BUSINESS NETWORK for OFFSHORE WIND

Testimony of Liz Burdock, CEO & President, Business Network for Offshore Wind Before U.S. House of Representatives Natural Resources Committee Subcommittee on Energy and Mineral Resources

September 16, 2019

Chairman Lowenthal, Representative Van Drew, and Members of the Subcommittee, it is my honor to appear before you today to discuss the benefits and potential challenges for New Jersey's offshore wind industry from the industry's supply chain perspective.

The Business Network for Offshore Wind (the Network) is a national a 501(c)3 national nonprofit. This organization was created with **one** purpose: To help build the U.S. Offshore wind market and its supply chain through education and connections. Due to demand and the need to grow the U.S. industry, we operate as a national nonprofit with a strong presence in 11 states including New Jersey. We have a staff of more than 25 years experience in clean energy, stakeholder engagement, communications and facilitation. We also have the ability to call upon our vast network of members and European contacts to assemble best practices.

As an authoritative voice for the offshore wind's supply chain community, the Network brings together, offshore wind original equipment manufacturers (OEMs), global offshore wind developers, policymakers, world subject matter experts and more than 300 Member businesses representing most if not all of the sectors of the offshore wind energy supply chain.

Offshore Wind Market and Supply Chain Economic Benefits

The Network monitors and reports on U.S. market developments regularly. We publish white papers and host an annual State of the Offshore Wind Industry and Public Sector update.

The Network works in partnership with State economic and labor departments, and has a close working relationship with the New Jersey Economic Development Authority (NJ EDA).

- NJ EDA was an active partner with the Network on New Jersey's second supply chain forum, titled Time for Turbines III, held in Atlantic City on August 16.
- NJ EDA and the Network teamed up to offer the New Jersey Offshore Wind Supply Chain Registry, an opportunity for companies to find partners and buyers. We have 524 categories for products and services with 427 companies enrolled in the NJ directory.

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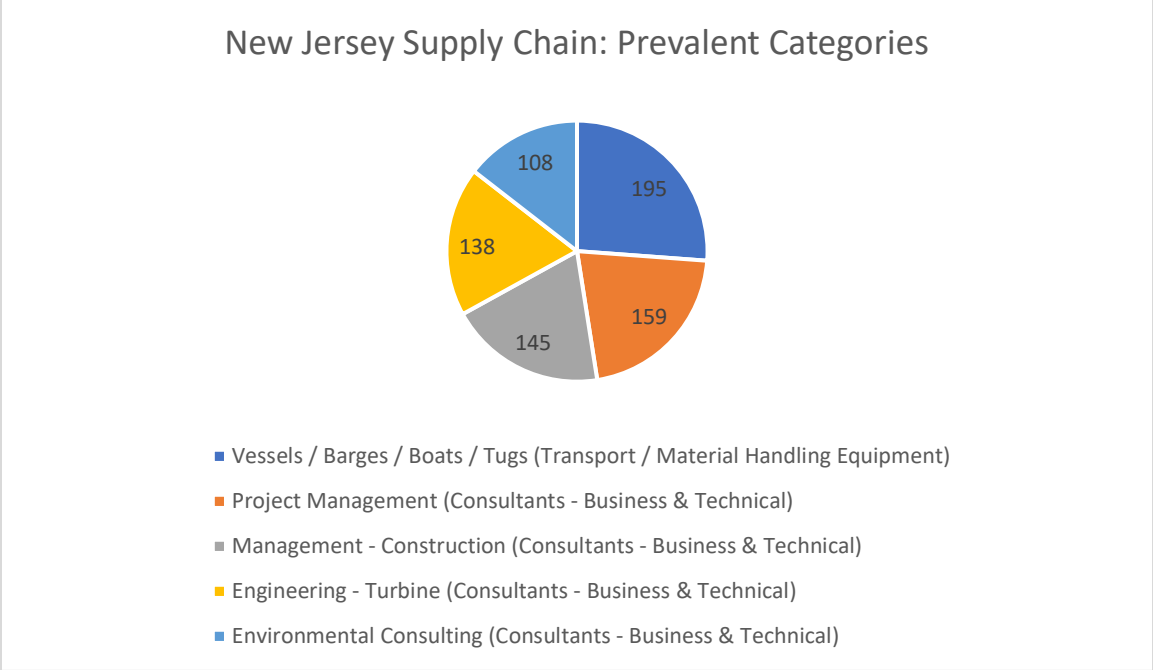

Global Offshore Wind Market

The Network does not view the U.S. Market in isolation. Instead, we consider it as part of the growing and larger global market. Therefore, the Network is a founding member of the World Forum Offshore Wind (WFO), a nonprofit association promoting offshore wind worldwide.

The Global Wind Energy Council's (GWEC) *Global Offshore Wind Repor*t shows that the global offshore market has grown by an average of 21% each year since 2013, reaching total installations of 23 gigawatt (GW). More than 4 GW of new capacity was installed each year in 2017 and 2018, making up 8% of the total new installations during both years. For the first time, China was the largest offshore market in 2018 based on new installations, followed by the UK and Germany.

The National Renewable Energy Laboratory's (NREL) most recent offshore wind market report indicates that global offshore wind project pipeline capacity has grown to 272 GW with more than 25 GW installed capacity globally. There was a record 5GW installed in 2018. The total value of the global offshore wind energy market is expected to reach USD 57.2 billion by 2022.

The offshore wind industry supports 40,000 jobs in Europe after it has installed

18 GW of offshore wind, according to Wind Europe. The United States offshore wind market has similar new job generation potential as offshore wind jobs differ from the onshore wind industry.

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U.S. Offshore Wind Market Overview

It has taken over a decade for offshore wind to be viewed positively on the U.S. East Coast, but the sector is growing with increasing momentum helped in part by falling offshore wind costs from technology advancements as well as U.S. state policies that see the merits of adding offshore wind into their respective state energy mixes.

The Block Island 5-turbine project has proved that the U.S. can build offshore wind power, and this summer we started construction of a set of turbines that will be operating in federal water off the coast of Virginia by 2020.

The New York Bight is progressing toward an auction of the four Wind Energy Areas in 2020 and the U.S. offshore wind energy project development and operational pipeline grew to an estimated potential generating capacity of 25,824 MW, with 21,225 MW under exclusive site control. The U.S. Department of Energy estimates that the existing and proposed federal lease areas off the coast of New Jersey could support up to 12.5 GW of offshore wind energy.

Simultaneously, state governors Lamont, Baker, Raimondo, Cuomo and Murphy are all supporting utility-scale offshore wind as the scale provides significant benefits to ratepayers and the environment.

One key project is the first U.S. utility-scale wind farm, Vineyard Wind 1 in Massachusetts, an 800 MW project, as well as the 400 MW Revolution Wind in Rhode Island and 200 MW Revolution Wind in Connecticut.

On June 21, 2019, the New Jersey Board of Public Utilities announced it was awarding 1100 MW to Ørsted. In July, New York awarded 1696 MW to Ørsted (880 MW) and Equinor (816 MW) bringing the total of offshore wind supported by a public financial mechanism to 4,834 MW.

In August, Massachusetts closed its competition for its next 800 MW procurement of the State's 3200 MW goal, and Connecticut could procure up to 2,000 MW in 2019.

This is just the first of many announcements that are forthcoming, and the U.S. is now on track to be a 20 GW market by 2030.

In March, 2019 the "Supply Chain Contracting Forecast for U.S. Offshore Wind Power" white paper was issued by the University of Delaware Special Initiative on Offshore Wind. This study provided data on the scale of the East Coast offshore wind industry supply chain marketplace as shown below:

Key industry components required to achieve an almost $70 billion utility-scale build-out of America's offshore wind power capacity by 2030 include:

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More than 1,700 offshore wind turbines & towers .....$29.6 billion

More than 1,750 offshore turbine & substation foundations ..... $16.2 billion

More than 8,000 kilometers of upland, export & array cables ..... $10.3 billion

More than 60 onshore & offshore substations ..... $ 6.8 billion

Marine support, insurance & project management ..... $ 5.3 billion

TOTAL by 2030: $68.2 billion

Under BOEM's direction, the US now has 15 wind energy areas leased with a capacity of 21GWs for offshore wind. In the 4th quarter of 2018, the sale of three wind energy areas provided more than $400M to the US Treasury. In the same quarter, two private transactions totaling over $700M were made, when Ørsted purchased Deepwater Wind and its projects, and Shell and EDF purchased a NJ Offshore Wind Energy Area. At the beginning of 2019, Virginia utility, Dominion Energy announced a $11bn commitment, the largest utility investment in offshore wind so far. Dominion's approach will bring increased US utility participation and further help drive down costs that may soon start attract corporate customers. In summation, offshore wind has contributed more than $2 billion of investment in the U.S. during the past six months alone.

Benefits of Offshore Wind Energy

Offshore wind not only produces renewable, clean and affordable energy. It also generates jobs and investments to strengthen our economy. Building the offshore wind industry and supply chain will provide a variety of economic, workforce development and environmental benefits for the U.S. and New Jersey.

Proven Technology Unleashes a Potential 2,058 GW in clean energy generation

Offshore wind energy uses proven but evolving technology that has been deployed for more than 20 years in different parts of the globe. Europe now has a total installed offshore wind capacity of 18,499 MW. This corresponds to 4,543 grid-connected wind turbines across 11 countries. If offshore wind were to be fully deployed in the U.S. to harness the Nation's 2,058 GW of technical potential as determined by DOE, it can provide an energy output of 7,200 terawatt-hours per year – enough to provide nearly double the nation's 2015 annual electric generation. Further, it could drive significant reductions in electricity price volatility associated with fossil fuel costs.

As wind turbines grow larger and their supporting technology improves, costs are coming down in Europe and the U.S. costs to larger and more efficient turbines, lower capital and operating costs, and educated supply chain along with other

advancements in the field. The most dramatic example of U.S. offshore wind pricing was the contract for the Vineyard Wind 1 project in Massachusetts, which came in at a levelized cost of 6.5 cents per kilowatt hour in 2018.

Eighty percent of the U.S. energy demand is along the U.S. coastline. And Offshore Wind Helps Grid Stability and Resilience

The cost-effective electricity produced from offshore wind which can be easily transmitted to where it is needed most i.e. the major load centers. Many coastal areas have very high-energy needs. 53% of the United States' population lives in coastal areas, with concentrations in major coastal cities. Building offshore wind farms in these areas can help to meet those energy needs from nearby sources. Offshore wind speeds tend to be faster than on land. Small increases in wind speed yield large increases in energy production: a turbine in a 15-mph wind can generate twice as much energy as a turbine in a 12-mph wind. Faster wind speeds offshore mean much more energy can be generated. Offshore wind speeds tend to be steadier than on land. A steadier supply of wind means a more reliable source of energy. As offshore wind is strongest when energy is needed most by these load centers —in the middle of the day and early evening—it will help to stabilize electric rates. Excess offshore wind energy has the potential for storage, which in turn can help improve the stability and resilience of the aging grid infrastructure.

According to "The Growing Market for Clean Energy Portfolios" a new report by Rocky Mountain Institute (RMI), portfolios of clean energy resources can provide the same energy and reliability services as traditional gas power plants — but cost less.

Currently, there is an estimated $90 billion of planned investment in new gas-fired power plants and over $30 billion of planned investment in proposed gas pipelines. If clean energy replaces the proposed gas plants, consumers could save $29 billion.

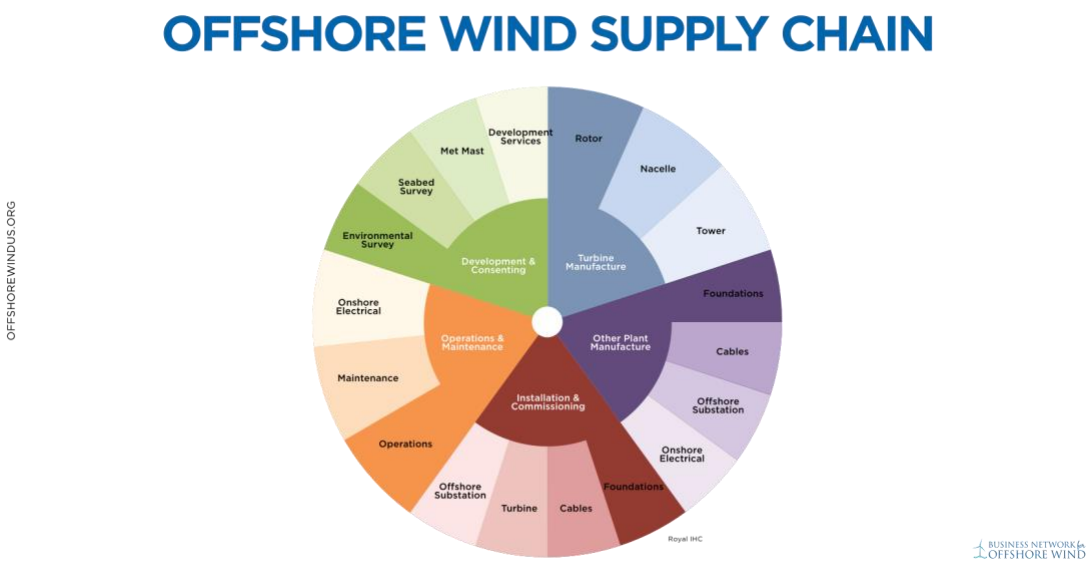
Establishing A Robust Offshore Wind Industry Would Lead to Significant Positive Environmental and Economic External Benefits

Wind power has a remarkably small carbon footprint. There are zero carbon emissions associated with the operation of wind turbines. Assuming the DOE/DOI National Offshore Wind Strategy was fully implement by developing 86GW of offshore wind, the U.S. would see a 1.8% reduction in cumulative greenhouse gas emissions – equivalent to approximately 1.6B metric tons of Co2-saving up to $50B in avoided global damages. Furthermore the U.S. could save $2B in avoided morality, morbidity, and economic damages associated from cumulative costs reductions in sulfur dioxide, nitrogen oxides and fine particles. Offshore wind energy also has one of the lowest water consumption footprints, unlike fossil fuels and nuclear power plants.

According to DOE/DOI, deployment of 86GW of offshore wind could support $440M in annual lease payments to the U.S. Treasury and $680M in annual property tax payments.

Job Creation and Economic Growth

Offshore Wind Energy calls upon many different existing industrial sectors. It provides the potential to create a national demand that will bring about accelerated growth rates in job creation. Offshore wind jobs start with the planning phase, then advances through the assembly, build-out and deployment; primary, secondary as well as tertiary supply-chain component manufacturing and service providers; to 25 years plus of technicians providing operations and maintenance.



The US National Renewable Energy Laboratory estimates that 20.7 jobs are created for 1 MW of offshore wind power. The current projects in MA, RI, CT, NY, NJ, MD and VA total almost 5,000MWs of offshore wind power; in simple math this equates to 100,000 jobs by 2025.

Below are some examples of types jobs by development phase. This is by no means an exhaustive list, but rather an illustration to show the variety and depth of jobs created by offshore wind.

Phase 1: Development and Project Management (Siting And Permitting)/Wind Farm Design and Surveys

- Oceanographer
- Hydrographer

- Geophysicist
- Data Processor
- Marine Mammal Observer
- Marine Ecologist

Phase 2: Turbine (WTG) (Rotor, included blades; nacelle and tower)

- Welders
- Composite Specialist
- NDT Inspector for secondary components
- Sand Blasting & Painters

Phase 3: Balance of Plant (Foundations, Cables, Substation)

- Draftsman*
- CNC Machinist*
- Estimator
- Facilities Manager
- Forklift and Crane Operators
- Carousel and Tensioner Operator
- Cable Joiner
- HV Electricians
- Design Engineer
- Scaffolder

Phase 4: Installation and Commissioning (Turbine, Foundation, Cables, Substation, Vessels)

- Crane Operator
- Crew Services
- Cable Joiner
- Fiber Optic Technician
- Electrician
- Vessel Operations/Maintenance

- Shipwright
- Pipefitter

➢ ROV Operation
- Project Manager
- Pilot
- Supervisor
- ROV Engineer

➢ Guard Vessels
- Captain
- Mate
- Deckhand

Phase 5: Operations, Maintenance and Service

➢ Wind Farm Operations
- Operations and Maintenance Manager
- Control Room Technician
- Operations Controller
- SCADA Technician
- Communications Network Technician

➢ Turbine Maintenance (Usually under warranty for 5 years and responsibility of the turbine manufacturer)
- Rope Access and Blade Repair Manager, Supervisor, Technician
- Wind Turbine Technician
- Lift Technician
- Crane and Rigging Inspector
- Fire Safety Technician

➢ Maintenance and Service Logistics
- Diver
- ROV Crew
- Foundation Cleaning Operator
- Port Services (Dockmaster, Dock Gateman, Line handler)

Good Ocean Neighbor

Regulations established by U.S. BOEM has created a 12 mile minimum distance from shore helping to eliminate concerns with view shed issues. New research shows that the Block Island Wind Farm off the coast of Rhode Island has increased tourism and been good for business. The turbines sit three miles from shore and visitors pay for guided tours to see the mechanical marvels. A recent study of Airbnb data at Block Island determined that tourism has increased by 19% since the installation of the offshore wind turbines. Recreational fishermen also benefit because the turbine foundations serve as artificial reefs. A single turbine can support several metric tons of shellfish which in turn attract a bounty of fish. The Block Island 5-turbine project has demonstrated that by doing extensive outreach to the commercial and recreational fishing communities, an offshore wind project can co-exist with and even enhance fishing in the area around the wind farm.

Offshore Wind Benefits to New Jersey

New Jersey has a strong starting point and advantage for offshore wind, created by existing leased offshore wind areas in federal waters with good wind resources, east of its coastline. The State has a legislative framework, the Offshore Wind Economic Development Act (OWEDA) . New Jersey is well placed to use the turbine technology to harness its offshore wind resources to bring fossil free clean electricity to its transmission and distribution grids implementing existing policies. Since the original New Jersey Offshore Wind policies were put in place, a number of lessons from other states and countries have been shared. The additional learning from the development of the US market has been weaved in the implementation of the New Jersey's OWEDA by Governor Murphy's administration. Consequently, a strong offshore wind program has emerged creating a vibrant New Jersey supply chain and providing many benefits to New Jersey residents.

New Jersey Offshore Wind Progress

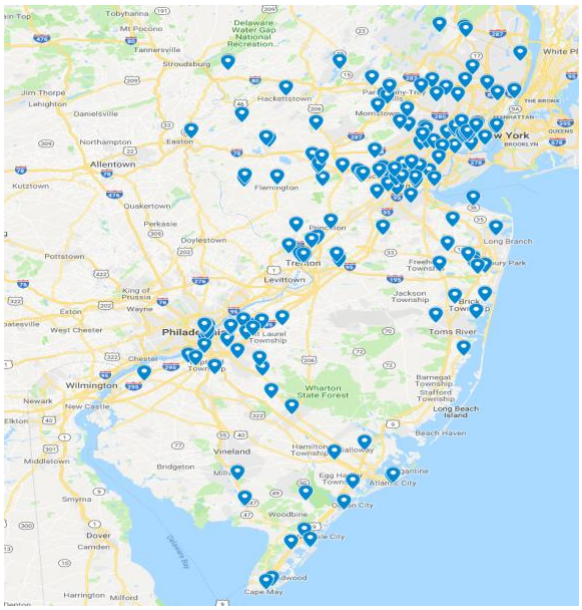
New Jersey Governor Phil Murphy fulfilled a key clean energy campaign promise by issuing Executive Order 8 that directs the state to move forward aggressively toward the goal of generating 3500 MW (megawatts) of offshore wind energy by 2030. The order further directed the NJ Board of Public Utilities (BPU) to update the Offshore (wind) Renewable Energy Certificate (OREC) program to help fund offshore wind energy projects. NJ BPU released its Draft Energy Master Plan on June 10, 2019. The NJ BPU hired a team of consultants to draft the NJ Offshore Wind Strategic Plan (OWSP) due later this month.

In the meantime, the NJ BPU forged ahead with its first major solicitation and awarded 1100 MW to the Ocean Wind project owned by Ørsted on June 21, 2019. To support this effort, NJ EDA opened an Offshore Wind Tax Credit program for

businesses that make a capital investment of at least $50 million dollars in certain qualified offshore wind facilities within seven southern counties.

The State also entered into a partnership with the Network to create the New Jersey's Offshore Wind's offshore wind Supply Chain Registry (https://n415.fmphost.com/fmi/webd/OSWSupplyChain?script=102). This electronic database allows companies to publicly indicate their interest and ability to supply components and services for US offshore wind projects. It also serves as a valuable resource for companies looking to buy from and partner with other offshore wind firms.

New Jersey Offshore Wind Supply Chain Companies



Encouraging Competition

The NJ BPU also opened New Jersey offshore wind solicitations to multiple leaseholders encouraging competition and resulting in cost competitive proposals. The three leaseholders in New Jersey waters—Ørsted, EDF Renewables/Shell, and Equinor—are some of the most experienced offshore wind developers in the world. Ørsted is the leading global developer in terms of most offshore wind farms deployed the top global developer, Equinor has run multiple projects in northern Europe including a floating wind farm off of Scotland, and EDF Renewables/Shell New Energy has extensive international experience in both onshore and off wind. This caliber of offshore wind developer with their deep experience helps ensure the investment New Jersey is making in offshore wind is maximized, protected and brought to fruition.

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Job Creation

According to a study by E2, the average wind farm (roughly 44 turbines) off of New Jersey's shore is expected to add $702 million to the state's economy. Since winning the 1100MW procurement in June for offshore wind electricity, Ørsted has already:

- Announced that EEW would have the contract for manufacturing the project's foundations in or around the Paulsboro, NJ port area. The German-owned EEW, a steel pipe manufacturer and supplier to the oil and gas industry, is willing to make a $100M investment in a steel fabrication plant to manufacture steel foundations. This facility will employ over 500 workers. In addition, the need for secondary steel and services such as: welding, sandblasting and painting will involve hundred's of small and medium sized local businesses.
- Launched its Pro-NJ Trust fund in Cape May and Atlantic Counties which will invest up to $15 million in grants to support local infrastructure investments and to support small, women, and minority-owned business owners
- Committed to establishing an Operation and Maintenance (O&M) base in Atlantic City that will provide permanent, high-skilled jobs during the 35+ year lifespan of the project

The E2 study projected the offshore wind project will add 4,313 jobs based on the average wind farm of 44 turbines. The image below illustrates one aspect of offshore wind development- vessels and logistics. There can be 100 vessels working on an offshore wind project site at one time, which involves hundreds of workers offshore with a larger local labor force onshore supporting them. Examples of jobs range from offshore vessel crews, marine construction workers, and sea observers to onshore welders, control room operators, and suppliers (equipment, catering, fuel).

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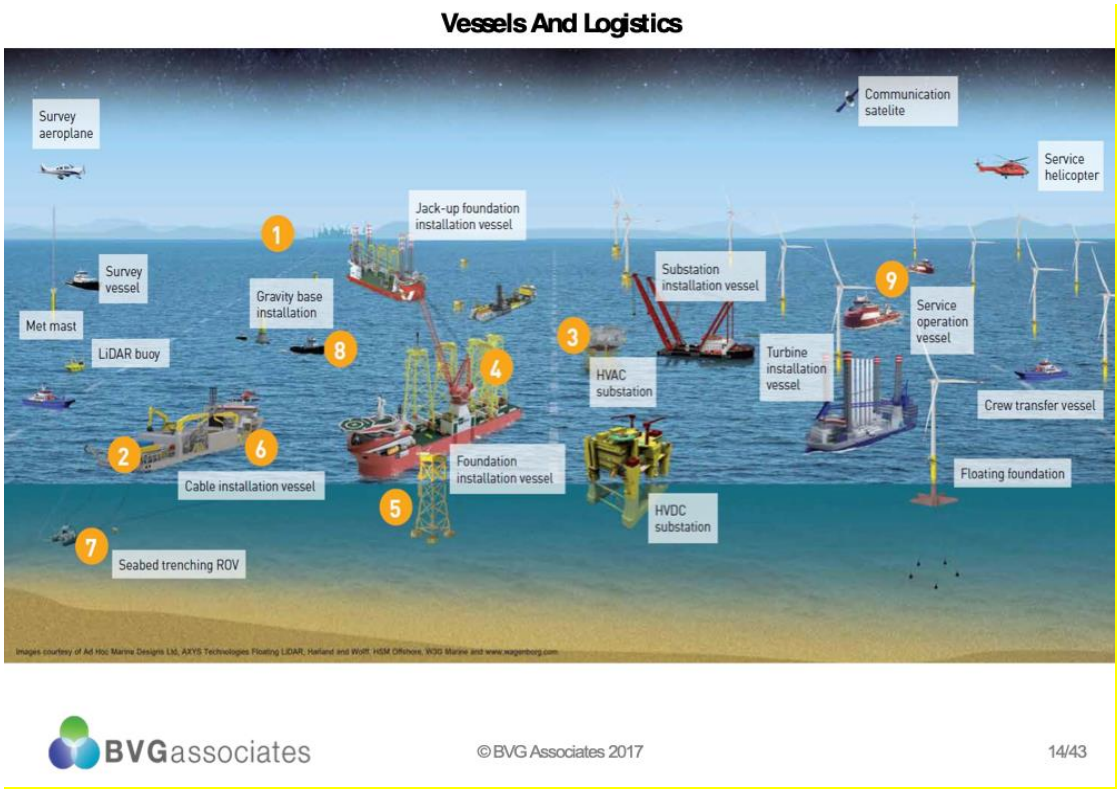

The investment in offshore wind will also lead to port revitalization and clusters. Offshore wind has proven in cities like Bremerhaven, Germany and Rotterdam in the Netherlands that it can bring neglected waterfront areas back to life by creating clusters of supporting businesses to manufacture and assemble wind turbines. This could allow New Jersey's older docks and brownfields to become active again, with major tax benefits to the surrounding communities.

Achieving Renewable Portfolio Standard (RPS) goals

New Jersey has set ambitious RPS goals for 50 percent clean energy by 2030 and 100 percent by 2050. There are currently 344,000 acres under federal lease off the coast of New Jersey that can support up to 3500 megawatts of capacity, representing 20 percent of New Jersey's energy needs. The NJ Board of Public Utilities has acknowledged in the Draft Energy Master Plan that it will need to exceed its 3500 MW by 2030 offshore wind goal to achieve its RPS objectives. New Jersey currently gets about 90 percent of its power from nuclear and natural gas power plants. The nuclear plants are aging, so offshore wind will be needed to fill the gap. New Jersey cannot meet these ambitious targets or replace this generation without a utility scale clean energy solution like offshore wind. A recent study conducted by the Network shows that OSW will help NJ replace existing nuclear generation with zero-carbon generation and contribute to meeting new demand

with zero-carbon generation. Expanding OSW deployment at a rate of about 400MW a year will result in a 36% contribution to NJ's total zero-C generation by 2050.

Environmental Benefits

Last, but certainly not least, offshore wind energy will mitigate climate change and sea rise, topics critically important to Superstorm Sandy survivors along the Jersey Shore. On August 13th, 2019, The Washington Post ran a story *2°C: BEYOND THE LIMIT: Extreme climate change has arrived in America.* This story focus on the scientific analysis of the NOAA data showing that "in every Northeast state except Pennsylvania, the temperatures of the winter months of December through February have risen by 2 degrees Celsius since 1895-1896. Rhode Island is the first state in the Lower 48 whose average temperature rise has eclipsed 2 degrees Celsius. Other parts of the Northeast — New Jersey, Connecticut, Maine and Massachusetts — trail close behind." The story illustrates the seriousness of climate change and how it creates the need for utility scale renewable energy solutions now. Governors from Rhode Island, New York, New Jersey, Massachusetts, Maine, Connecticut, Maryland, and Virginia have commitment and aggressive offshore wind polices that will improve their economy and environment. Offshore wind is a proven, utility-scale clean energy technology combats climate change.

The energy produced for New Jersey by Ørsted 's 1,100 MW Ocean Wind Project will result in 78 million tons of avoided CO_2 over the 25-year life span of the project. This is the equivalent of removing 16.6 million cars driven for one year.

Challenges for the New Jersey Offshore Wind Program

Maintaining a clear, predictable procurement timeline

To encourage industry investment in the New Jersey, the State has provided a detailed and predictable plan. Adsitional investment requires continuing with biannual solicitations of at least 1,200MW starting in 2020 and continuing through at least 2026. Setting regular, interim milestones along the way to 2050 ensures the program stays on course and achieves its long-term goals.

Expiring Federal Investment Tax Credits

Further declines in offshore wind off-take prices are far from certain in the near term. The U.S. Investment Tax Credit expires in 2020, projects will have to make up the difference by raising prices. While offshore wind costs are coming down, these projects still require substantial up-front investment, and there are costs involved and additional time needed to build the industry's supply chain and infrastructure.

Balancing the Needs Of All Ocean Users

As in other states, New Jersey commercial fishermen have voiced their concerns about offshore wind farms damaging prime fishing grounds, especially for scallops, clams and other ocean bottom shellfish and fish. It is extremely important that federal and state officials and offshore wind developers do extensive and committed outreach to the fishing community and use their feedback to site wind farms and turbines to do the least possible impact on these industries. The offshore wind industry, in particular the developers, have entered into proactive dialogues with commercial fisherman through the involvement with Responsible Offshore Development Alliance (RODA) and Responsible Offshore Science Alliance (ROSA) to advance this regionally and build on our successful experience with the Block Island Wind Farm. As an industry, we strongly support collaborative, regional science and believe that both siting and permitting is a robust and transparent process formulated with best available science.

US DOI BOEM Permitting Process

We encourage the streamlined, predictable federal permitting (BOEM, NOAA, etc.) of offshore wind projects and supporting infrastructure. The US Bureau of Ocean Energy Management (BOEM) is currently reviewing at least four Construction and Operations Plans (COPs). With 15 active leases in the US offshore wind marketplace and additional areas slated to be auction, the number of project reviews has increased. A slowdown or denial in the permitting process will send a signal that could set back New Jersey and the entire sector. We are concerned that companies will look to other emerging markets such as Asia or South America as places to invest, and the U.S. will not be able to capture the economic investment.

Grid and Transmission

The relationship between offshore wind generation and grid connections for transmission is challenging. The North East grid should be able to accept the first 5,000MWs of power, but additional offshore wind new generation will require a potentially ground breaking and disruptive policy. If the problem is not addressed, the market will technically not be capable of providing the megawatts hours that policy makers have called for in the goals they have set. Communicating the risks of not acting on this issue and incentivizing State officials to build the infrastructure to allow for a large number of megawatts to be placed on the grid is necessary.

Conclusion

We encourage the Committee and its members to give specific attention to the needs of offshore wind development by extending the 30 percent investment tax credit for offshore wind facilities through 2025. Because of the complex nature of siting

projects in the undersea environment and the necessity to engage a variety of stakeholders in a mixed-use ocean area, offshore wind projects can take considerably longer to develop than their onshore wind counterparts. For this reason, we need to extend the efficacy of the offshore wind incentives with these challenges in mind to be sure that this industry develops to scale.

Congress should monitor the permitting process to ensure global stakeholder lessons and science are incorporated into the decision making process. We also encourage increasing funding sources to allow US BOEM to hire personnel helping to ensure the processing of developer COP applications is met within the 24-month "One Federal Decision" time period. We also encourage the committee to request regular updates from BOEM on the COP approval process to help ensure plans are moving through agency reviews in a timely manner.

We encourage the Federal government to continue identifying additional wind energy areas and to maintain a robust, consistent and transparent siting and leasing offshore program to encourage additional and new developers to enter the US offshore wind market. The US now has 15 wind energy areas leased with additional lease auctions planned in NY and CA, but industry requires a robust leasing progeam to justify local investments in manufacturing.

In the 4th quarter of 2018, the sale of three wind energy areas provided more than $400M to the US Treasury. Lease auction and on-going lease payments made by developers to the Federal government for the use and development of lease of US ocean waters should be of benefit to all parties involved, including State ratepayers and local supply chain businesses. Congress should direct BOEM to partner with States where offshore wind development and robust policies to support industry growth are underway such as New Jersey. We encourage Congress to seek regulatory changes to reinvestment of a portion of offshore wind lease auction proceeds into State offshore wind activities. There are models for structuring the reallocation of federal proceeds back to states such as Land and Water Conservation Fund and/or GOMESA (legislated in 2006 to allow revenue sharing with oil producing states in the Gulf of Mexico) https://www.boem.gov/Revenue-Sharing/and HR 6665. Federal auction proceeds should be allocated to procuring federal energy needs from offshore wind, develop grants and programs that invest in port infrastructure upgrades, essential for creating offshore wind clusters of economic activity, support offshore wind research and development, and assist U.S. companies seeking capital investments to become part of the supply chain.

Offshore wind transmission to shore should be coordinated. By coordinating transmission, overall costs are lowered. Projects located farther from shore will benefit from lower transmission costs if there is a connection point to a transmission line from an existing project. Coordinated transmission will increase

competition – new and experienced developers will be able to enter the market - projects located farther from shore will be competitive with those close to shore and small projects may compete with large projects. Industry needs government help to come to consensus on a path forward. Both State and Federal agencies need to take a more active role in a dialogue.

Since the Network started undertaking work in New Jersey, the US offshore wind market has been altered significantly offshore wind is no longer a dream along the North East, but a reality. However, the reality of offshore wind is set in motion by the policymakers' promise of offshore wind jobs and state economic development. A need exists to unify the east coast offshore wind activities and to coordinate the existing contributors to the US supply chain with an approach wherein the NE and mid-Atlantic are not competing—duplication and redundancy of investments requirements and assets would be damaging to the industry. We recommend the Federal government take a leadership role in working cooperatively with states to discuss and convene state officials for conversations about port coordination, supply chain, workforce needs and grid and transmission.

On behalf of my organization and the offshore wind industry in New Jersey, I thank the Chair, Representative Van Drew and the Subcommittee for traveling to Wildwood, and for the opportunity to submit this testimony.

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