Statement before the Senate Committee on Finance Hearing:
Climate Challenges: The Tax Code's Role in Creating American Jobs, Achieving Energy Independence, and Providing Consumers with Affordable, Clean Energy

Broad, Efficient, and Technology-Neutral Tax Policy for Clean Energy

Alex Brill
Resident Fellow

April 27, 2021

Chairman Wyden, Ranking Member Crapo, and Members of the Committee,

My name is Alex Brill, and I am a resident fellow at the American Enterprise Institute, a public policy think tank here in Washington, DC. Thank you for the opportunity to testify about the tax code's role in our country's pursuit of clean energy. The views and opinions I offer today are mine alone and do not represent those of my employer or necessarily those of my colleagues at AEI.

Introduction

Today's hearing addresses a timely and important topic: the tax treatment of energy. A broad, efficient, technology-neutral tax policy geared toward encouraging less energy consumption and more renewable energy production is critical to ensuring a reduction in CO_2 emissions. The US tax code has long encouraged the use of clean and renewable energy, as well as energy conservation and efficiency, with policies dating back to the Energy Tax Act of 1978. Unfortunately, a scattershot approach to tax policy aimed at reducing US reliance on fossil fuels – whether in pursuit of energy independence or to address concerns about climate change – has led to a complex and convoluted tax code.

Over the years, Congress has enacted dozens of deductions, credits, exclusions, and other favorable tax policies to incentivize a broad array of renewable energies (wind, solar, geothermal, biomass, etc.); structural efficiency technologies (residential energy efficiency upgrades, commercial energy efficiency investments, etc.); and low-carbon transportation (plug-in vehicles, electric motorcycles, alternative fuels, vehicle refueling facilities, etc.). In some cases, policies encourage additional investment in existing technologies, foster demand for and broader adoption of clean energy, and incentivize research and development. In other cases, policies may be little more than windfall gains for manufacturers of existing products.

As Congress considers the role of tax policy in addressing our climate challenges, I encourage members to consider options that simplify the tax code with respect to energy, avoid the economic distortion of provisions that are not technology-neutral, and adopt a broad-based and fiscally responsible approach.

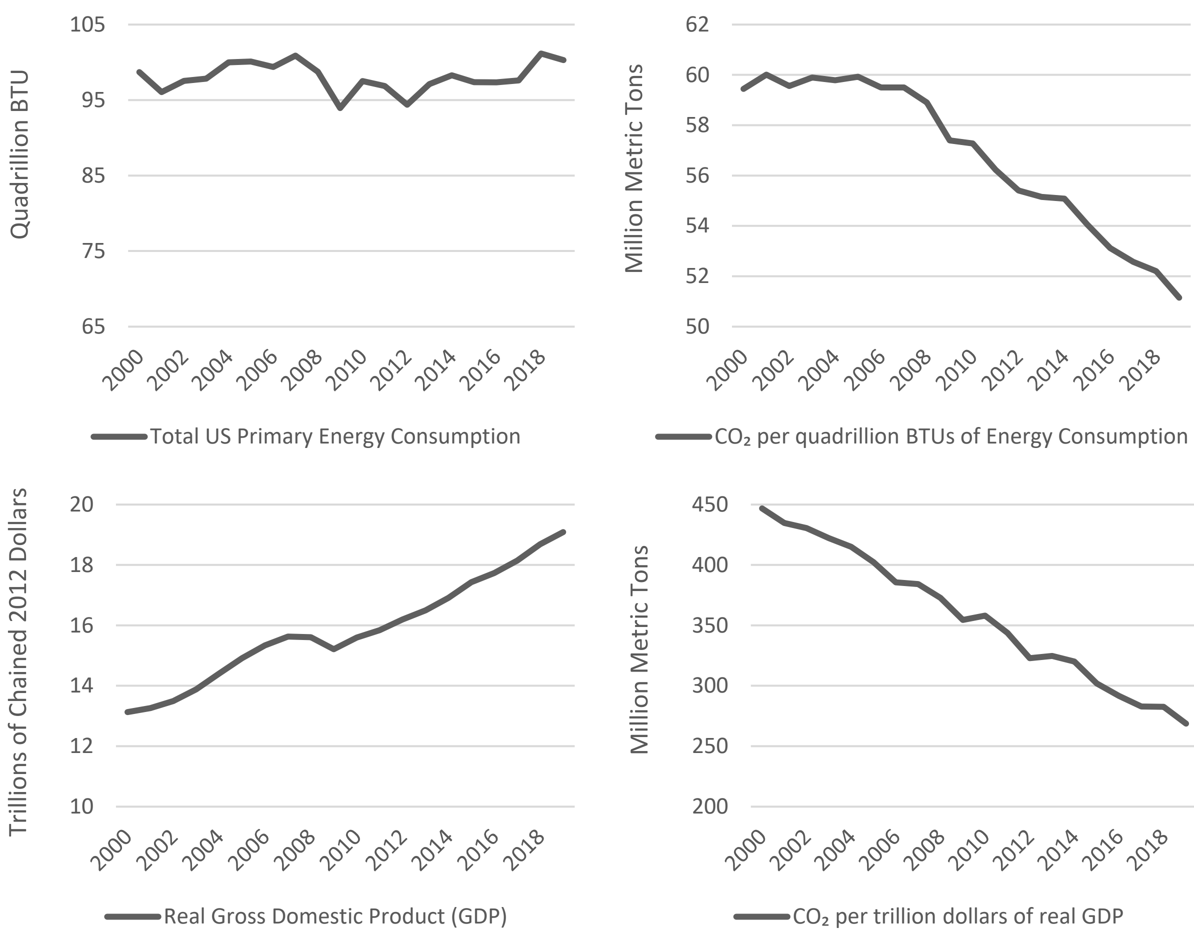
Trends in Energy Use

In broad terms, the United States is becoming more energy efficient relative to gross domestic product (GDP), and the energy consumed in the United States results in significantly less CO_2 emissions per BTU than in the early 2000s. Total energy consumption has been relatively constant in the last two decades and CO_2 emissions from the energy sector peaked in the United States in 2007. From that year through 2019, the US economy grew 22 percent in real terms while the amount of CO_2 emitted per unit of energy fell more than 14 percent (EIA, 2021). Recent data from the Energy Information Administration (EIA) indicate that energy-related CO_2 emissions in the United States fell an additional 11 percent in 2020. This was due in part to the pandemic and recession (in particular a decline in transportation-related energy consumption), but in large part to a decline in CO_2 intensity from less coal and more natural gas and renewable energy use (EIA, 2021).

In addition, from 2007 to 2019, the amount of energy per dollar of GDP dropped more than 30 percent, as the service sector grew faster than the goods-producing sector (EIA, 2021). In other words, our energy sector has become significantly less carbon-intensive, thanks to the decreasing share of coal and increasing share of natural gas and renewable energies, *and* the US economy has become less energy-intensive.

Figure 1 illustrates these trends. The first panel presents total US energy consumption, which fluctuated between approximately 94 and 101 quadrillion BTUs from 2000 to 2019. The second panel illustrates the decline in the carbon intensity of the energy that is consumed in the United States, a ratio that was relatively constant through 2007 but has since steadily declined 14 percent. The third panel presents the overall upward trend of the US economy, and the fourth panel plots energy-related CO_2 emissions as a share of GDP. Since 2000, the US economy's CO_2 emissions dropped from nearly 450 million metric tons per trillion dollars of GDP to 269 million metric tons. Of course, total emissions matter most with regard to climate change, but the progress toward lower emissions, relative to near-constant levels of energy consumption and significant economic growth, is noteworthy.

Figure 1. US Energy Consumption, CO_2 Emissions, and Economic Growth, 2000–2019



Source: Data from the Energy Information Administration and Federal Reserve Bank of St. Louis.

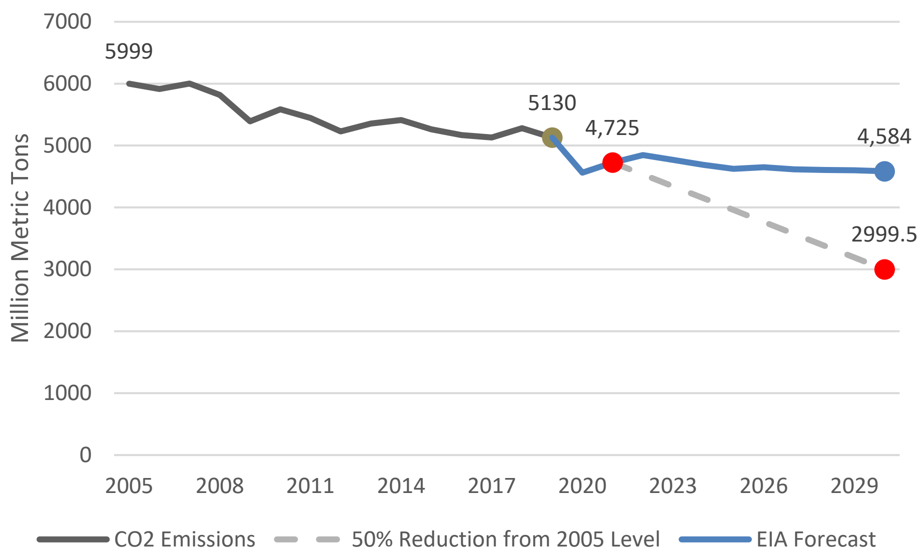
Nevertheless, a much greater reduction in CO_2 emissions is necessary to address the significant risks of climate change. Meaningful policy interventions are required to achieve additional large-scale carbon emission reductions. Such progress must be achieved globally, but a lack of binding commitments from all nations does not preclude the US from adopting sensible, market-based policies domestically.

President Biden recently announced an emissions reduction target of 50 percent of 2005 economy-wide greenhouse gas pollution levels by 2030 (White House, 2021). This is a significant goal, as the Energy

Department's current baseline forecast for energy-related CO_2 emissions in 2030 changes little from current levels (EIA, 2021). Even less ambitious reductions will require significant changes in the carbon intensity of the energy consumed and the quantity of energy consumed in the United States.

For perspective, in 2019, energy-related CO_2 emissions accounted for 78 percent of total US greenhouse gas emissions (EPA, 2021). Figure 2 reports CO_2 emissions from the energy sector since 2005 and shows that total emissions have declined 14.5 percent from 2005 through 2019. Figure 2 also presents the baseline forecast from the Department of Energy's Annual Economic Outlook along with the level equivalent to a 50 percent reduction in energy-related CO_2 emissions relative to 2005.

Figure 2. US Energy-Related CO_2 Emissions: Levels, Forecasts, and Targets, 2005–2030



Source: Data from the Energy Information Administration.

The Case for Targeted Energy Tax Policy

Policy interventions to encourage market-based reductions in carbon emissions are justified by the lack of price signals associated with the societal cost of these emissions. Private transactions between buyers and sellers of carbon-intensive products fail to incorporate the negative externalities associated with emissions of CO_2 into the atmosphere. Instead, the cost of CO_2 emissions is borne by society as a whole, including both current and future generations.

This negative externality is becoming increasingly obvious. Beyond the increase in sea level, extreme weather (intensity and frequency), and environmental damage, the consequences of climate change can be measured in economic terms. Recent research published by the Congressional Budget Office (CBO, 2020) estimates that, absent meaningful intervention, climate change will cause output in the United States to be 1 percent lower in 2050 and in every year after. As I recently noted, policymakers need to understand that the cost of inaction on climate change is nowhere close to zero (Brill, 2021).

Tax policies can correct for the negative externality by putting an explicit price on CO_2 emissions, providing a tax subsidy that encourages energy conservation and renewable or low-carbon forms of energy, or a combination of both strategies. Tax subsidies can reduce the after-tax cost of an investment in a source of renewable energy (an investment tax credit) or can be designed to increase the price received for the sale of clean energy (a production tax credit). Moreover, tax subsidies can serve to bolster nascent technologies seeking to achieve production cost efficiencies through scale. For example, there have been extremely valuable and important technological advances in wind and solar energy. The average prices of solar and wind energy have tumbled over the last decade, and markets have responded with significant increases in demand for these renewable forms of energy. Tax credits further lower the cost of these technologies and positively contribute to their adoption (Mai, 2016). However, there are downsides to energy tax subsidies that should be noted.

Drawbacks of Energy Tax Subsidies

The tax code includes a wide array of tax incentives to encourage clean energy, energy efficiency, or energy conservation. Broadly speaking, these policies can be grouped in the following categories:

- Production tax credits for renewable energy.
- Production credits for alternative fuels.
- Investment tax credits for renewable production capacity.
- Tax credits for energy-related residential property investments such as renewable energy generation and energy-efficient upgrades.
- Alternative fuel vehicles and refueling properties.
- Other provisions, including accelerated depreciation for certain energy-related properties and pollution control facilities; tax credit bonds for renewable energy; an energy research tax credit; and a carbon sequestration tax credit.

Table 1 provides a summary of these provisions that are considered tax expenditures by the Joint Committee on Taxation (JCT, 2020).

Table 1. Clean Energy Related Federal Tax Expenditures by Category

Production tax credits for renewable energy
Credits for electricity production from renewable resources (sec. 45) - Wind - Geothermal - Qualified hydropower - Small irrigation power - Municipal solid waste - Open-loop biomass
Credit for electricity production from closed-loop biomass facilities (sec. 45(d)(2))
Production tax credits for alternative fuels
Credit for second-generation biofuel production (sec. 40(a)(4))
Credit for biodiesel and renewable diesel fuel (sec. 40A)
Credit for producing fuels from a nonconventional source (sec. 45K)
Investment tax credits for renewable production capacity
Energy credit (sec. 48) - Solar - Geothermal Fuel Cells - Microturbines - Combined heat and power

- Small wind - Geothermal heat pump systems
Tax credits for energy-related residential property investments
Credit for nonbusiness energy property (sec. 25C)
Residential energy-efficient property credit (sec. 25D)
Credit for construction of energy-efficient new homes (sec. 45L)
Credit for investment in advanced energy property (sec. 48C)
Alternative fuel vehicles and refueling properties
Credit for plug-in electric vehicles (sec. 30)
Credit for fuel cell vehicles (Alternative motor vehicle credit) (sec. 30B)
Credit for alternative fuel vehicle refueling property (sec. 30C)
Credit for electric motorcycles (sec. 30D)
Other clean energy-related tax provisions
Credit for carbon dioxide sequestration (sec. 45Q)
Credit for holders of clean renewable energy bonds (sec. 54)
Credit for holders of qualified energy conservation bonds (sec. 54A)
Exclusion of energy conservation subsidies provided by public utilities (sec. 136)
Exclusion of interest on State and local government qualified private activity bonds for energy production facilities (sec. 141)
Exclusion of interest on State and local qualified private activity bonds for green buildings and sustainable design projects (sec. 142(a)(14))
Energy efficient commercial buildings deduction (sec. 179D)

Source: Joint Committee on Taxation JCX-23-20, November 5, 2020.

From a budget perspective, many of the existing tax policies are small, sometimes because their value is limited (for example, a 10 percent credit not to exceed $500 per taxpayer for residential window upgrades) and sometimes because the utilization of the policy is low (for example, a cellulosic biofuel producer credit). However, the aggregate cost of tax subsidies for clean energy is significant. Based on estimates provided by the Joint Committee on Taxation, the tax expenditures for clean or renewable energy or energy efficiency policies will exceed $60 billion during the period 2020–2024 (see Table 2). The largest renewable energy tax provisions are the Energy Investment Tax Credit, and the Energy Production Tax Credit. The five-year tax expenditure for these two provisions is $52.5 billion.

Table 2. Clean Energy Related Tax Expenditures: 2020–2024 (Billions of Dollars)

Tax Expenditure Category	**2020**	**2021**	**2020–2024**
Renewables	$13.2	$12.6	$56.1
Efficiency	$0.7	$0.5	$1.4
Alternative Tech. Vehicles	$0.7	$0.6	$3.0
Total	**$14.6**	**$13.7**	**$60.5**

Source: Data from the Joint Committee on Taxation JCX-23-20, November 5, 2020.

The realized cost of these subsidies to the federal budget could grow exponentially if the clean and renewable energy target that President Biden has proposed is achieved. This dramatic decline in greenhouse gas emissions – a 50 percent reduction relative to 2005 emissions by 2030 – would require a dramatic increase in the utilization of renewable energy and electric vehicles, as well as increases in energy conservation. The cost of tax subsidies for these activities will grow as their adoption grows.

In addition to the significant cost and the large number of tax subsidies, there are other limitations to the subsidy approach. The Treasury Department's Inspector General for Tax Administration has identified administrative problems with residential energy tax credits (sec. 25C and sec 25D) involving both improper claims of the credit and incorrect denials (TIGTA, 2011 and 2015). More generally, subsidizing energy production will lower the price of electricity and thereby lead to an overall increase in demand, which is counterproductive to the goal of energy conservation.

It is difficult (if not impossible) for a subsidy agenda to be technology-neutral. Metcalf (2009) illustrates how the hybrid vehicle tax credit offers a subsidy that varies from $0 to more than $11 per gallon of avoided gasoline consumption based on typical usage assumptions and depending on the vehicle purchased. JCT (2016) illustrates the complexity in determining the amount of energy saved from the credit. Metcalf (2009) demonstrates that the production tax credit for wind and geothermal, if measured in terms of subsidy amount per ton of CO_2 avoided, varies significantly due to the fact that geothermal energy likely displaces coal (high in CO_2 per BTU) and wind likely displaces natural gas (lower in CO_2 per BTU). While the production tax credit, determined based on the quantity of electricity generation, is the same for both wind and geothermal, the subsidy value in terms of CO_2 is unequal.

Finally, many provisions are temporary, which causes uncertainty for taxpayers. For example, in 2020, 15 tax provisions were set to expire. All but two were renewed, and only one was made permanent (see Table 3). This year and in 2022, another 16 energy-related provisions are set to expire (JCT, 2021).

Table 3. Energy-Related Tax Provisions Previously Set to Expire December 31, 2020

Tax Provision	Extended Until
Credit for Section 25C Nonbusiness Energy Property (sec. 25C(g))	12/31/2021
Alternative Motor Fuel Vehicle Credit for Qualified Vehicles (sec. 30B(k)(1))	12/31/2021
Credit for Alternative Fuel Vehicle Refueling Property (sec. 30C(g))	12/31/2021
Credit for Two-Wheeled Plug-In Electric Vehicles (sec. 30D(g)(3)(E)(ii))	1/1/2022
Second Generation Biofuel Producer Credit (sec. 40(b)(6)(J))	1/1/2022
Energy Production Tax Credit (sec. 45)	1/1/2022
Credit for Production of Indian Coal (sec. 45(e)(10)(A))	12/31/2021
Credit for Construction of Energy-Efficient New Homes (sec. 45L(g))	12/31/2021
Special Dep. Allowance for Second Gen. Biofuel Plant Property (sec. 168(I))	Expired
Energy-Efficient Commercial Building Deduction (sec. 179(D))	Made Permanent
Special Rule to Implement Electric Transmission Restructuring (sec. 451(k))	Expired
Black Lung Disability Trust Fund: Increase in Amount of Excise Tax on Coal (sec. 4121(e)(2))	12/31/2021
Oil Spill Liability Trust Fund Financing Rate (sec. 4611(f)(2))	12/31/2025
Excise Tax Credits and Outlay Payments for Alternative Fuel (sec. 6426(d)(5), (sec. 6426(e)(6)(C)))	12/31/2021
Excise Tax Credits for Alternative Fuel Mixtures (sec. 6426(e)(3))	12/31/2021

As the Joint Committee on Taxation (JCT, 2016) noted in a report prepared for this Committee:

> While the government can in theory establish an efficient set of subsidies for the activities it chooses to subsidize, in practice it cannot administratively identify and set up programs to subsidize every conceivable energy-saving practice. Additionally, it is not possible to identify meritorious technologies not yet invented. The government must continue to expand the class of

credit-eligible activities if it wishes to minimize the economic distortions that come from favoring certain technologies through tax subsidies over other technologies that prove equally capable of achieving reductions in fossil fuel consumption. Furthermore, the investment in research to develop such new technologies might be constrained by the existence of tax subsidies for current technologies. Investors in such research run the political risk that their newly discovered technologies will not be granted any tax subsidies and may find it difficult to compete with existing subsidized technologies.

The Recent Reform Proposal Introduced by the Senate Finance Chairman

Chairman Wyden and other lawmakers recently introduced legislation, the Clean Energy for America Act, that would consolidate tax incentives for renewable energy, transportation, and energy conservation. One admirable intent of this legislation is to establish a more technology-neutral clean energy tax policy. However, as noted above, a fixed rate production tax credit may appear neutral but have disparate impacts on carbon mitigation.

Moreover, the new credits proposed in this legislation phase out once sector-specific CO_2 emissions decline 25 percent (relative to 2021). As a recent report by researchers at the University of Maryland outlines, a plausible path toward President Biden's emissions target would include a 76 percent reduction in CO_2 emissions from electricity generation and a 40 percent reduction in emissions from transportation. Other sectors are likely less adaptable in the coming decade (Hultman et al., 2021). Therefore, the clean electricity and clean transportation provisions in the Clean Energy for America Act are not designed to provide tax incentives during the full transition period proclaimed by the Administration. An extension and expansion of these provisions to align with the targets proposed by President Biden would dramatically expand the cost.

Explicitly Pricing Carbon Is the Optimal Way to Reduce CO_2 Emissions

While tax subsidies for renewable energy production or investment can encourage the deployment of more clean energy, these policies – for reasons just discussed – are certain to be suboptimal relative to a price on carbon, specifically a carbon tax.

Economists have long agreed that a carbon tax is an efficient and effective way to reduce carbon emissions. Prominent economists on the left and right – including Ben Bernanke, Alan Greenspan, Martin Feldstein, Greg Mankiw, and Glenn Hubbard, as well as Janet Yellen, Austan Goolsbee, Jason Furman, Laura Tyson, and Larry Summers – have urged the United States to adopt a carbon tax. These views are not new. A *Wall Street Journal* article in 2007 found that a majority of economists surveyed believed that a "tax on fossil fuels would be the most economically sound way to encourage alternatives" (Izzo, 2007). One carbon tax proposal has earned endorsement from four former Federal Reserve Board chairmen, 28 Nobel Laureates in economics, and 15 former chairs of the White House Council of Economic Advisers.

More recently, the business community has strongly endorsed putting a price on carbon. For example, in September 2020, the Business Roundtable advocated for a carbon tax, and in January of this year, the Chamber of Commerce's position paper on climate change signaled its openness to a carbon tax. The American Petroleum Institute and top companies in the oil industry have also expressed support.

A carbon tax is technology-neutral and encourages shifts away from carbon-intensive sources of energy while encouraging energy efficiency and conservation, and research and development in new technologies. Many of the advantages and design considerations of a carbon tax are considered in Brill (2017).

By imposing a larger burden on coal than on natural gas, a carbon tax would support the transition toward greater natural gas utilization in the United States and would accelerate the retirement of coal plants. Extending and accelerating this trend will further the reduction in CO_2 emissions in the United States. In addition, by imposing a larger burden on natural gas than on renewable energy, a carbon tax would encourage additional investment and deployment of energy sources such as wind and solar.

Unlike tax subsidies targeted toward the production of new renewable energy, a carbon tax has the potential to impact energy demand generally, thereby further reducing CO_2 emissions over time. A carbon tax would increase the rate of return on energy-efficient upgrades; encourage the utilization of more fuel-efficient vehicles; reduce miles traveled; and drive many small and modest adjustments in choices made by consumers, manufacturers, and others on their energy consumption. While the price elasticity for electricity demand is small in the short run, recent evidence suggests that it is quite high in the long run (Burke and Abayasekara, 2018). The significance of this result is that a durable carbon tax has the potential to significantly reduce energy demand in the period after 2030, a contrast to policies targeting wind and solar energy deployment within the current decade.

A carbon tax would, depending on the rate set, raise significant amounts of new federal tax revenues. While tax increases may not be a desirable outcome to conservatives committed to limited government, a carbon tax should be recognized as an opportunity to reduce other more distortionary taxes, or as a substitute to alternative taxes that are more economically damaging. For example, a carbon tax is certainly superior to an increase in the corporate tax rate.

A $15/ton carbon tax that increases 6 percent annually would raise a similar amount of revenue as President Biden's proposal to raise the corporate tax rate to 28 percent. A $35/ton carbon tax could raise as much as President Biden's entire business tax agenda.

President Biden's proposed corporate rate hike would put the United States first among all OECD nations with respect to the average combined state and federal corporate tax rate (Bunn et al., 2021). It would also raise the cost of capital for corporations and increase the tax distortion between debt and equity financing (Pomerleau, 2020). A carbon tax would have none of these negative consequences but would have positive effects on carbon emissions, energy conservation, and the transition to a clean energy economy. York (2021) estimates the economic advantage of a $25/ton carbon tax versus a 28 percent corporate tax rate.

Conclusion

The tax code is a well-suited instrument for policymakers pursuing market-based strategies to shift energy consumption in the United States toward clean and renewable fuels. This objective is laudable given the costs and risks associated with climate change. In theory, renewable energy consumption can be encouraged with either a tax on carbon or a tax subsidy on items or activities that are alternatives to fossil fuels. To date, the United States has pursued the latter approach and enacted dozens of targeted tax credits and other tax subsidies intended to favor particular types of renewable energy and specific energy conservation investments.

However, as a practical matter, a carbon tax proves far superior. Subsidies are difficult to construct in an efficient, technology-neutral manner when the objective is to displace CO_2 emissions from existing energy forms. Subsidies can be fraught with complexity, and the temporary nature of most clean energy tax provisions creates costly uncertainty. In contrast, a carbon tax offers a broad, efficient, and technology-neutral approach to encouraging wider adoption of existing clean energy sources. It also incentivizes research into new technologies and encourages consumers of energy, whether they be households or businesses, to adopt energy-efficient choices. Finally, a carbon tax is a far superior policy when compared to President Biden's business tax agenda, which includes increasing the corporate tax, increasing the tax on foreign income, and establishing a new alternative minimum tax on certain large businesses.

References

Brill, Alex. 2017. *Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities.*

Brill, Alex. 2021. "There Are Costs for Climate Change Whether Leaders Take Action or Not." *The Hill*, https://thehill.com/opinion/energy-environment/544507-there-are-costs-for-climate-change-whether-we-take-action-or-not.

Bunn, Daniel, et al. 2021. "President Biden's Infrastructure Plan Raises Taxes on U.S. Production." https://taxfoundation.org/biden-infrastructure-american-jobs-plan/.

Burke, Paul J., Ashani Abayasekara. 2018. "The Price Elasticity of Electricity Demand in the United States: A Three-Dimensional Analysis." *The Energy Journal* 39 (2): 123–146. https://www.iaee.org/energyjournal/article/3055.

Congressional Budget Office (CBO). 2020. "CBO's Projection of the Effect of Climate Change on U.S. Economic Output: Working Paper 2020-06." https://www.cbo.gov/publication/56505.

Energy Information Administration (EIA). 2021. "Annual Energy Outlook 2021." https://www.eia.gov/outlooks/aeo/pdf/AEO_Narrative_2021.pdf.

Environmental Protection Agency (EPA). 2021. "Inventory of U.S. Greenhouse Gas Emissions and Sinks Fast Facts." https://www.epa.gov/sites/production/files/2021-04/documents/fastfacts-1990-2019.pdf.pdf.

Hultman, Nathan, et al. 2021. "Charting an Ambitious U.S. NDC of 51% Reductions by 2030." Center for Global Sustainability Working Paper. https://cgs.umd.edu/sites/default/files/2021-03/Working%20Paper_ChartNDC_Feb2021.pdf.

Izzo, Phil. 2007. "Is It Time for a New Tax on Energy?" *The Wall Street Journal*, https://www.wsj.com/articles/SB117086898234001121.

Joint Committee on Taxation (JCT). 2016. "Present Law And Analysis Of Energy-Related Tax Expenditures." https://www.jct.gov/publications/2016/jcx-46-16/.

Joint Committee on Taxation (JCT). 2020. "Estimates of Federal Tax Expenditures for Fiscal Years 2020-2024." https://www.jct.gov/publications/2020/jcx-23-20/.

Joint Committee on Taxation (JCT). 2021. "List of Expiring Federal Tax Provisions 2021-2029." https://www.jct.gov/publications/2021/jcx-1-21/.

Mai, Trieu, et al. 2016. "Impacts of Federal Tax Credit Extensions on Renewable Deployment and Power Sector Emissions." National Renewable Energy Laboratory. https://www.nrel.gov/docs/fy16osti/65571.pdf.

Metcalf, Gilbert E., 2009. "Tax Policies for Low-Carbon Technologies," *National Tax Journal*, National Tax Association, vol. 62(3), pages 519-33, September.

Pomerleau, Kyle. 2020. "The Tax Burden on Business Investment Under Joe Biden's Tax Proposals." https://www.aei.org/wp-content/uploads/2020/09/The-tax-burden-on-business-investment-under-Joe-Bidens-tax-proposals.pdf.

Treasury Inspector General For Tax Administration, Processes Were Not Established to Verify Eligibility for Residential Energy Credits, Reference Number: 2011-41-038, April 19, 2011, http://www.treasury.gov/tigta/auditreports/2011reports/201141038fr.pdf.

Treasury Inspector General for Tax Administration, Results of the 2015 Filing Season, August 31, 2015, https://www.treasury.gov/tigta/auditreports/2015reports/201540080fr.pdf.

White House. 2021. "FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies." https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/.

York, Erica. 2019. "Comparing the Trade-offs of Carbon Taxes and Corporate Income Taxes." https://taxfoundation.org/biden-carbon-tax-corporate-tax-tradeoffs/.