

INSIGHTS

Offshore Winds Blowing in New Directions

October 18, 2011

By: [Frank V. Maisano](#)

In the aftermath of the offshore wind industry's recently completed [annual get-together](#) in Baltimore last week, there are many signs of success on the ocean blue's horizon. While those possibilities shine brightly in a number of key areas, the industry is also facing some difficult challenges. First, the good news. The industry still continues to grow broadly in terms of people developing, constructing and looking to invest in wind projects and its related industrial activity. The conference in Baltimore again had a near-record turnout for an industry that still has yet to build a project in North America. Offshore wind pioneers continue to investigate, plan and develop projects from Maine to North Carolina, with some projects much further along than others in the development process. As well, a support network of supply-chain businesses and helpful infrastructures are also making progress. Brightest among this group is the [Atlantic Wind Connection](#), an innovative offshore transmission backbone project designed to accelerate and facilitate large-scale development of offshore wind. One of the best ways to deliver the scale required to make the offshore wind industry happen is by creating a single offshore transmission system that can collect the energy and bring it to consumers on shore efficiently and reliably. By reaching this scale, the industry can also maximize the job-creation potential for the region's workers. With partners including Google Inc., Good Energies Inc., Marubeni Corp. and European supergrid developer Elia on board with funding, technical support and knowledge, the project is moving much faster than most people expected when it was announced a year ago. As well, manufacturing has started to catch up. A new partnership between composite/blade supplier AC Wind and the University of Delaware's Center for Composite Materials aims to make AC Wind's planned Salisbury, Md., plant one of the largest composite facilities in the world, capable of manufacturing large-scale offshore wind turbine blades up to 100 meters. The effort will help streamline the plant design and development process for Maryland's first offshore supply-chain manufacturer while reducing costs and improving process efficiency and reliability. Finally, a [new study](#) from Pike Research suggests that global investment in offshore wind power will surge in the next few years. According to the report, revenue from offshore wind power production will reach \$104 billion by 2017, representing more than 53% growth. Under a more aggressive scenario, offshore wind power revenues could reach \$130.5 billion. These successes have created strong momentum over the past year despite the fact that the industry has been slow to get a project up and running. This lack of momentum on the project side is cause for concern. Already, projects with signed PPAs have suffered some delays. NRG Energy Inc.'s [Bluewater Wind](#) project in Delaware suffered a setback when a loan guarantee misfire caused it to delay placing towers to measure wind speed

into the water. This delay could threaten the project's ability to meet its first impending PPA deadline in 2016. As well, other projects, including the highly touted, closely watched [Cape Wind Offshore](#) project, continue to struggle over financing, litigation and power price woes even though they have been given strong pushes from the Department of the Interior and supportive states. And despite the claims of increased interest from President Barack Obama and federal officials, more staff at the U.S. Bureau of Ocean Energy Management devoted to renewables and even a streamlining initiative aimed at speeding the review of permits, the world's best wind resources remain largely untapped because they are in places that cannot be owned or controlled in the traditional way. Finally, cost remains the giant elephant in the room. Whether it is power prices or other costs, they remain a significant problem for those who are looking to get these projects financed. Roughly 70% of an offshore wind project's cost is other infrastructure, installation and maintenance costs, not the turbines. This is where the Atlantic Wind Connection project may help limit costs for developers by taking away some of the burden of developing and permitting project-specific radial transmission. In addition, the cost of offshore wind generation is significantly higher than that for onshore wind, driving the industry to deploy larger turbines in larger arrays. While this increases the initial cost and makes financing more difficult, an infrastructure of new construction and maintenance vessels; larger, battle-tested turbines; and the transmission backbone could over the long haul reduce these costs dramatically. As a result, the long-term fate of the offshore wind industry probably hinges on driving down the cost to about 10 cents a kilowatt-hour over the next two decades to remain competitive with gas and other fuels. It is possible. In some places, where it is abundant and transmission is good, land-based wind is already selling at 3 cents. These same characteristics could exist offshore in a few years when the transmission backbone is completed and large-scale deployment is achieved. Americans want offshore wind to succeed. A recent poll of voters in Maryland, Delaware and New Jersey showed that 78% support the development of offshore wind power, while 67% want their elected officials to support offshore wind, even if it is more expensive. So we know there is a lot of interest and support for this burgeoning industry. It's now a matter of making it happen.