



**Testimony of Martha Wyrsh, President, Vestas-American Wind Technology, Inc.
before the
Senate Finance Subcommittee on Energy, Natural Resources & Infrastructure**

December 14, 2011

Chairman Bingaman, Ranking Member Cornyn and members of the subcommittee, my name is Martha Wyrsh, and I am the President of Vestas-American Wind Technology, Inc. (Vestas), the North American arm of Vestas Wind Systems. On behalf of Vestas' 3,000 employees in the United States, thank you for the opportunity to be here today to discuss tax policies to support renewable energy.

This hearing is extremely timely in light of the serious challenges facing the domestic wind industry if the Section 45 Production Tax Credit (PTC) is not extended beyond December 31, 2012. I strongly urge an immediate extension of the PTC. This will ensure the continued development of wind energy and the domestic manufacture of wind turbines that will lead to a healthier economic and energy future for America.

Wind energy is a success story Congress can be proud of. The PTC has been a very effective tool in driving a new energy economy in America. Due largely to the PTC, the wind industry now represents a manufacturing base that employs tens of thousands of U.S. workers in high-wage, high-skill jobs across the country. Predictable, long-term tax and energy policies are critical to the continued growth of wind energy as a low-cost domestic source of electricity in the U.S.

Vestas is the second largest wind turbine manufacturer in the U.S. and the number-one global wind manufacturer, as measured by wind turbines installed. We design, manufacture and supply wind turbines for wind power plants around the world, and are very proud to be a significant part of the manufacturing renaissance which is coming about in this country. We do not develop or own wind power plants in North America.

The Vestas parent organization is based in Denmark with a 100-year history of making heavy equipment. Our U.S. headquarters are in Portland, Oregon, and our presence is felt in nearly 40 U.S. states. Our U.S. operations include:

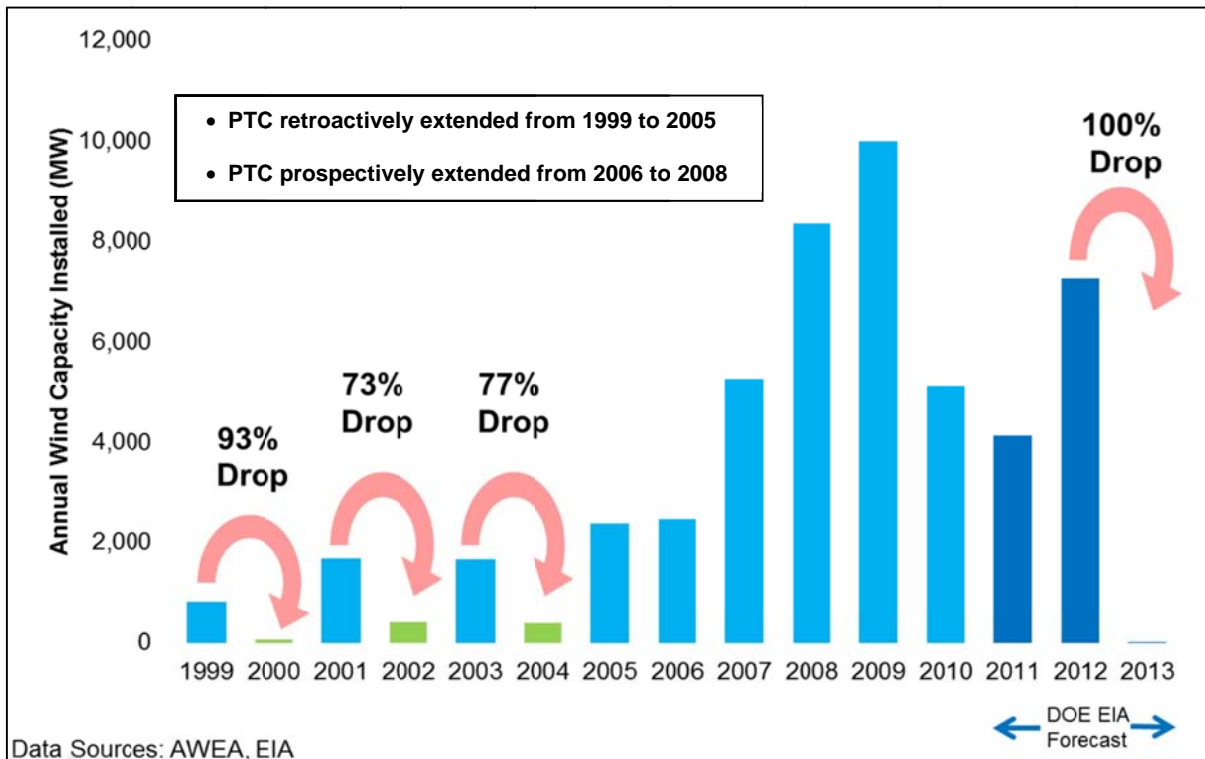
- Four manufacturing facilities where we produce industrial scale blades, nacelles and towers
- Four technology research and development facilities
- More than 100 wind parks and 20 construction sites
- Warehouse and repair facilities
- Procurement of supplies and components
- Sales and back-office organization

We have been doing business in the U.S. for more than 30 years, supplying more than 11,000 wind turbines in 26 states. This represents nearly 9,000 MW of new, clean, secure domestic energy supply providing enough electricity to power about 2.7 million American homes.

Economic Impact of the PTC

I am relatively new to wind energy having spent most of my career in the natural gas and electric utility industries. As a former natural gas and electric utility executive, I have seen first-hand how policy measures, particularly the tax code, can impact energy generation. Congress has long incentivized energy technologies, and many of those incentives are credits that are permanent in the tax code. While wind and other renewables have had support in recent years through tax credits such as the

PTC, those policies — in contrast to the support provided to the fossil-fuel and nuclear sectors — have been short-term and not provided companies or investors the long-range vision needed to plan and make investment decisions. Since 1999, the PTC has been extended seven times, and prior to 2005, this was done retroactively after expiration. In turn, the industry has seen a boom-and-bust cycle of development, with significant drops in installations in years following PTC expiration. Every one of those drops has an impact on employment and capital investment.



From 2008 to 2011, the U.S. experienced an enormous increase in wind energy development. This three-year window has been the longest timeframe the industry has ever had to make investment decisions. Investments in wind energy have been between \$10 billion to \$20 billion per year since 2008.

During this period, there has been a significant increase in domestic wind energy manufacturing capacity, largely due to the stability of the longer-term tax policy regime. Vestas alone constructed four manufacturing facilities and our technology and research centers, and developed our entire supply chain, investing approximately \$1 billion in the U.S. economy.

Our American manufacturing base not only serves the U.S. market, but also exports products to Canada, Mexico, and Brazil, among other countries. The PTC has helped drive our American export business. With the robust U.S. wind market engendered by the PTC, we were able to size our manufacturing plants where we could support an export market, too.

We are proud to employ more than 1,800 Americans at our Colorado facilities, almost all of whom were hired from 2008 to the present. At full operating capacity, those factories can employ more than 2,500 people. These are skilled-labor positions that pay competitive wages with generous medical and retirement benefits. Without a longer term PTC regime, Vestas will not ramp up these plants to full capacity. Unless conditions change, after completing the manufacture of turbines under order for 2012 delivery, we will have to make tough decisions on whether we can continue to employ the number of people currently working for us in these plants and in other U.S. facilities.



Nacelle factory (Brighton, CO)



Tower factory (Pueblo, CO)



Blade factories (Windsor and Brighton, CO)

Vestas also creates jobs in rural America. We have more than 800 skilled technicians who provide service for our installed turbines. Our technicians and their families live and work in rural areas where the turbines are typically installed — places that have been hit hard by the economic recession.

As the global leader in wind-power technology, we have established a large research and development division in the United States. We have a research center headquartered in Houston, and have technology and research offices in Colorado, Oregon and Massachusetts. As you know, we are not the only wind manufacturer on American soil. According to the American Wind Energy Association there are more than 36,000 utility-scale wind turbines currently operating in the United States, powering more than 10 million American homes and businesses. These turbines are supported by 80,000 Americans employed in this country's wind industry. More than 20,000 of these Americans work in direct manufacturing jobs supported indirectly by hundreds of thousands of employees working for suppliers.

Wind energy is a major American industry, maturing into a mainstream energy source. We at Vestas, just like other manufacturers, have brought new jobs and billions in new investment to America. However, our future in America is in jeopardy.

Reducing the Cost of Energy

Vestas, along with others in the industry, is working hard to drive down wind energy's cost. Electrons generated by wind are not yet competitive with the cost of electrons generated from other sources such as natural gas and coal. However, we have made significant strides toward that goal over the past several years, supported by the more predictable and stable PTC regime since 2008. According to a *Lawrence Berkeley National Laboratory study*, the cost of energy from wind has dropped 22% since 2009. Due to performance improvements since the 1990s, a turbine with a nameplate capacity seven times larger can produce 15 times more electricity. Vestas has set a goal to reduce the cost of energy from Vestas turbines by 6-10% per year — and within a several years our cost of energy should be equivalent with other power generation fuel sources. Until we get there, however, a tax credit program such as the PTC is vital for continued investment and technology breakthrough.

We know wind power can compete with other forms of energy all things being equal. But that is not the world in which we live. Policy support and tax incentives have long driven the decisions the country makes on energy development. We are competing against other forms of energy that have received, and continue to receive, subsidies that often provide both a cost and market advantage. As an industry, we understand the necessity for flexibility on the size and scope of the PTC for the long term, and have a desire to stand on our own without incentives. But it is imperative that a long-term solution, which might include a PTC extension for up to 10 years, is provided. This will give businesses certainty about their investments and give the industry the ability to plan and invest accordingly to meet the needs of this growing market.

Long-term Policy Support Necessary

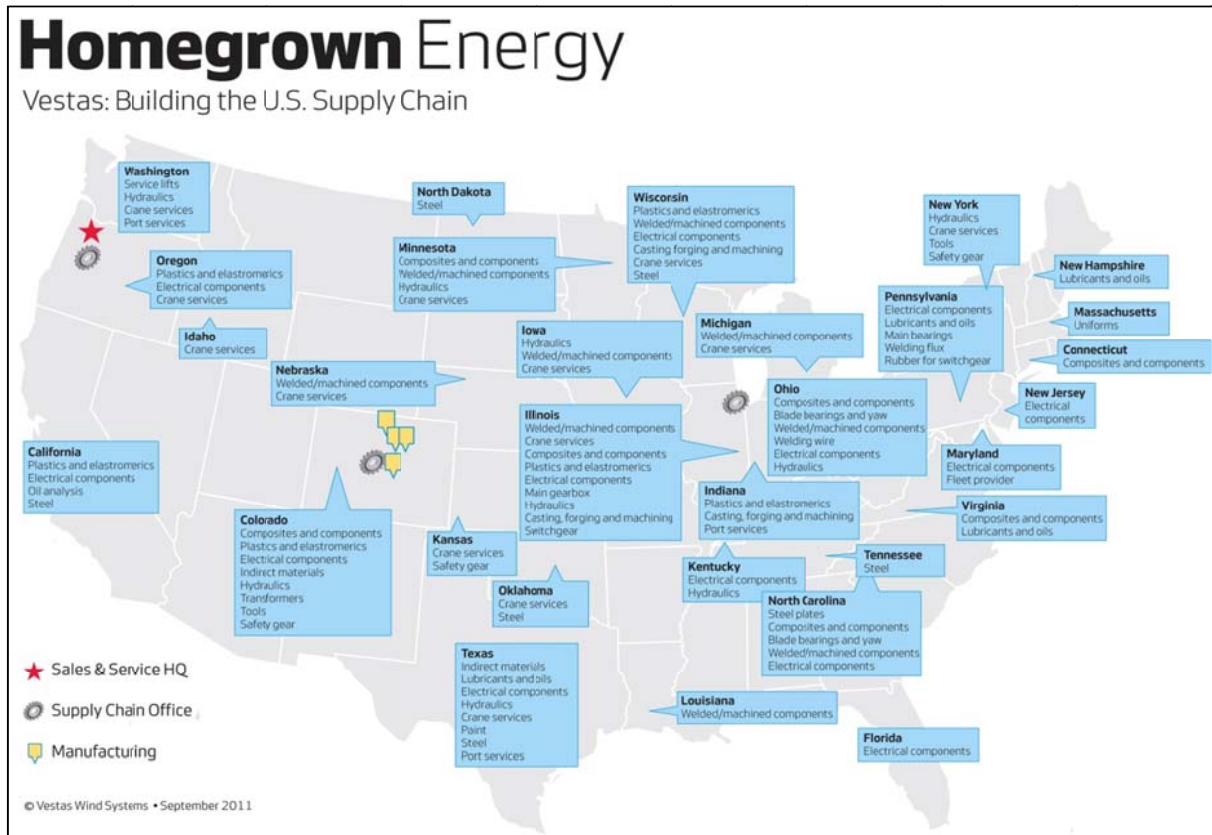
The development cycle of wind projects begins well before the turbines are installed. Project conceptualization to completion can take two to three years. Wind developers require months to site their projects, negotiate power-purchase agreements and obtain necessary permits. Only when these prerequisites are well in hand do they issue bids for turbines. The turbine bidding and contract negotiation process can take months. Most orders from our customers are placed at least one year in advance of project completion because manufacturers need significant lead time to schedule, acquire and assemble the thousands of component parts needed to build a wind turbine.

Our costs are extremely large. The average installed cost of a 2 MW wind turbine is \$2 million and we will install about 1,250 turbines in the U.S. this year and a comparable amount in 2012. We build wind turbines based on orders from our customers, and each order is unique. Once a turbine is built, it must be transported to the site, constructed and tested. Like the construction of any modern power plant, the development of a wind project entails considerable site preparation and earth-moving operations, complex logistics, and heavy construction.

The timeline for project development from turbine order to a wind farm producing electricity is typically 12 to 18 months. That does not include all of the regulatory and siting approvals that developers must secure before completing an order with a turbine manufacturer such as Vestas. For example, the turbines that Vestas and other manufacturers will deliver and install by the end of 2012 were actually ordered in 2010 and 2011.

Vestas has built a supply chain stretching from coast-to-coast. There are more than 8,000 component parts in a wind turbine. Vestas works with more than 90 U.S. components suppliers in 30 states. The domestic content of one class of Vestas wind turbines has grown to 80 percent, and the industry average exceeds 60 percent. This is a huge increase in the past few years and a direct indicator of how many manufacturing jobs have been created in the United States. These companies provide the thousands of component parts needed to construct a wind turbine. For example, a significant amount of the steel in our towers and nacelles is produced in North Carolina steel mills. We purchase lubricants, electrical components, and hydraulics from Texas. Cranes and welded materials are sourced out of Iowa. We recently entered into a new agreement to purchase gearboxes from a supplier that has built a new manufacturing facility in Georgia. Each of these suppliers will be directly impacted if the PTC is not extended, and the communities in which they do business will feel the pain of the downturn in business.

Extending the PTC now will allow wind power plant developers to place orders for 2013. Currently, few, if any, 2013 orders are being placed. This impacts not only the manufacturer but the supply chain as well. We order component parts based on the market we anticipate, often before orders are placed. Suppliers require significant lead time to ensure they have produced the parts necessary to meet our customers' needs. When orders slow down due to a looming expiration of the PTC, our suppliers' businesses suffer.



Uncertainty is Halting Investment

Nothing is more unsettling to our business than lack of regulatory and fiscal certainty. Vestas interacts with North American wind developers on a daily basis. Although the PTC does not expire until the end of 2012, the impact is being felt now. We have already heard from some of the largest wind developers that they will significantly reduce — or even stop — placing any new turbine orders until there is certainty the PTC will be extended beyond 2012. Some of these developers, including the largest in North America, NextEra, have announced their decision not to invest in wind energy in the U.S. through public filings with the Securities and Exchange Commission and in discussions with the investment community. They are turning their wind energy investment dollars to other countries around the globe.

The looming expiration of the PTC forces companies to make hard decisions today, not next December. In anticipation of fewer domestic installations, we have already seen layoffs by wind power plant developers occur this fall. Unless an extension is approved quickly, there will be more. A report released on December 12, 2011, by Navigant Consulting, a respected non-partisan consulting firm, estimates 37,000 domestic jobs could be lost if the PTC is not extended. That is a significant number, and many communities across the country would be impacted. An immediate extension of the PTC would alleviate companies from having to make difficult decisions to terminate employees, and would instead allow those companies to focus on driving new investments and creating new jobs.

We have concrete examples of wind power's economic benefits and the economic boost created by the PTC. According to an economic multiplier report by ECONorthwest, Vestas' U.S. operations in 2008 generated more than \$1.1 billion in total economic activity, including more than 7,000 direct and indirect jobs for American workers and business owners. One example from that report is the Pioneer Prairie wind farm in Iowa. Property taxes for the project, when fully assessed in 2016, will be a combined \$3.7 million for two counties. More than half of the property-tax revenues will go to local schools. According to a study by the Renewable Northwest Project, a typical 100 MW wind project creates more than 160

direct and indirect jobs. Once built, over the expected 20-year lifecycle of the wind farm, the project will pay direct wages of \$118 million and \$1.5 billion in property taxes.

The PTC has always enjoyed bipartisan support, similar to many other tax credits that have incentivized the development of energy technologies. We sometimes get caught up in political discussions about green energy versus other forms of energy. But extending the PTC is not about green, or red or blue, for that matter. It is about American manufacturing, American jobs and investing in American energy. If you truly believe in an “all of the above” energy strategy for America, then we must continue to tap wind energy, one of our most abundant domestic resources along with other renewable and traditional energy assets.

Access to Investment Capital

I believe the wind industry should have the flexibility other energy technologies have to reach a deeper pool of public investors through a public Master Limited Partnership (MLP) structure. Based on my experience in the gas industry, this is a powerful tool to raise capital from the private sector. Wind and solar infrastructure are not qualifying assets for MLP tax treatment today, which means this type of renewable energy generation is not on a level playing field when soliciting investment capital from Wall Street. We know that many active investors want the opportunity to invest in renewable energy on the same basis as hydrocarbon and ethanol MLPs. The MLP structure has been successful in the hydrocarbon infrastructure industry — it should be expanded to include renewable-energy technologies.

Offshore Wind Development

Vestas has significant experience with offshore wind development having installed turbines throughout the coast of Europe. We are active in both manufacturing and installing turbines in the North Sea off the United Kingdom coast. We believe that the potential for offshore wind generation in the United States is huge in the medium to long term and support efforts to grow that market. The regulatory regime and the cost of offshore wind is a hurdle, but one that we believe can and will be overcome with continued support, both at the state and federal levels. We support efforts by Senator Tom Carper to provide incentives to drive offshore wind development.

We believe that the potential of the offshore market will only be realized by a strong onshore wind industry. While onshore and offshore wind development have some different technological applications, we are one industry. Many of the capabilities developed in the onshore industry are transferable to offshore. A healthy onshore manufacturing and service base will support the ongoing research and development to drive down costs of offshore wind energy.

Conclusion

The U.S. has the best wind resources and the largest energy demand in the world. Stable policy drivers will cause significantly more investment in wind energy and domestic energy production will increase. Vestas works closely with a number of manufacturing companies that are prepared to invest in the U.S. but are hesitant due to the lack of policy stability. The wind industry is part of a global economy, and the competition for investment and manufacturing is strong among different regions of the world. Other countries have made long-term commitments to secure clean energy investments, particularly Europe and Asia. The U.S. risks falling further behind other nations if we do not enact long-term policy mechanisms to drive new development and further reduce wind energy's cost. The production of electricity from wind promotes energy diversity and helps to stabilize electricity prices for consumers. Wind power provides energy security by tapping an abundant domestic resource. Wind energy gives a much-needed economic boost to rural regions of the country. Wind energy reduces carbon emissions into our air. It is a win-win for American jobs, secure American energy production and American energy ingenuity.

For this industry's continued success, it is critical that Congress immediately extend the PTC. The impact of allowing the PTC to expire — or extending it at the last hour — is much greater than in

previous years. As the Navigant study shows, 37,000 American jobs could be lost. This would be a devastating blow to the nation's fragile economy.

Often we hear of government support not achieving its goal of driving new investment. This is not one of those times. Wind is driving a new energy economy in America and providing a manufacturing base that is employing thousands of U.S. workers across the country. Simply put, providing certainty through an immediate extension of the PTC will ensure continued investment, energy security and jobs.

Thank you for the opportunity to provide testimony. I look forward to answering any questions.

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