom line is still going to be new oil. But if we provide oil in one part of the country for them, it is almost like using a distribution system. The bottom line is new oil. And as you know in natural gas they have already announced that they have increased their prices to us some 60 cents.

Senator MONDALE. One final question: First of all, I want you to know we appreciate the attention you have given to this problem.

We hope that we can have your sympathetic cooperation because literally there is no other place to turn to.

This morning I used figures on the production of so-called new oil, for the last year, as compared to the past years, I think those figures indicated that since the policy of deregulating new oil and controlling old oil had been in effect, new oil production has actually dropped

* CFEA subsequently submitted a document entitled "National Petroleum Product Supply and Demand: 1975" a technical report by the Office of Policy and Analyses, Quantitative Methods. This was made a part of the office files of the committee.

by some 750,000 barrels a day, while production of old oil has remained a constant. That is the first year's experience we have of this high priced incentive.

Can we afford many more years of that kind of success?

Mr. ZARB. Senator, first of all, with respect to old oil, there is no question on that matter. It is going away, and getting lesser of an amount.

Senator MONDALE. But I am talking about the past year; the production numbers on old oil are constant, are they not, or virtually constant?

Mr. PASTERNAK. The production on old oil has declined slightly over the last year.

Senator MONDALE. By how much?

Mr. PASTERNAK. It is a couple of hundred thousand barrels a day, I believe.

Senator MONDALE. Over the last year?

Mr. PASTERNAK. Yes.

Senator MONDALE. 200,000 barrels a day?

Mr. PASTERNAK. Roughly.

Senator MONDALE. New oil has dropped 750,000.

Mr. ZARB. Do you mean in percentages, Senator?

Senator MONDALE. No. Production of new oil has dropped by 750,000 barrels a day, based on March 1975 figures, and the production of old oil has been constant. You say that that is not correct.

Mr. PASTERNAK. I do not have the figures in front of me, but those figures sound a little bit off, because total domestic production is down about 400,000 to 500,000 barrels a day. So I do not see how those numbers go together.

Senator MONDALE. These are the March 1975 figures. Does that help?

Mr. ZARB. What is the source of those numbers?

Senator MONDALE. The KGB, I guess. [General laughter.]

We got them somewhere.

Mr. ZARB. Well, why do we not submit for the record our official numbers, and see how they compare?

[The following was subsequently supplied by the Federal Energy Administration:]

DOMESTIC OIL PRODUCTION

[Million barrels per day]

	Old	New and released
January 1974	5.344	2.405
February.....	5.677	2.289
March.....	5.370	2.417
April.....	5.375	2.422
May.....	5.519	2.226
June.....	5.530	2.106
July.....	5.603	2.101
August.....	5.730	1.910
September.....	5.776	1.810
October.....	5.655	1.885
November.....	5.759	1.805
December.....	5.512	1.837

Senator MONDALE. I do not know, because my staff guy does not know, either. Am I correct that so-called new oil production has dropped substantially in the last few years? Did that surprise you?

Mr. PASTERNAK. No. I think that there is a very obvious reason for that. In just about the turn of this decade, in 1970, we saw a tremendous decline in domestic exploration, as there was a moratorium resulting from the Santa Barbara incident. There was a moratorium at the end of the 1960's in offshore development, in offshore exploration, as a result of the Santa Barbara incident; and that, in effect, is what we are seeing today from the 3- to 4-year leadtime that you would have had from those days. I think that what you will see over the next 3 years is new oil production increase substantially as a result of the increased exploration in 1974, plus some of the new fields that have come on line—

Senator MONDALE. Now, the number of new wells being drilled; do you have figures in terms of new proven reserves that have been found?

Mr. PASTERNAK. We can supply those for the record.

Senator MONDALE. Are they substantial?

Mr. PASTERNAK. I do not think that we have seen substantial additions to proven reserves in the last year.

Senator MONDALE. Could you submit those figures on actual, new proven reserves for the record? I would appreciate it.

[The Federal Energy Administration subsequently submitted three documents—Geological Survey Circular 725 entitled “Geological Estimates of Undiscovered Recoverable Oil and Gas Resources in the United States,” the “Initial Report on Oil and Gas Resources, Reserves, and Productive Capacities”, submitted in compliance with Public Law 93-275, Section 15(b), and a supplement to the initial report containing the reports of the statistical and mathematical consultants. These documents were made a part of the official files of the Committee: The summary of the initial report follows:]

CHAPTER I

SUMMARY

A reliable and detailed assessment of the domestic reserves and resources of oil and natural gas the United States can count on is absolutely essential to the formulation of any realistic plan to bring the nation to a point of energy self-sufficiency by 1985.

The Federal Energy Administration (FEA) has completed a year-long study of proved reserves of crude oil and natural gas. Preliminary estimates show that, as of December 31, 1974, the United States had proved reserves of 38.2 billion barrels of crude oil and 237 trillion cubic feet of natural gas.

The preliminary estimates are based on a survey by the FEA of all oil and gas field operators in the United States. The results of the survey are detailed in Chapter IV of this report.

The FEA estimate of 38.2 billion barrels of proved crude oil reserves is 11 percent higher than the estimate of 34.2 billion barrels of proved crude oil reserves published by the American Petroleum Institute (API).

In addition, the FEA estimate of 237 trillion cubic feet of proved natural gas reserves is marginally higher than the estimate of 233.2 trillion cubic feet of proved natural gas reserves published by the American Gas Association (AGA). The published AGA figure of 237.1 trillion cubic feet of natural gas proved reserves has been adjusted to subtract 3.9 trillion cubic feet of gas which has been produced and is being held in storage, and is not included in the FEA estimate. These estimates seem to differ no more than might be expected from estimates from different sources. The significance of the differences will be clearer after the processing of the data collected in FEA's study has been completed.

Both the FEA estimates and the estimates published by industry trade groups define proved reserves as those oil and natural gas resources that have actually been discovered and can be produced under current economic and technological conditions.

The FEA estimates do not include indicated reserve—small quantities of oil believed to be economically producible from known reservoirs using proven but as yet not installed recovery technology. New information on the amount of indicated reserves is still being compiled by FEA.

Even greater quantities of recoverable oil and gas remain undiscovered. Some of these are in undiscovered reservoirs in known fields (inferred reserves). The greater portion is in undiscovered fields. The U.S. Geological Survey (USGS) estimates that the total of inferred reserves and undiscovered recoverable resources probably equals 105 billion barrels of oil and 686 trillion cubic feet of natural gas.

Estimates such as these are subject to wide estimating errors. There are 19 chances in 20 that the oil potential may be at least 73 billion barrels and one chance in 20 that it will be as much as 150 billion barrels. Similarly, estimates of natural gas potential range from 524 trillion to 857 trillion cubic feet.

In addition, from 17 to 28 billion barrels of natural gas liquids may be recoverable from the processing of natural gas which may be produced from as yet undiscovered reservoirs. The most probable estimate of natural gas liquids recoverable from this source is 22 billion barrels.

These estimates of oil and natural gas resources were prepared by USGS for FEA. They are discussed in detail in Chapter VIII of this report. That chapter also compares the latest USGS figures on undiscovered recoverable resources of crude oil, natural gas, and natural gas liquids with three previous estimates published by USGS and with studies made by the National Academy of Sciences, the National Petroleum Council, the American Association of Petroleum Geologists, the Potential Gas Committee and the independent energy consultants, M. King Hubbert and L. G. Weeks. Some of the leading estimates are shown in Exhibit I-1.

The resource estimates prepared by USGS are markedly lower than those that it has previously published. Its most likely estimates are close to the more conservative ones that have been made by others. Both resource and reserve estimates (Exhibit I-2) are limited to oil and gas recoverable with current technology.

EXHIBIT I-1.—Comparisons of estimates of U.S. undiscovered recoverable oil and gas resources

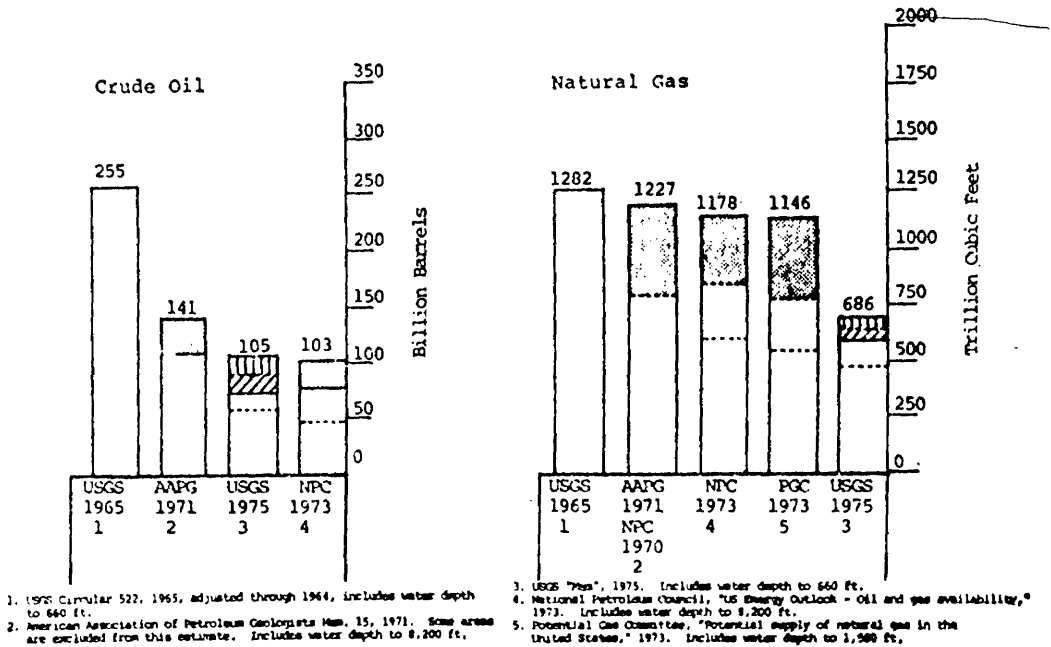
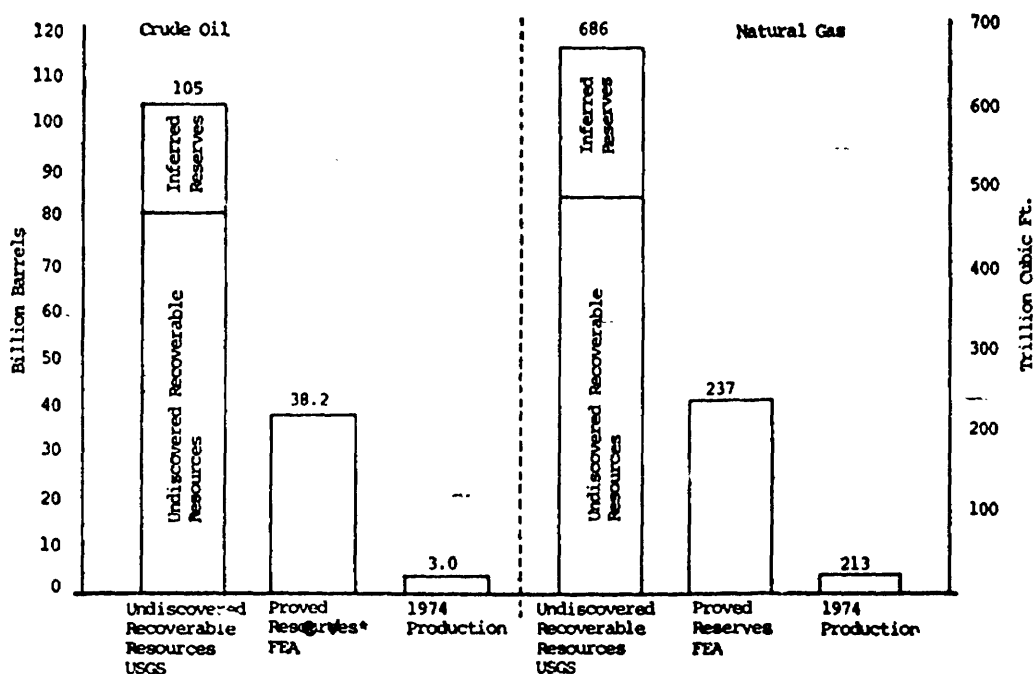


EXHIBIT I-2.—U.S. Resources, reserves and VTGD production of crude oil and natural gas



*Does not include "indicated" reserves of crude oil.

A recent FEA study suggests that ultimately as much as 65 billion barrels more oil may be recoverable from known oil reservoirs if new enhanced recovery techniques are successful. The realization of a significant portion of this potential will require advances in applied technology and prices high enough to cover costs substantially greater than those of current recovery procedures.

The data above suggest four conclusions:

1. Though U.S. proved oil and gas reserves may be higher than had been indicated previously, annual additions to reserves must be greater than in recent years if domestic producing rates are to be sustained.
2. Remaining volumes of recoverable oil and gas in the United States are large enough to warrant expanded efforts to find and produce them.
3. Recoverable oil and gas resources have limits which may be approached in the next fifty years, though those limits cannot now be determined with certainty.
4. There is a need for :
 - (a) Intensified exploration to define those limits.
 - (b) Advancement of recovery technology.
 - (c) Development of alternative energy sources.
 - (d) Conservation of all energy resources available to us.
 - (e) Economic incentives to make exploration, recovery, development and conservation financially attractive to investors and consumers.

If present firm plans for domestic refinery construction are carried out, the Nation should be in a position to reduce the proportion of its petroleum product requirements which are imported. (See Chapter IX.) It will, however, continue to need some imported crude oil to supplement domestic production to meet the raw material requirements of its refineries.

The foregoing summarizes information developed to date by FEA to meet its obligation under Section 15(b) of the Federal Energy Administration Act of 1974. FEA's full program of analysis to meet the requirements of the Act included the operator survey of reserves and productive capacity, the resource evaluations, and the refining capacity study previously noted.

In addition, collateral programs were undertaken to provide checks on the validity of the operator survey, to obtain information on major oil and gas fields

which the survey could not provide, and to test alternate methods for the development of oil and gas reserve estimates. The principal elements of FEA's study are summarized in Chapter II. The collateral programs include engineering analyses of 59 large oil and gas fields, (Chapter V); analyses of oil field producing histories (Chapter VI); and an investigation of reserve and productive capacity estimates from State agencies and trade associations (Chapter VII).

Chapter III provides, for the benefit of those not familiar with petroleum geology and engineering, an abbreviated description of methods relevant to the estimation of oil and gas reserves. Examples of applications of these methods are included in Appendix D, which summarizes the preliminary results of engineering analyses of each of 25 oil and gas fields.

During the past year, FEA's analysis of oil and gas resources, reserves, and productive capacity has been dedicated to the design and conduct of an experimental program for continuing study of these factors, while at the same time developing information for the earliest possible use by the Administration and Congress in their consideration of National energy policies and programs. This report provides the preliminary portion of that information.

A later report, in September, will present final estimates of proved reserves from FEA's survey of oil and gas field operators and added information from that survey on indicated reserves and productive capacity. It will also report the results of engineering studies of 34 additional fields which together with 25 field studies included in the current report will cover more than half of the Nation's proved reserves of oil and about 30 percent of natural gas reserves.

Results of the operator survey will be checked against these field studies as well as against data developed from FEA's analyses of field production histories and against reserve and productive capacity estimates from other sources.

Experience gained from these studies will be drawn upon to formulate recommendations for a continuing program for monitoring the Nation's oil and gas resources and reserves and the rates at which they can be produced.

Senator MONDALE [presiding]. Senator Curtis?

Senator CURTIS. Mr. Pasternack, what is the definition of new oil?

Mr. PASTERNAK. New oil is any oil that has been produced in new properties that was not in existence in 1972, which was when we started a number of these base regulations; and the second is that it is any oil that is produced in excess of 1972 production levels on the existing property.

Senator CURTIS. Where does oil produced by secondary and tertiary recovery methods come in? Is it classified as new or old oil?

Mr. PASTERNAK. It depends. If, in fact, the secondary and tertiary recovery has enabled an oil property to produce at levels higher than it was in 1972, it is considered new oil. If, in fact, all it has done is enable it to maintain its previous level or not even reach its previous level, it is still considered old oil.

Senator CURTIS. Do you decide well by well, then?

Mr. PASTERNAK. Yes. You decide it on property by property.

Mr. ZARB. The most prevailing circumstances would have it not new oil.

Senator CURTIS. Would have it not new oil?

Mr. ZARB. Yes.

Senator CURTIS. That could be greatly affected by decontrol.

Mr. ZARB. Yes, sir.

Senator CURTIS. I have been told that in the early days of oil drilling in Pennsylvania, for instance, the driller would skim off about the first 15 percent, and that many other places in the country, considering the technology available at that time, plus the very low price of oil—at many wells, they took the first 30 percent, because it was easy to get, and most economically feasible. It is important that we recover all that oil, is it not?

Mr. ZARB. Yes, sir, and we calculate conservatively that that would represent 1.4 million barrels a day by 1985.

Senator CURTIS. Over what we are dealing now?

Mr. ZARB. In 1985.

Senator CURTIS. An increase of that much?

Mr. ZARB. Yes, sir.

Senator CURTIS. How many barrels of oil do we use a day?

Mr. ZARB. By 1985, we will be using 22 million barrels a day.

Senator CURTIS. How much oil are we using in production of electricity?

Mr. PASTERNAK. We are using about 5 to 7 million barrels a day, something in that range.

Senator CURTIS. What kind of oil is it?

Mr. PASTERNAK. It is residual oil.

Senator CURTIS. Something about 30 percent of our electricity is generated by burning oil; is it not?

Mr. PASTERNAK. Yes.

Senator CURTIS. Now, what impact will that have on all the other uses of petroleum, if we were to convert totally to coal for the production of electricity?

Mr. PASTERNAK. It would have a substantial impact on our other uses of petroleum.

Senator CURTIS. Can you spell it out with any figures?

Mr. PASTERNAK. We believe that an active coal-conversion program can save anywhere from half a million to a million barrels a day within 5 to 10 years.

Senator CURTIS. That is a million to half a million barrels of crude per day?

Mr. PASTERNAK. That is right.

Senator CURTIS. So it would make more product available for all end uses, whether it is gasoline or whatever?

Mr. PASTERNAK. That is correct.

Senator CURTIS. I notice that part of the recommendation relates to tax benefits for the conversion from petroleum to nonpetroleum for the production of the electricity. What governmental programs or outside forces are holding up the conversion of electrical generating plants to coal?

Mr. ZARB. One is the environmental implementations, where we need to have both the modification of the Clean Air Act that we have asked for in amended form; and secondly, under normal circumstances, we need to have an Environmental Protection Agency approval of our calculations.

So the environmental consideration is set No. 1.

Second, we have the ability to get coal to where it can be burned. Our transportation facilities are not what they should be in that particular area. In some cases, the financial investment required to burn coal is as much as building an entire new plant. Capital investment is the second part of that critical path, the first being the environmental issues. As I pointed out earlier, we started the program by using the authorities given us by the Congress. We used these mandatory authorities, which expired in June, and we are waiting for a renewal.

Senator CURTIS. Do mandatory authorities override the environmental agencies?

Mr. ZARB. No, sir, the way the law is written, we must make our own determinations on environmental effects, and the Environmental Protection Agency has the ability to review our data and then make a decision of their own.

Senator CURTIS. In my State, we have been undertaking to build a huge coal-fired electrical generating plant. It is of such magnitude that the district is buying their own train or trains. They are also building 35 miles of additional railroad. But the Sierra Club intervened in the proceedings before the Federal Power Commission. The delay has already cost the State of Nebraska \$38 million. If it runs the full course, it will be \$100 million.

We are rather a small State, populationwise, yet we seem helpless to move any faster.

I see my time is up, but that situation should be remedied if the President's efforts on speeding up and simplifying Governmental regulations—

Mr. ZARB. In the President's energy package, he included certain modifications of the Clean Air Act. Both Russ Train and I have testified in favor of it. We both believe that it will help our energy situation, without endangering our environmental goals.

Senator MONDALE. Senator Brock.

Mr. PASTERNAK. I would like to interrupt. The number on the oil consumption of electrical utilities is about 1.5 percent.

Senator CURTIS. That is what would be saved if we ceased using oil for generating electricity?

Mr. PASTERNAK. That is what we now consume in the generation of electricity.

Senator CURTIS. 1.5 million barrels a day?

Mr. PASTERNAK. Yes.

Senator CURTIS. What is our total consumption now? I have got it for 1985, but what is it now?

Mr. PASTERNAK. Total consumption right now will average, this year, at about 16.9 million barrels a day.

Senator BROCK. It is 9 to 10 percent; which is the figure I was questioning. I knew you—

Mr. ZARB. The other part of residual oil imports is New York and parts of the Northeast.

Senator BROCK. I am fascinated by this prospect of switching to coal. You do have a good deal more oil used for heating purposes than you mentioned on your 1/2 million for electricity. If you include that, you probably can get close to 5 million barrels, can you not?

Mr. ZARB. Yes; the residual consumption in total, is about 3 million barrels a day, with the remainder being the heating utilization of the residual oil. So I would say at least 3 million barrels.

Senator BROCK. Now, you say we have not got the real capacity, but we have got some of the finest ports in the United States, in Boston and in Norfolk. We ship almost all of the coal for export for this country out of Norfolk. Why can we not ship—

Mr. ZARB. Well, we can. I pointed out the rail capacity, because in some parts of the country we just cannot move coal without rail, par-

ticularly in the interior of the Nation. But if we can solve these environmental concerns, then I believe we will be able to get coal into some of those areas.

Senator BROCK. All right. Now, let's go to the second point on the relative cost versus oil. Is that control still economical?

Mr. ZARB. Yes, sir.

Senator BROCK. Considerably so?

Mr. ZARB. Yes, sir.

Senator BROCK. So the only constraint that is stopping you from doing what you would like to do is an environmental constraint?

Mr. ZARB. We could do more without the environmental constraint. We point out that there are some facilities that would have to make a very heavy capital investment to burn coal. Now that is not the rule; that is the exception. There are other areas where they now run on intrastate natural gas, which is relatively cheap. In this case they have no incentive to convert, unless we mandate it.

Senator BROCK. Now you have come up to the second point that I wanted to talk about. You made the statement: "Believe me, this winter, we are going to wish we had done something about natural gas." I would admit to a bias because Tennessee is more affected than other States, but I have got people out of work now and I am going to have a lot more this winter, because this Congress has not acted, has not acted in several years. And I do not know what it takes to educate somebody that something has got to be done, but I cannot accept Senator Roth's hope that we can allocate it around adequately. I do not think you can allocate adequately, because of the constraints on the pipeline system, and the long-term contracts and the commitments that have been made. I think my State is going to get just clobbered this year, and I am sick and tired of hearing people say, well, I cannot go for deregulation, because it would mean increased prices.

Price does not mean a whole lot, when you are out of a job, and that is what we are facing in Tennessee. I do not know what it takes to ring some bells around here, but somebody has got to get honest and start talking about real world economics.

Mr. ZARB. Well, Senator, I can tell you that we mean to be in a position, before the end of this summer, of laying out specifically what we anticipate happening around the country, and how much we are going to be able to do to help minimize it. But there will be no surprises here, except that when people do look at what we anticipate in terms of impact this winter, I think there will be a general surprise, and perhaps that will help to focus attention.

Senator BROCK. I will admit I am fortunate in my hometown. I had a very foresighted president of our local natural gas company, and 10 or 12 years ago, he made a decision that natural gas was going to run out, because the Congress did not have the courage to deal with the problem, and he put our community on a special rate then. We have been paying for it ever since. But we have still got natural gas. It is not true in Nashville; it is not true in other parts of my State.

I do not know what Bill Roth of Delaware or Bill Brock in Tennessee are going to do this winter to help. I do not know what you can do to provide us some relief. I do not know how to get people's attention to this problem. I do not know what it takes. Whatever you can do would sure be appreciated.

I would ask one question—I think your proposed excise tax is 37 cents per 1000 cubic feet. That will give an equivalency of about \$13 a barrel of oil. Is that right?

Mr. ZARB. Yes, sir.

Senator BROCK. Do you really think that is adequate?

Mr. PASTERNAK. 37 cents per Mcf is equivalent to \$2 a barrel of oil.

Senator BROCK. That is what I was worried about. I think that is right. It is the \$2 import tax that you—

Mr. ZARB. It equalizes the fee tariff.

Senator BROCK. Now, the Btu cost could not possibly be under 37 cents; it would be closer to \$1.25, maybe \$1.50, would it not?

Mr. PASTERNAK. Yes. Just to get a perspective, the average cost, delivered to electrical utilities now, for natural gas is about 54 cents per million Btu's. Oil is running about \$2 per million Btu's. The 37 cent excise tax was not only arrived as a Btu equivalent to the \$2 import fee, but also because we believed that 37 cents excise tax would substantially reduce the curtailment problem this year, as a surcharge.

Senator BROCK. Well, it may not be very good politics, but I do not think 37 cents is anything close to—either, if you want to talk about equivalent Btu and real price, I think you ought to be talking about a heck of a lot more than 37 cents, either in the form of deregulation or the form of excise tax. If we cannot get a deregulation bill through this Congress, then we are going to have to put on an excise tax that will give us an equivalency, in terms of Btu costs, because it has got to cost money, or you cannot slow down the waste. And I give you an example. We had a person with General Motors here, what, Friday, and he said that he was using natural gas in his plants. Why? Because it was cheaper. He did not need it. But it was a rational economic decision for him. It was rational only because we in the Congress have held the price below its real economic cost.

You have to offset that in Texas right now, probably in other States of the Union, on the basis that it will guarantee them 10 years of natural gas at \$1.75 per 1,000 cubic feet or more, with an escalator across.

And industries are coming down, because that is still a better buy than they can get in any other energy source, and we are sitting here—the rest of the States are getting half by totals. We are getting a half by this lid we have on natural gas. We are running out of our basic sources, and the Congress refuses to act, and I think there must be some sort of medal for incompetence that we could award.

I do not want to berate you. I appreciate the response you have made.

Mr. ZARB. We would gladly accept the 37 cent plus deregulation and think that that would have enough of an impact to give us a good headstart in this area, and hopefully we can get something done this year so that we will not really suffer a few years out.

Senator BROCK. You have my support.

Senator GRAVEL [presiding]. I would like to cover several items. There may be a vote—there is a vote—and I will just take a few moments and then we will adjourn.

I have a Btu tax proposal that I have had for some time. I do not know if you are familiar with the legislation that I have introduced

in the past. My feeling is, of course, that it is equitable. If you are going to tax energy, then you ought to tax on it on a uniform basis, all forms of energy, so that you do not discriminate against one form of energy as opposed to another form of energy.

What would be your reaction to a Btu tax, to fund the trust fund?

Mr. ZARR. Senator, we need to discourage the use of oil and gas and encourage the use of substitute fuels. With respect to a trust fund, there are two defects and some benefits. The two defects are, first, where does the money come from? And if the money comes from tariffs and other taxes, and goes into a trust fund, we do not have it returned to the economy. So, you have got a difference in economic impact in that inability to deliver it to people who deserve some equity. Second, the trust fund, for example, that was produced in the House bill subjected the expenditures from that fund to the appropriations process. What we had succeeded in doing was to take out of the economy some \$1 million or \$2 million a year and not put it back very expeditiously into the economy, not having funded to the correct levels. So we have one independent variable driving another and then finally making it go through the appropriations process anyway, so that we have not achieved anything except to set up another vehicle.

I would like the notion of taxes, particularly long term, since it has to be more valuable to society. I would like to be sure that we continue to encourage the use of alternatives to oil and gas particularly over the next 3 to 5 years.

Senator GRAVEL. You will not deliver any money with that machinery because you take it back. You are talking about giving it back to the consumer or giving it to the Treasury, and you are not putting capital where it belongs; that is, to permit the private sector to expand the energy capabilities of this country. Your proposal does not do that one iota, as I see it. And of course, the Democratic proposal that has been enunciated somewhat here is that we have to protect the little guys. So we are going to give the cost increases, which is to punish them for using energy, back to the poor people. So that in point of fact, we get nothing back from the producers and we go merrily down the spiral of creating scarcity, which is what produces the high price.

Mr. ZARR. I think not.

The President's program seeks to return the taxes, such as an excise tax or a tariff, which have nothing to do with the market mechanism or windfall, to people as a neutralizing factor with respect to the impact on the economy. So I think that is not possible. The private capital features are going to come from our ability to get out of the way. The decontrol situations say that we make room for private capital flow into that sector. And I think the President's program does that.

Senator GRAVEL. But over 30 months, and by that time we could be in a lot more trouble than we are in now. And I appreciate the reason why he has done it this way. Because of the politics played with on my side of the aisle, which have boxed him in. If he deregulates, the prices goes up. We will blame it on President Ford and we do not blame it on the Congress. So nobody is prepared to really take some leadership for the American people and do what we know has to be done—that is to deregulate, whether we do it 30 months from now or in a slow painful process.

Are you familiar with the Nathan report? The Nathan study? It shows that over the past 10 years, since 1959, we have not seen the economic price of oil equal the sales price. In other words, we have not been to the point where there has been an economic return. That is the reason why we have seen our supplies continue to dwindle.

Now, in the face of that, I believe—you know, you are committed to another direction—that would indicate that we should deregulate right now. Forget the 30 months. That is hocus-pocus for the voter.

Mr. ZARB. Senator, I think there are two issues here. One is an obvious compromise of what seems to be the attitude of the Congress so that we can do something. The other question is, if we do get the 30-month program enacted and enacted now, the industry can plan so that they can see the light at the end of the tunnel and begin the process of getting the job done. I think all things considered, this is the best formula to get some motion. We have been talking for 7 months now about an energy program, and we have gotten not one meaningful piece of legislation.

Senator GRAVEL. I would hope to offer the amendment that got lost in the House on recycleable materials. We could save a lot of energy costs if we could begin to prepare for the cartel actions that are going to visit us with respect to these imported resources.

What would be your reaction to a tax credit for paper, scrap iron, and for bauxite for aluminum? What would be your reaction?

Mr. ZARB. In principle, I do not think we would object, Senator, but I would like to look at the numbers and exactly who they affect. Sometimes when we get into this, we start out with great motivation and we wind up subsidizing those who least need the subsidy.

Senator GRAVEL. The other alternative, of course, would be to wipe out the tax advantages that the virgin materials have.

What would be your reaction to that?

Mr. ZARB. I would like to look at specifics; that is too much of a generalization.

Senator GRAVEL. Very good, Mr. Zarb. I appreciate your patience, your testimony, and your candor. And I understand the restrictions that you have. We appreciate your leadership.

[The prepared statement of Mr. Zarb follows:]

STATEMENT OF FRANK G. ZARB, ADMINISTRATOR, FEDERAL ENERGY ADMINISTRATION

Mr. Chairman, Members of the Committee. I am pleased to have the opportunity to appear before you today to discuss H.R. 6860, as amended, the energy legislation recently reported out of the Ways and Means Committee and subsequently passed by the House. In my testimony, I wish to address two major items: First, I wish to review the Administration's proposals for achieving energy independence and reiterate our willingness to work with the Congress to achieve an energy program which will result in necessary import reductions; second, I would like to comment on H.R. 6860 and provide the results of our analysis regarding import reductions achieved by that bill.

THE PRESIDENT'S PROGRAM

In viewing today's energy situation, we must recognize that a severe energy problem does indeed exist, and that the era of cheap and abundant fossil fuels is over. The need for action is patently clear, and I shall not take up any more of the Committee's time reciting the lengthy litany of where we have been and where we will be, should remedial action not be forthcoming. Allow me just to briefly outline our current situation:

1. The United States, at present, imports both crude and product at a seasonal low of 5.4 million barrels per day (32 percent of our total demand). At the close of this year, we estimate that figure to surpass seven million barrels per day, nearly 41 percent of total demand.

2. Consumption currently is about 15.7 million barrels per day. At the close of this year, we estimate that figure to be approaching over 18 million barrels per day.

3. Domestic production of crude oil is presently a little over eight million barrels per day, a 7.2 percent decline from the same period last year, and over one million barrels per day below 1972. And this decline will continue next year.

When these facts are combined with the recent reports that the Organization of Petroleum Exporting Countries (OPEC) is considering additional price increases, the picture clearly emerges that this nation's backward slide away from energy independence has not yet been reversed.

The 1973 embargo clearly demonstrated the consequences of energy dependence on uncertain foreign sources of supply. That previous embargo created a loss in the Gross National Product estimated to range between \$10 to \$20 billion. The embargo also created a direct unemployment effect of 500,000 jobs.

By 1977 imports will rise from 6.0 million barrels a day, of which about 1.5 million barrels a day was derived from Arab sources, to almost eight million barrels a day; and the increase is almost entirely attributable to Arab sources of supply. If another Arab embargo occurs the shortage will be twice as great as during the last embargo; and the GNP and unemployment effects will be correspondingly severe.

The alternatives we face must be addressed with these facts clearly in mind. One possible alternative is to do nothing, but a lack of action only postpones decisions we will eventually have to make. Without appropriate actions, our cost for imported oil, which was \$3 billion in 1970, and \$26 billion last year, could reach \$32 billion in 1977.

The only real alternative is the development of a viable, comprehensive energy program which demonstrates this Nation's willingness to take the difficult and expensive steps to implement an energy conservation program and to develop new energy resources.

Such was the purpose in sight when the President first introduced his comprehensive energy program to the Congress almost six months ago. To this day, after that length of time, it remains the only integrated plan for dealing with our vulnerability to supply interruption and price manipulation by foreign powers. The President has prescribed tough action to cure our energy ills. He, as you are already aware, originally outlined three time-phased goals.

One: In the short-term, a cut in our oil imports of 2 million barrels per day by the end of 1977.

Two: By 1985, imports of no more than 3-5 million barrels per day—and the capability of immediately replacing that amount from storage and standby measures in the event of a supply disruption.

Three: Accelerated development of energy technology and resources so that the United States can meet a significant share of the energy needs of the free world by the end of this century.

To carry out these goals, the President has submitted to the Congress the proposed Energy Independence Act of 1975, a bill which provides measures to achieve energy conservation, increased supply, the deregulation of natural gas, and increased energy preparedness through a system of strategic reserves. This bill combined with oil decontrol, a comprehensive energy conservation tax package (including a windfall profits tax, and excise taxes on domestic production of petroleum and natural gas), and incentives for utility financing provides a complete energy program.

Because this program utilizes the price mechanism to achieve energy conservation through demand constraints, the President proposed a system of permanent tax reductions to refund the increased costs of energy to Americans. These tax reductions are distinct from the temporary anti-recession tax reductions already enacted into law. Under the President's program, the cost of energy becomes more expensive in relation to other goods, but through the tax reductions to every consumer recommended by the President, the consumer receives increased income to meet increased energy costs.

Another alternative would be the greater use of government controls—import quotas, allocation systems or rationing, Sunday closings of gasoline stations, no-driving days, etc. All of these actions and others were reviewed during the

embargo. We chose some and rejected others. Those actions we chose were designed to help us through a short-term crisis. But we now face a potentially long term crisis. Each regulatory option would involve self-imposed shortages, burgeoning bureaucracies, and disruptions in the lives of all American citizens. Also, to be effective, those controls which were chosen would have to be in place for a long period of time because of expected shortages. We do not believe that the American people would be willing to accept, nor should they be subjected to, such long lasting, pervasive controls over almost every aspect of their lives.

Certainly the President's program will set into motion powerful forces to reduce energy consumption and to substitute domestic for foreign supplies. Such must be the case, for the longer we delay action, the longer it will take for these forces to work. The longer it takes for the forces to work, the more vulnerable our economy and our foreign policy become.

In an effort to reverse this trend toward dependence on foreign oil, the President raised crude oil import fees by one dollar a barrel on February 1. After a 90-day delay, in which he hoped that a comprehensive legislative package could be enacted, he imposed an additional one dollar per barrel fee on June 1.

The effect of these measures on our level of petroleum imports will be both immediate and cumulative over time. By 1977, we estimate that our demand for imported oil will be reduced by more than 300,000 barrels per day—a short-term goal that no Congressional proposal thus far tendered can match. Retail gasoline prices have risen by 1.8 cents per gallon as a result of the February one dollar increase. The June 1 action will most likely result in an increase of approximately 1.5 cents per gallon.

To furnish a substantial incentive to reverse the trend of declining domestic production and further stimulate conservation, the Administration has urged the phased decontrol of old domestic crude oil combined with a windfall profits tax.

The President's plan to decontrol the price of old oil will allow the price of controlled domestic oil, presently at \$5.25 per barrel, to rise gradually to the price level of presently uncontrolled oil. The effect of this plan will be two-fold: First, industry will be given an impetus to increase the production of our own supplies of petroleum as domestic oil prices are permitted to rise, and secondly, the subsequent increased overall price of oil will reduce demand. In 1977, this decontrol plan, in conjunction with the increased import fees, will reduce the demand for imports by approximately 880,000 barrels per day. However, just as phased decontrol has the greatest effect on reducing petroleum demand, it also involves increased cost. Phased decontrol, if put into effect in the last six months of 1975, and assuming the imposition of the increased import fees, would cause gasoline prices to rise about one cent in 1975 and seven cents when the program is fully effective. The effect on electricity prices will be slight, less than 2 percent by the end of 1977.

Additionally, an acceptable windfall profits tax would, as stated by the President, recapture excess profits and assure that the end of controls does not result in one sector of the economy benefitting unfairly at the expense of other sectors because the money collected would be returned to the consumer.

To spur production of crucial natural gas supplies, the President has proposed the deregulation of new supplies of that resource. The Senate will be debating various approaches toward the natural gas problem in the near future.

Natural gas accounts for about one-third of the Nation's total energy requirements. In addition to being the dominant energy source for U.S. industry, it also provides heat for 55 percent of the Nation's homes. The Federal Power Commission (FPC) has been regulating the wellhead price of natural gas sold interstate since 1954. During the last decade, a steady decline in real prices in the gas fields has resulted in declining levels of new discoveries, as regulation has failed to provide the incentives to explore for and develop the increasingly costly gas reserves. Unless long-term trends relating to drilling and discovery are reversed, the availability of natural gas is headed for a sharp decline in the years ahead. At the same time, regulated field prices, along with other advantages of gas (e.g. its convenience and clean-burning characteristics), have escalated the demand for this fuel, especially in the industrial and the electric utility markets which account for about 60% of gas consumption. By increasing the demand for gas and decreasing the amount supplied, FPC price ceilings have been instrumental in creating a costly shortage of the Nation's cleanest fuel.

To reverse this trend toward declining natural gas supplies, the President has proposed that the price of new natural gas be deregulated to spur investment in the exploration and development of new reserves. Thus, the deregulation of new natural gas would allow the average *wellhead* price to increase more rapidly than continued regulation would permit. However, the effect on natural gas prices paid by the residential customer would be small and gradual for two reasons. First, as interstate gas is sold under contracts of 15 to 20 years, it would be a number of years before all gas could be deregulated. Second, less than one-fifth of the residential price can be attributed to the price of gas at the field. If price controls on new natural gas in interstate markets had been lifted at the beginning of this year, the impact on the average annual residential bill would be \$6.38 in 1975, \$10.21 in 1976, and \$13.30 in 1977. In percentage terms, this would mean an increase of 3.9 percent in 1975, 6.2 percent in 1976, and 8 percent in 1977.

If new gas prices for gas sold interstate are not deregulated, the effect on the Nation will be deleterious at the very least: (1) there will be further unemployment and reduced industrial production as a result of curtailments to industrial production as a result of curtailments to industrial customers; (2) gas will be replaced by oil, and the volume of oil imports needed to replace gas could rise to an estimated four million barrels per day in 1985; (3) to the extent that natural gas is not available, maintenance of air and water quality standards will require considerable added expense as a result of increased reliance on oil, coal or nuclear generating plants; and (4) consumers in the interstate market will continue to be disadvantaged, because the interstate pipelines that serve them will be unable to maintain even current sales levels. Deregulation of natural gas is the only practical way of avoiding the problems associated with substantial curtailments.

Most recently, the President's Labor-Management Committee has recommended legislative and administrative measures which need to be taken to increase electric utility construction and output. The administrative recommendations, including the establishment of a task force to work on expediting the construction of electric utility plants, have already been implemented. It is the legislative initiatives which now need to be taken up.

The President has endorsed the Labor-Management Committee's legislative recommendations and Secretary Simon presented the President's specific proposals to the Ways and Means Committee on July 8th.

The proposed legislation would do the following:

Increase the investment tax credit permanently to 12 percent on all electric utility property except generating facilities fueled by petroleum products. No change of the percent-of-tax limitation is involved. The increase in the credit is allowable only if construction work in progress is included in the utility's rate base and the benefit of the increase is "normalized" for ratemaking purposes. "Normalized" in this sense means reflecting the tax benefit for ratemaking purposes pro rata over the life of the asset which generates the benefit instead of recognizing the entire tax benefit in the year the utility's taxes are actually reduced. In the absence of normalization, the entire tax benefit would flow through immediately in the form of reduced utility rates for consumers, and no real economic benefit would result for the utility.

Give electric utilities full, immediate investment tax credit on progress payments for construction of property that takes two years or more to build, except generating facilities fueled by petroleum products, without regard to the five-year phase-in required by the Tax Reduction Act of 1975. This new provision applies only if the regulatory agency includes construction work in progress in the utility's rate base for ratemaking purposes.

Extend to January 1, 1981, the period during which pollution control facilities installed in a pre-1969 plant or facility may qualify for rapid five-year straight-line amortization in lieu of normal depreciation and the investment credit.

Permit rapid five-year amortization of the costs of either converting a petroleum-fueled generating facility into a facility not fueled by petroleum products or replacing a petroleum-fueled facility with one not fueled by petroleum. This amortization is in lieu of normal depreciation and the investment credit, and is available only if (i) its benefits are "normalized" for ratemaking purposes, and (ii) construction work in progress is included in the utility's rate base for ratemaking purposes.

Permit a utility to elect to begin depreciation, during the construction period, of accumulated construction progress expenditures, generally the same expenditures as those which qualify for the investment credit construction progress payments under the Tax Reduction Act of 1975. Any depreciation taken during

the construction period will reduce the depreciation deductions available after the property is completed. This early depreciation will be available only if the ratemaking commission includes construction work in progress in the utility's rate base and "normalizes" the tax benefits for ratemaking purposes. Construction of generating facilities which will be fueled by petroleum products will not qualify for such depreciation.

Permit a shareholder of a regulated public electric utility to postpone tax on dividends paid by the utility on its common stock by electing to take additional common stock of the utility in lieu of cash dividends. The receipt of the stock dividend will not be taxed. The amount of the dividend will be taxed as ordinary income when the shareholder sells the dividend stock and the amount of capital gain realized on the sale will be decreased (or the amount of capital loss increased) accordingly. Dividend stock is deemed sold before other stock.

We estimate this program will reduce electric utilities' tax liabilities by \$600 million for the fiscal year 1976, and by an increasing amount in subsequent years.

In addition to the recommendation of the Labor-Management Committee, the President himself has recommended legislative changes in utility regulation in the Utilities Act of 1975, Title VII of the Energy Independence Act of 1975. Title VII was proposed to make selective changes in state utility commission regulation by eliminating prohibitions against off-peak pricing (so that utilities may charge lower prices to customers during off-peak hours), by eliminating undue regulatory lag, by prohibiting suspension of proposed rate schedules by more than five months, and by eliminating prohibitions against use by a utility of a normalization method of account. Title VII would also eliminate fuel adjustment clauses which do not allow utility rates to accurately reflect increasing fuel costs.

Each of these actions: (1) import fees (2) oil decontrol (3) natural gas deregulation and (4) utilities incentives, combined with the other items contained in the Energy Independence Act of 1975, was and is necessary if we are to find a solution to our energy problems. The program the President put forward is a comprehensive one. It will reach the goals the President set forth and which, I think, the American people are entitled to.

Unless the Congress acts now to enact a constructive energy development and conservation program, we may never reach those goals.

H.R. 6860

And now, I would like to comment on H.R. 6860 itself. We are opposed to enactment of the Energy Conservation and Conversion Act of 1975 in its present form. The bill recognizes the need to reduce the Nation's dependence upon an uncertain supply of imported oil, but it falls seriously short in achieving its objectives. It fails to provide adequate and appropriate taxes on petroleum and natural gas to achieve necessary conservation. Its emphasis is misdirected toward automobile fuel standards and import quotas. It provides a long series of expensive tax credits and accelerated depreciation provisions for energy-related materials which are expected to result in little or no energy savings.

However, let me hasten to say that H.R. 6860 was neither conceived nor originally drafted to provide as little energy savings as it does in its present form. The predecessor to H.R. 6860, H.R. 5005, while containing provisions not in keeping with the President's program, nevertheless would have saved substantially greater amounts of energy than will H.R. 6860. We did not agree with the methods or focus adopted by H.R. 5005 to save energy, but the import reductions more closely followed the goals set by the Administration for the next few years.

Even with the tariff and exercise tax on business use of petroleum and natural gas, H.R. 6860 is expected to reduce imports by only 125,000 bbl/day in 1975, 214,000 bbl/day in 1976, and 314,000 bbl/day in 1977, the year in which the President's program would be saving 2,000,000 bbl/day. More importantly, because H.R. 6860 effectively rolls back the second dollar of the supplemental import fee, and loses the import reductions attributable thereto, the bill's net effect from what the President has already done, is essentially no additional savings. By 1985, when the President's program was estimated to be saving 7.2 million bbl/day of petroleum, H.R. 6860 would be saving only 2.1 million bbl/day, a difference of over 5 million bbl/day in imports. Even assuming that the price of imported oil drops to \$7.00 a barrel after 1978 (in 1973 dollars), the total outflow in U.S. dollars in 1985 resulting merely from the difference in import savings between H.R. 6860 and the President's program is over \$12.7

billion per year. If in fact the price of imported oil does not drop in the next few years, the outflow will be substantially greater.

We believe that the President's program is the only comprehensive plan set forth thus far which is capable of achieving the 2,000,000 barrel per day import reductions necessary by 1977 to start this country on the road to energy independence. Unless substantial demand restraint measures are incorporated which affect all sectors of the economy equally, that import reduction level will not be reached. A bill which results in only about 15 percent of those necessary import reductions is unwise legislation.

The only desirable provision of H.R. 6860 is section 231 which provides a nonrefundable tax credit of up to \$150 for 30 percent of qualifying residential insulation expenditures made up to \$500. The credit is available through December 31, 1977 to encourage energy-saving retrofit of residential housing. This credit, originally proposed by the President in January of this year, is estimated to save approximately 20,000 bbl/day of petroleum in 1975, 65,000 bbl/day in 1976, and 110,000 bbl/day in 1977 when the credit ceases. Because a home once retrofitted with insulation continues to use less energy throughout its useful life, this 110,000 bbl/day saving will continue for years in the future. Any energy program adopted by the Congress should contain such a provision in order to provide a financial incentive to the average American to cut down on the use of energy in his home.

The excise tax on the business use of petroleum and petroleum products contained in section 411 of H.R. 6860 indicates a Congressional realization that increased prices will result in petroleum demand reduction, and a comprehensive domestic exercise tax on petroleum would be a desirable concept. The President proposed such demand reduction measures in the form of a two dollar a barrel excise tax on all domestic crude oil. Section 411, however, is not such a comprehensive excise tax and it falls on too narrow a sector of the economy.

Section 411, as presently drafted, would impose an excise tax on the business use of petroleum of 17 cents per barrel in 1977 rising to \$1.00 per barrel in 1982 and thereafter, and an excise tax on the business use of natural gas of 4 cents per Mcf in 1977 rising to 18 cents in 1980 and thereafter. The tax does not apply to use as a fuel in vehicles, vessels, or aircraft; in residential facilities, including hotels and motels; for use in mineral extraction (mining); for farming purposes; nor does it apply to fuel used in electrical generating units constructed or acquired before January 1, 1976.

With the many exemptions contained in section 411, the effects of the tax do not spread equally across the economy as we believe they should. It will take a comprehensive domestic excise tax on petroleum to provide substantial energy savings achieved through the price mechanism resulting in import reductions over the next two to three years.

It is imperative that any energy program contain substantial demand constraints in order to lower total consumption without the need for an ongoing allocation program. If foreign supply itself is merely restricted, as I will discuss shortly in regard to the quota sections, then an artificial shortage would be created. Artificial shortages may require allocation in order to most equitably distribute access to petroleum supply, and allocation results inevitably in increased bureaucracy and distortion of the market mechanism. Energy consumption must be substantially reduced in the next few years and the most equitable way of reducing consumption is by allowing each end-user to determine his own consumption based on market forces, rather than allocating fixed amounts to energy consumers.

This leads me to what we believe are the least desirable provisions of H.R. 6860. Title I of the bill provides for a system of quotas, license tickets, and duties on imported petroleum and petroleum products, and repeals certain Presidential authority under Section 232 of the Trade Expansion Act of 1962. Specifically:

Section 111 imposes quotas on oil imports of 6 million bbl/day beginning in 1975 and 6.5 million bbl/day for 1977, 1980 and thereafter. Two million bbl/day of the quotas are set aside for residual fuel oil of which up to 400,000 bbl/day may be distillate fuel oil. This is a temporary exemption to assure that the importation of residual and distillate fuel oil will not be restricted for the next three years.

Section 112 provides for the sealed bid auctioning of import license tickets by the Federal Energy Administration to distribute access to imported oil. Tickets purchased in this "major" auction would be fully marketable. A separate

sealed bid auction is established for small refiners and independent marketers. Tickets in this "minor" auction would not be marketable.

Section 121 establishes a 2 percent duty on imported petroleum and a 5 percent duty on imported petroleum products which may be raised by the President to 10 percent in either case (or 1 dollar, whichever is greater), however, the President would not be able to raise the duty on petroleum products to above 5 percent for two years after enactment. Of particular importance is the fact that section 121 also repeals Presidential authority under the Trade Expansion Act of 1962 to adjust imports of petroleum and petroleum products except during periods of war, attack on the United States, or during actual hostilities involving the use of U.S. Armed Forces.

With respect to section 121, I am very much concerned over the repeal of Presidential authority to adjust petroleum imports except during actual hostilities for the following reasons. First, the "national security" can be threatened under other circumstances than those which involve actual hostilities. The rapid rise of petroleum imports and the even more rapid rise of petroleum import prices are conditions which certainly threaten the national security, not just because of the outflow of U.S. funds, but principally resulting from a growing reliance on uncertain sources of petroleum supply. If petroleum imports continue to rise, the President will need the flexibility to take actions designed to halt the flow of imports.

Secondly, the elimination of Presidential authority to set import license fees and tariffs effectively rolls back import tariffs to less than half their present levels, and will result in an increase in foreign imports due to the lowered price. At this time with respect to crude oil, there is a supplemental license fee of \$2.00 per barrel and a basic fee of \$0.21 per barrel. Assuming H.R. 6860 became law, and the elimination of Presidential authority was replaced by the duties contained in section 121, and assuming an \$11.00 per barrel import price, the total import charge on crude oil would drop to \$0.22 per barrel [2 percent of \$11.00] with Presidential authority to raise it to \$1.10 per barrel [10 percent of \$11.00]. This precipitous drop in the price of imported petroleum would serve to make it more attractive to a prospective purchaser and would only tend to increase foreign imports.

In addition, there are a number of other serious problems created by section 121. Since the 10 percent limitation serves as an upper limit for duties on both crude and product, there is no flexibility to establish an appropriate differential between the duties on crude and product to protect domestic refining capacity. The concept of this differential is recognized in the bill's establishing the basic tariff for products at a higher rate (5 percent) than the basic tariff for crude (2 percent). The concept is not carried through, however, in the provisions allowing the tariffs to be raised up to 10 percent ad valorem. Furthermore, the restriction in section 121 which fixes the rate of duty on petroleum products at 5 percent for two years effectively prevents the President from raising the rate of duty on crude oil to over 5 percent, since to do so would reverse the crude-product differential.

The separate "minor" auction to allocate petroleum to small refiners and independent marketers is unnecessary and will result in a windfall to bidders in the "minor" auction. The bill provides that the amounts of petroleum made available to the "minor" auction shall be such so as to ensure that "(i) any small refiner can operate his refineries at capacity, and (ii) any independent marketer can adequately supply his regular distribution channels" (Sec. 112(c)(3)(B)). When sufficient fungible goods (import tickets) are supplied to an auction so as to satisfy the needs of all bidders, as would be done in the minor auction, then the need to bid up the price will be negligible and a low energy bid will result. This energy bid, lower than the average bid in the "major" auction, results in the small refiner windfall.

A small-refiner windfall will create extensive pressure for expansion of the preferred group and for increases in the volumes made available through the small refiner auction. If the quota provision is retained, the bill should be amended to provide a set-aside in which small refiners are guaranteed specific volumes of import tickets to be sold at the average price established in the major auction.

As I pointed out, section 111 sets aside from the quota level two million barrels a day for residual and distillate fuel oil for three years. This exception was designed to assure that areas of the country which are dependent on imported fuel oil would be given a chance to locate new sources of supply or to convert to coal where possible. This provision would even further restrict the amount of

crude oil which could be imported into this country as the two million barrel per day residual and distillate exception is subtracted from the total daily quota to arrive at the quota level for crude oil, and may further aggravate the possibility of artificial shortages created by the quota.

Another problem with the quota section of H.R. 6860 is the exemption of petrochemical feedstocks from the quantitative limitations. This increases the total volumes which may be imported. Since these feedstocks would not have to be covered by licenses obtained in the auction, imports of petrochemical feedstocks would be subsidized to the extent of the cost of auction import licenses. There seems no substantial reason for this preference and its presence would again create substantial pressures for expanding this favored category by administrative interpretation. This provision would also distort import patterns, causing a shift from crude oil to eligible feedstocks. Petrochemical feedstocks outside the quota should at least be subject to an additional import license fee equal to the average price for import tickets established in the "major" auction.

Finally, use of an import quota requires careful prediction of consumption levels or else artificial shortages and resultant higher prices may be created through excessive lowering of the quota, resulting in the necessity for an allocation program with its incumbent inequities and market distortions. This possibility particularly arises in the years past 1977 when declining domestic production may create more severe supply problems and force increased reliance on foreign imports.

Sections 211 through 217 establish fuel efficiency standards for automobiles. Each manufacturer is required to achieve an average level of fuel economy for his fleet, computed separately for domestic and imported cars. A manufacturer is deemed to meet the standard if his fleet average is within 0.5 mpg of the standard. Should the manufacturer's fleet average fall below the standard set for that model year, then the manufacturer becomes liable for a civil penalty. The penalty is \$5 for each 1/10 mpg that the manufacturer's fleet average falls below the standard, multiplied by the total number of cars manufactured by the manufacturer for that year.

The initial fuel efficiency standards set forth in the bill are 18.5 mpg for 1978, 19.5 mpg for 1979, and 20.5 mpg for 1980. The Secretary of Transportation will determine the standard for the years 1981 through 1984 leading to the year 1985 when the bill dictates a fuel efficiency standard of 28.0 mpg. The standard for any year may be lowered where the Secretary of Transportation determines that emission standards applicable to 1977 or later model year automobiles are more stringent than emission standards applicable in 1975. The Secretary may adjust the fuel efficiency standard by the amount of lessened miles per gallon attributable to the stricter standards.

We believe that the voluntary fuel efficiency agreements made by the major manufacturers and announced by the President continue to be the most effective way to achieve increased automobile fuel efficiency without placing such a burden on manufacturers so as to increase possible unemployment. A 40% increase in automobile fuel efficiency is expected to result by 1980 from the agreements and with interim goals, Federal monitoring, and public reporting of progress announced by the President, no legislation is needed in this area at this time. Should the automobile manufacturers fail to achieve the goals announced by the President, the Administration will seek appropriate legislation at that time.

H.R. 6860 also provides tax credits for residential solar energy equipment and for electric cars. While these might seem to encourage energy conservation, each in fact would produce little or no energy savings, would unnecessarily subsidize persons who would have purchased such items anyway, and is unwarranted.

Section 232 provides a non-refundable tax credit of up to \$2,000 (25 percent of expenditures up to \$8,000) for expenditures made to fit a residential dwelling with solar heating and cooling equipment. Such equipment at this time is expensive and is priced out of the reach of most middle class homeowners. The solar energy tax credit is not expected to induce many persons to add solar equipment to their homes because of the high initial expense.

This Administration is taking significant steps to hasten the commercial use of solar energy, including preparation of a National Plan for Accelerated Commercialization of Solar Energy. Alternative strategies for market stimulation are a key element in the Plan. The Federal Energy Administration, the Energy Research and Development Administration, the Department of Housing and

Urban Development, and the National Science Foundation are working to expedite and promote use of solar energy, but specialized tax credits (which would primarily benefit high income tax payers) are not, in our opinion, appropriate.

Section 233, which was added by amendment during debate in the House of Representatives, provides a non-refundable tax credit of up to \$750 (25 percent of expenditure up to \$3,000) for the purchase of an electric highway car.

Clearly, we have to move toward a personal transportation system which does not solely rely on petroleum. Electric vehicles may eventually become a viable alternative to the conventional internal combustion engine. However, the initial high cost and relatively limited range of the electric highway vehicles available today puts them in the luxury class. A tax credit, at this time would benefit primarily those few individuals with high incomes and special circumstances who would normally have otherwise purchased an electric vehicle. The Administration is committed to encouraging and supporting the research necessary to improve battery technology and thereby lower the high cost of electric vehicles. We, therefore, oppose the enactment of this provision.

Another of the provisions to which we most strongly object is Title III, which establishes the Energy Conservation and Conversion Trust Fund. The Administration has long opposed the establishment of trust funds for specific purposes. Our reasons for such opposition are amply borne out by reference to the Highway Trust Fund; namely, that trust funds tie up enormous sums and create their own constituencies and lobbies. The President has recently announced his proposal to cut back the Highway Trust Fund and return much of the revenue to the States.

All expenditures needed for energy research and development can be easily and efficiently handled through the regular budget and appropriations process. It would be ineffective management to commit by law funds which five years from now might be used for better purposes.

Finally, let me address those provisions of H.R. 6860 which attempt to increase energy supplies through a series of tax incentives. Sections 421 through 424 would provide accelerated 60-month amortization for qualified energy use equipment such as shale and conversion equipment, coal processing and deep mining equipment, and coal pipelines; qualified railroad equipment; and railroad rolling stock. Section 431 would extend the 10 percent investment tax credit to insulation and solar equipment. We believe that each of these provisions will result in little or no increased production of energy resources, that companies would proceed to purchase and utilize the same equipment without the credit or accelerated amortization, and that these provisions essentially result in a tax windfall with a resulting substantial revenue loss.

Section 432 would eliminate the investment tax credit for new electrical generating facilities fueled by petroleum or natural gas. The concept of promoting electrical generating capacity now powered by petroleum or natural gas is a good one, but we believe that section 432 would go about it the wrong way by attempting to use the elimination of tax credits. The investment tax credit for utilities was temporarily increased from four to ten percent by the Tax Reduction Act of 1975. The President has proposed a permanent increase in the investment tax credit to 12 percent for electric utility equipment not powered by petroleum or natural gas, and we support that proposal.

In summary, I wish to say again that the road to increased energy supply and reduced energy consumption can most effectively be accomplished through a price mechanism which will at the same time encourage development of domestic energy resources and constrain consumption. Such a price mechanism must raise the price of energy in relation to other goods but yet rebate the amount of the increased prices through a progressive tax mechanism. The major items to be considered in this respect are phased oil decontrol combined with a windfall profits tax, import duties, deregulation of natural gas, utilities incentives, and the other items contained in the Energy Independence Act of 1975. Unless Congress moves rapidly to achieve these objectives, we will continue to place a dangerous and growing reliance on oil imported from uncertain sources.

I again pledge the full cooperation of the Federal Energy Administration to work with the Congress to implement a comprehensive and timely national energy program.

[Whereupon, at 4:45 p.m., the committee recessed, to reconvene subject to the call of the Chair.]