



**Statement by  
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**Presented at the  
U.S. House of Representatives Committee on Natural Resources'  
Subcommittee on Energy and Mineral Resources  
Oversight Hearing on "America's Offshore Energy Resources:  
Creating Jobs, Securing America, and Lowering Prices"  
March 5, 2013**

Introduction

Thank you, Mr. Chairman and members of the Subcommittee.

My name is Robert Mitchell. My company is developing the Atlantic Wind Connection project, a private venture backed by several large investors that include Google, Bregal Energy, Elia, and Marubeni. These investors are backing the Atlantic Wind Connection because (1) they are excited about offshore wind and see it as the next frontier in domestic energy production, with a resource potential great enough to power the entire east coast of the United States. And, (2) they know that the Atlantic Wind Connection is the best way to enable this industry to develop to the scale needed to build an industry, and that it is the most efficient way to deliver offshore wind energy to shore.

The Atlantic Wind Connection is an undersea transmission cable that will span the mid-Atlantic region, beginning in northern New Jersey and eventually extending to southern Virginia. The transmission line will connect wind farms that are built in the federally-designated "Wind Energy Areas," ten to twelve miles off the coast. Using the most advanced transmission technology available today, the Atlantic Wind Connection will be able to move offshore wind electricity from where it is generated to where it is needed and where it is most valuable. And when the winds are calm and the wind farm output drops, the line will be used to move conventional energy resources efficiently from places where there is surplus power to places where the demand, and the price, is high. In addition, the grid along the coast is generally weak, and building a high-capacity cable paralleling the coast will strengthen the grid and make it more reliable.

The first phase of the Atlantic Wind Connection is the New Jersey Energy Link, which will connect energy users and resources in southern, central and northern New Jersey. That State has been blessed with the perfect conditions for offshore wind: a large offshore area with relatively

shallow water far enough from shore to avoid visual impacts, outstanding wind resources, and considerable port facilities and skilled labor that can be tapped to build this new industry.

As the Subcommittee deliberates on America's offshore energy resources in regards to "creating jobs, securing America and lowering prices," Atlantic Wind Connection offers the following for consideration:

1. Offshore wind can create tens of thousands of jobs and add over \$30 billion to the US economy
2. Offshore wind could actually lower energy prices in the long-run and will add diversity that is critical to a secure supply
3. Offshore wind delivered by the Atlantic Wind Connection can reduce congestion and improve reliability

### **Jobs and Growth**

Offshore wind presents the unique opportunity to create an entirely brand new industry in the United States. With over 8,000 components in a modern wind turbine, many offshore wind turbine components can be manufactured here in the United States. Today, about 2/3 of the components in U.S. land-based wind turbines are manufactured domestically.<sup>1</sup>

There are significant opportunities for U.S. manufacturers to play a similarly substantial role in the offshore wind supply chain. Local sourcing is preferred for towers, castings, forging services, nacelle covers and blades to reduce transportation costs, decrease currency risk, and increase just-in-time turbine availability, product quality and service. As turbines become larger, few suppliers are equipped to produce the unique components and the size makes the components expensive and difficult to transport. The offshore wind industry's development will open up new markets for local suppliers.<sup>2</sup>

According to a 2011 study of the economic benefits of offshore wind, commissioned by Atlantic Wind Connection, the employment and GDP impact can be immense. The study was conducted by IHS Global Insight, a leading global analytics firm. IHS analyzed the economic benefits of building 7,700MW of offshore wind farms and the AWC offshore transmission line along the Mid-Atlantic. They found that a Mid-Atlantic build-out can create approximately 310,000 job-years of work (about 31,000 workers) in the US. There will be direct employment growth primarily in the construction of and operations/maintenance of the wind farms and transmission system, but that there will also be significant opportunities to develop the local manufacturing supply chain. Thus, a Mid-Atlantic build-out can create:

- 80,000+ job years from direct construction and manufacturing,
- 98,000+ job years from indirect employment at suppliers of equipment and services, and
- 130,000+ job years induced as wages flow through the economy.

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<sup>1</sup> 2011 Wind Technologies Market Report, U.S. Department of Energy, 2011.

<sup>2</sup> Assessment of the Economic Benefits of Offshore Wind in the Mid-Atlantic, IHS Global Insight, 2012.

All the additional economic activity would increase the GDP by \$33 billion and increase Federal, state and local taxes by \$7.5 billion.

### **Lowering Energy Prices**

Decades ago, land-based wind was considered high cost. America, however, committed to lead in land-based wind and over time we learned to build turbines better, larger, and at a lower cost. Today, not only are thousands employed in land-based wind, but the cost of land-based wind energy production has decreased close to the level of fossil-fueled energy. Land-based wind is now a viable, stable-priced, clean energy resource that contributes to our energy security.

A similar success is possible with offshore wind. Today it is comparable in cost to solar energy.<sup>3</sup> However, as offshore wind technology evolves, with larger, more efficient machines, and as the supply chain is localized, it is possible to lower the cost of offshore wind energy to the range of \$0.07 /kWh by 2030, according to the DOE's National Offshore Wind Strategy.

Less well understood, is that offshore wind - even at a higher cost initially - can lower energy prices. It is counterintuitive, but here's how: Electricity is sold in an auction market. Each energy resource is bid into that auction, at the cost of producing an extra unit of that energy (\$/MWhr). That cost is primarily determined by fuel costs. Nuclear power, for example, has very low fuel costs and as a result it bids into the auction at a low price. On the other hand, coal has a comparatively high fuel cost and thus bids in higher than nuclear, or increasingly higher than even natural gas today. Once offshore wind farms are built and operating, their offshore wind energy will bid into the market at zero cost. This is because (again, once in operation) there will be no cost associated with producing an extra megawatt of offshore wind electricity because the fuel – the wind – is free.

Let's use New Jersey as an example. While southern New Jersey has abundant nuclear resources and a lower overall energy demand, northern New Jersey is densely populated with the highest energy prices in the state. That's because of what's happening behind the scenes in the energy markets. Market price is set by the units that are needed to meet load. Today, without offshore wind, old, polluting, inefficient peaking units in the north are used to meet peak load demand and are setting the market price. When the New Jersey Energy Link is able to bring in offshore wind, and to move surplus lower cost clean nuclear and natural gas energy from southern New Jersey to northern New Jersey, those expensive peaking units will be displaced, and so the overall market-clearing price will settle at a much lower level. This is a benefit that will be enjoyed by all ratepayers in that market.

### **Reducing Congestion and Improving Reliability**

In addition to impacting market-clearing prices, offshore wind carried by the Atlantic Wind Connection will also relieve costly grid congestion. Like heavy road traffic that slows the

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<sup>3</sup> Ibid.

progress of people and goods, congestion on the electricity grid prevents lower cost and cleaner generating plants from serving customers. That is, when there is congestion on our grid, we cannot utilize the most efficient sources because they cannot get through. Think of the Atlantic Wind Connection as a north-south highway that allows the least-cost energy to flow freely, lowering prices and eliminating congestion costs.

Improving the north-south transmission pathways in the Mid-Atlantic region with an offshore backbone also supports grid reliability and security. This region includes our nation's financial hub, major east coast transportation and chemical infrastructure, our largest naval base and other critical military and national security facilities, and the nation's capital. Energy flows into this region largely from west to east along major transmission trunk lines and from south to north. During times of grid stress, due to severe storms, cyber-attack, physical attack, geomagnetic storm, or other significant event, the AWC north-south backbone can provide that extra margin of controllable transmission capacity that can keep the lights on. It does this by providing an alternate north-south path for moving power away from damaged or overloaded west-to-east or north-south terrestrial transmission lines.

## **Conclusion**

Offshore wind and the Atlantic Wind Connection can be terrific opportunity for the United States – to create jobs, lower, more-stable energy prices, and improve our electric system. The offshore wind industry taking hold in America today has worked hard, engaging investors, stakeholders, and energy and transmission planners at the state and federal levels. Further, we have been pleased with the role that the federal government has taken to facilitate offshore wind. The Department of Energy's "National Offshore Wind Strategy" has launched a variety of efforts to advance technology to reduce the cost of building offshore wind farms, to maximize a U.S. supply chain, and most recently to support pilot projects with near-term prospects for getting turbines spinning off our coasts. The Department of Interior's Smart from the Start program moved the industry miles ahead in a short period, by mapping federal "Wind Energy Areas" and by moving expeditiously on leases, permits and Rights-of Way. Lastly, the inclusion of an Investment Tax Credit for offshore wind in the fiscal cliff legislation will be helpful to the industry if the ITC can be extended long enough to accommodate the multi-year permitting and construction cycle of offshore wind farms.

We think offshore wind is a terrific opportunity for the U.S. to further its transition to clean energy and to create a huge numbers of jobs. We are concerned, however, about the potential sequester. We believe that the sequester is likely to interrupt the continued and very much necessary work on leasing and permitting, supply chain development, technology R&D and lowering costs. Each of us – in industry, state governments and the federal government – must continue to press forward. If the sequester occurs, the federal government will not only reduce its impact but will introduce even greater risk into this budding industry. With that, we risk losing the very unique opportunity that offshore wind represents.

Thank you for the opportunity to share these thoughts with you.