Since the Network was formed in 2012, we have brought together businesses and government, both domestically and internationally, to establish the offshore wind supply chain market and prepare U.S. businesses to enter the industry. This year, we worked hard to pave the way for the creation of an industry supply chain by promoting partnerships, advocacy and education. With your help, we will accelerate our momentum in leading the charge toward creating the U.S. offshore wind industry.
(from left to right) José Zayas, Director Wind and Water Power Program at U.S. Dept. of Energy; Peter Stabell, Managing Director at WPD Offshore Denmark; Markus Rieck, Commercial Executive-Offshore Wind at GE Renewable Energy; Liz Burdock, Executive Director at Business Network for Offshore Wind; Mary Beth Tung, Director at Maryland Energy Administration; Gunnar Groebler, Business Area Wind at Vattenfall Wind Power A/S; Michael Hannibal, CEO Offshore at Siemens Wind Power & Renewables Division; Thomas Brostrøm, General Manager at Dong Energy Wind Power (Bay State Wind)
When we talk about the Network, we often compare our organization to an offshore wind project. People pay attention to the majestic blades spinning slowly in the ocean breeze, but miss the vital, hidden activities: building the foundation, laying the electric cable and so much more that takes place beneath the surface.

Our intention in this report is to give you a good look at the whole picture. Our activities range from our annual International Offshore Wind Partnering Forum to our behind-the-scenes work in policy, education, and matchmaking; connecting offshore wind developers with the contractors and subcontractors who will build the thousands of components that make up the finished wind turbine.

Launching this entirely new industry where none currently exists is challenging but incredibly rewarding and important work, critical to bringing jobs to U.S. communities and meeting our electricity needs along both U.S. coasts and the Great Lakes area. The five turbines spinning off Block Island are a great start. We invite you to join us in getting much more “steel in the water” up and down the Atlantic and Pacific coasts—and in our Great Lakes—as soon as possible.

WHO WE ARE

The Business Network for Offshore Wind is a 501(c)(3) non profit organization solely focused on the development of the U.S. offshore wind industry and advancement of its supply chain. We are not a trade association of many voices; we are one leading voice for the offshore wind business community. We bring together developers, policymakers, academia, global experts and more than 150 member businesses for critical discussions and unprecedented networking opportunities.
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LETTER FROM THE EXECUTIVE DIRECTOR

Dear Members and Friends,

It is my pleasure to share with you the Network’s first annual report: Building an Industry, which covers our activities from July 2016 to June 2017.

Since the Network’s formation in 2012, we have held more than 40 supply chain activities; brought together over 1,000 businesses and government agencies, both domestically and internationally; educated and prepared U.S. businesses to enter the offshore wind industry; and helped establish the base for a U.S. supply chain. Over the past five years, we have built a brand and established credibility as the leader in the development of the U.S. offshore wind supply chain.

From the time when 20 core members came together in February 2014 to adopt our first strategic plan, Establishing an Offshore Wind Industry Through Collaboration, the Network has grown to more than 150 members. We have expanded our geographical outreach and scope, and emerged as the only national organization focused solely on offshore wind in the United States.

Through your financial help, the Network has been able to participate in numerous activities to help grow and expand the U.S. offshore wind market. In May, the Maryland Public Service Commission (PSC) approved and awarded financing for 368 megawatts (MW) of offshore wind through Offshore Renewable Energy Certificates (ORECs) at a levelized price of $131.93 per megawatt-hours (MWh) over 20 years. The Network actively participated in the process, providing expert testimony at MD PSC hearings and generating business support. Additionally, we organized workshops focused on Maryland grant programs and held a Meet the Developers breakfast with the two Maryland developers, US Wind and Deepwater Wind.

We also engaged in our first public relations campaign to raise awareness about the benefits and falling costs of offshore wind energy, educating the public to help decision makers secure more public support for offshore wind development.

We have expanded our scope of work with the following projects:

- We opened a New Jersey office and drafted a policy roadmap for New Jersey to make offshore wind a priority and commit to at least 3500MWs of offshore wind.
- We hosted the first offshore wind supply chain meeting in California in an effort to seed offshore wind market expansion in the world’s fifth largest economy.
- In October and April, the Network brought together more than 600 participants to network and exchange technical knowledge at our third and fourth International Offshore Wind Partnering Forums.
- We also began working with the National Renewable Energy Laboratory (NREL) to facilitate the creation of National Offshore Wind Standards.

These achievements represent the determination of Network members to see offshore wind thrive in the U.S., and show the support from many state, federal and local government officials.

Next year and in the years to come, we plan to accelerate our momentum in establishing the offshore wind industry in the U.S. We will continue in our mission to forge a path for our members through business and leadership opportunities in order to leave a lasting legacy of a cleaner, brighter world.

Liz Burdock
Executive Director
I have never been more optimistic about the future of our industry than I am today. For the past ten years, I have watched the U.S. offshore wind market inch forward slowly. Now the pace is accelerating. This is an exciting time for those who dedicate their time and energy to solidifying, not only the offshore wind industry, but the renewable energy market as a whole.

The Network invests time and energy into championing the U.S. offshore wind industry, collaborating across industry sectors, bolstering a healthy economy and workforce, and developing education programs to empower member businesses.

We have much to look forward to in the coming years as more political and business leaders learn about the economic and environmental benefits of offshore wind. Thank you for your continued support as we build this industry together.

Kevin Pearce
Board of Directors Chair
MISSION & PURPOSE
The Network works toward harnessing the power of offshore wind to create jobs, strengthen the economy, and improve the quality of life for all citizens. We believe the progression of the offshore wind industry requires a commitment to a core set of initiatives that are integral to our success: Education, Collaboration, Advocacy and Leadership. We empower our members with the education, tools and connections to take a leading role in the creation of this booming new industry.

The purpose of the Network is to expand public and private sector knowledge, expertise and contracts to bolster the offshore wind industry, and maximize member participation in the development, construction, maintenance and operation of the offshore wind industry and complimentary-based projects.

ORGANIZATION & NATURE OF OPERATIONS
The Business Network for Maryland Offshore Wind, Inc. was incorporated in 2013 and was officially designated as a 501(c)(3) organization by the U.S. Internal Revenue Service in 2014.

The Network’s primary revenue sources are grants, membership dues, event revenue and sponsorships. Revenues fund the Network’s three primary activities:

• **Education.** The Network educates decision makers, educators, nonprofit organizations, businesses and individual members of the public regarding the benefits of developing an offshore wind industry and other marine offshore renewable energy industries by conducting study tours, webinars and conferences on the topic of offshore wind and by producing newsletters, information sheets, and similar publications for public distribution.

• **Scientific Research.** The Network conducts studies and supports research and pilot programs to advance the development of offshore wind and marine offshore renewable energy.

• **Supply Chain.** The Network coordinates with the government and the private sector to develop an offshore wind supply chain by assisting in bringing businesses and the public sector together; acting as an ombudsman among the participants to encourage partnering and collaboration.

HISTORY
The Network started in 2012 as a group of Maryland companies that shared their vision of the benefits that offshore wind could bring to the business community.

The Network hosted its first annual International Offshore Wind Partnering Forum (IPF) in 2014. It has since become the leading technical conference for offshore wind in the U.S.

In 2015, the Network’s Board of Directors voted unanimously to expand the Network’s reach and efforts to focus on helping build a pipeline of offshore wind projects, stimulating collaboration across state boundaries to strengthen the evolving U.S. offshore wind industry and opening more business opportunities for Network members.

By request of the U.S. State Department, the Network was invited to speak on behalf of the U.S. offshore wind
WE EMPOWER MEMBERS WITH THE EDUCATION, TOOLS, AND CONNECTIONS NECESSARY TO PARTICIPATE IN THE DEVELOPMENT OF THIS BOOMING NEW INDUSTRY.

The Network was a featured panelist at the first invitation-only White House Summit on Offshore Wind on September 28, 2015.

The Network has become a well-respected organization as the only non-profit in the nation focusing solely on developing U.S. offshore wind and working on technical issues to remove barriers to its full-scale commercial development. With industry leaders participating as active members and serving on the Board, we have never been closer to making offshore wind in the U.S. a reality.

NETWORK STATUS & MEMBERSHIP

Over the past year, the Network has continued to grow in size and scope. Currently, membership stands at more than 150 members, with businesses specializing in maritime, manufacturing, transportation, engineering and construction industries, among others. Businesses range from sole practitioners to Fortune 100 companies. Since June 2016, 75 additional businesses have joined.

2016-2017 FEDERAL OFFSHORE WIND ACTIVITIES

Introduction of three offshore wind Senate Bills, S.3036, S.1102 and S.1672

BOEM Task force and Leasing activities in offshore wind areas adjacent to New York, North Carolina, South Carolina, Georgia, California and Hawaii

The release of an updated joint (DOE and DOI) National Offshore Wind Strategy

Preparation for updates, revisions and additions to U.S. design standards

DOE identified three projects from its offshore wind portfolio—the Atlantic City wind farm developed by Fishermen’s Energy, Lake Erie Energy Development Corporation’s Icebreaker project, and the University of Maine’s New England Aqua Ventus I project—that have demonstrated significant progress toward being successfully completed and producing power. These three projects have each received approximately $10.7 million in funding from DOE, and are each eligible for up to $40 million in additional funding in future project performance periods after reaching specific milestones, subject to Congressional appropriations and progress reviews.

2016-2017 U.S. OFFSHORE WIND MILESTONES

During the fall of 2016, the first offshore wind project off Block Island was completed with the successful installation of five 6MW GE turbines. Many Network members were involved, including Keystone Engineering and Montco Offshore Inc.

The Massachusetts offshore wind procurement legislation was signed into law, creating a 1600MW offshore wind power market over the next 10 years

Maryland’s Public Service Commission awarded ORECs to two offshore wind developers for Maryland projects

DONG Energy partnered with Dominion Energy to plan the construction of the 12MW Virginia Beach wind farm project

Massachusetts released an RFP for long-term contracts for offshore wind energy projects in June 2017
The Business Network for Offshore Wind (Network) actively helps grow and expand the U.S. offshore wind market. As the only U.S. non profit organization solely focused on offshore wind, the Network closely follows trends and market developments, helping members make informed business planning decisions.


By expanding into new markets, our goal is to seed the expansion of offshore wind initiatives within the public and private sectors. In 2015, the Network Board of Directors voted unanimously to expand the Network’s reach and efforts beyond Maryland borders to focus on helping build a pipeline of offshore wind projects and stimulate collaboration across state boundaries for the good of – not starting the industry – but strengthening the evolving U.S. offshore wind industry. The purpose is to create a U.S. offshore-based wind supply chain that can participate in all domestic wind farms as well as take a leading role in the global offshore wind markets.

**MARYLAND: 368 MW**

Through funding from the Town Creek Foundation, the Network hired outside legal counsel Alexander & Cleaver, and was directly involved in the Maryland Public Service Commission (PSC) process by submitting direct written and oral expert testimony, coordinating events with both developers, and implementing a public relations campaign focused on the economic benefits of the projects’ approval.

On May 16, 2017, the Maryland Public Service Commission (PSC) approved financing for two offshore wind projects totaling 368MW of offshore wind. In its Order, the PSC found both projects, US Wind’s 248MW project, and Skipjack LLC’s 120MW project, satisfied the offshore wind statute, subject to numerous conditions, some of which are discussed below. The Commission explained that they chose the “all-in” approach, which “signals to Maryland’s neighbors and the world that Maryland is ready to serve as a regional hub and a substantial base for additional offshore wind development up and down the East Coast, thus, yielding sustained job growth for many years to come.”

The Order noted the argument by the Network that “selection of both projects provides greater competition and opportunities for Maryland businesses to participate in the development of the projects, and is likely to yield the lowest cost to ratepayers.” Furthermore, the PSC was persuaded by Network arguments that the Commission should not wait until costs decrease before approving a project, since “part of cost reduction comes from competition and efficiencies from a maturing supply chain which will not develop in Maryland without a project off the coast of the Delmarva Peninsula.”

The Commission also noted the “overwhelming support for an offshore wind project from citizens, businesses, and public officials,” and after looking at the evidence, gathered to discuss how to make the project a reality. In several areas in the Order, the Commission noted its strong belief in the economic and environmental benefits of the projects, as well as stating that approving both projects are in the public interest.

The PSC stated in the Order that “we accept as a condition to our Order the recommendation made by the Business Network that each Applicant use a port facility in Baltimore to serve as the marshaling port, and further, that each Applicant use a port facility in Ocean City to serve as the O&M port.” In addition, the Commission noted that “US Wind pledged a $51 million investment
in a steel fabrication plant and $26.4 million in upgrades at the Sparrows Point Shipyard area. Skipjack has factored in an expected $25 million investment in a Maryland steel fabrication facility.” The Commission adopted those proposals as conditions to project approval. It also required Skipjack to invest $13.2 million in upgrades to Tradepoint Atlantic or a similar Maryland port.

**NEW JERSEY: 3500 MW**

The Network’s New Jersey office moves us beyond Maryland borders. In August 2016, the Network set up a New Jersey office and hired a New Jersey State Director with seed funding from the Energy Foundation, DONG Energy and Atlantic Wind Connection.

New Jersey has a world class wind resource extending far off its shore that can deliver clean, reliable power right where it is needed, with potential to provide more than 4GW of offshore wind power. In February, the Network held a Members-Only panel to discuss the road map for offshore wind in New Jersey. NJ Assembly Environment & Solid Waste Chairman Tim Eustace and panelists Fred Zalcman of DONG Energy, Paul Rich of US Wind, Markian Melnyk of Atlantic Wind Connection and Paul Gallagher from Fishermen’s Energy discussed the future of offshore wind in New Jersey.

Next April, 2018, the Network’s International Offshore Wind Partnering Forum’s (IPF) conference will be held in Princeton, N.J. to demonstrate the Network’s commitment to growing the industry with a new administration.

**CALIFORNIA: FLOATING A NEW MARKET**

In March, the Network joined with Pacific Offshore Energies Trust (POET) to host a full-day symposium with offshore wind developers, businesses and Federal and State regulators to ensure offshore wind becomes part of California’s future clean energy mix.

The formal panels throughout the day provided insights into capturing the European downward pricing trends in offshore wind electricity; the importance of port infrastructure, availability of logistics for a planned supply chain roll-out; and examples of the training required for skills that match the demands of building offshore wind facilities. World-class offshore wind developers including Principle Power, Dong Energy, Statoil, Magellan Wind and Trident Wind defined their views and interest in advancing floating offshore wind along California’s coast.

UK’s Catapult described the shifting trends in Europe and the work presently underway to optimize efficiency. The National Renewable Energy Laboratory demonstrated its approach for quantifying the potential energy, which would be commercially connected to California’s grid. All participants remained mindful of the respect required to work with multiple existing users of California’s existing coastal waters including fisheries. A range of environmental specialists shared details that contrasted differences of West Coast and East Coast bird types as well as advanced technologies and monitoring practices that could be used to support utility-scale projects through California’s multiple environmental permitting process.
STATES ACTIVELY ENGAGED IN OFFSHORE WIND

5.4 GW OFFSHORE WIND

Maine, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia, North Carolina, South Carolina, Ohio, Oregon, California, Hawaii

**COMPLETED**
- RHODE ISLAND
  - Block island Wind Farm
  - America’s first offshore wind farm

**APPROVED**
- NEW YORK
  - Long Island Power Authority
  - 90 MW Project
  - Construction starting 2020
- MARYLAND
  - 368 MW Project

**PENDING**
- MASSACHUSETTS
  - 400-800 GW

**UPCOMING**
- VIRGINIA
  - 12MW
- OHIO
  - 30MW
- NEW JERSEY
  - 1100MW
- NEW YORK
  - 2400MW
OFFSHORE WIND BY THE NUMBERS

32% REDUCTION IN ENERGY COSTS FOR OFFSHORE WIND SINCE 2012

13¢ kWh U.S. OFFSHORE WIND PRICE

OFFSHORE WIND PRICES CONTINUE TO DECREASE. IN EUROPE, THE PURCHASE PRICE HAS FALLEN BELOW 5.5¢ / KWH

NEW YORK, MASSACHUSETTS, NEW JERSEY, AND MARYLAND ARE COMMITTED TO BUY 5.46 GW OF OFFSHORE WIND POWER

13 NEW US WIND ENERGY AREAS LEASED EQUALING: 15 GW OF OFFSHORE WIND POWER
One of the most important aspects of the Network is providing relevant industry information to our members. Through our connections with government organizations, developers and industry leaders, we are able to provide members with the most up-to-date industry news, giving them the competitive edge necessary to thrive in the evolving U.S. industry. The Network releases a bi-annual State of the State Report, which catalogs and describes U.S. offshore wind projects and state policy activity to support the growing industry.

The Network promotes learning from Europe, which has a robust offshore energy industry and specific processes, procedures and requirements. Europeans have experience customizing solutions that meet local requirements and promote cultural diversity initiatives.

The Network hosts a series of educational and informational workshops to educate small businesses about the offshore wind supply chain and help them identify where they fit into it. The series also focuses on retooling, investment, partnering and timing.

Members and non-members on our mailing list receive a monthly newsletter highlighting recent developments in the industry and policy that are of interest to industry. Our newsletters are sent to more than 3,000 contacts and features content compiled or written by Network Members and staff.

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**GLOBAL OFFSHORE WIND 2017**

In June, the Network attended the Global Offshore Wind 2017 conference in London to connect with European companies and learn from offshore wind experts about the future of global offshore wind.

The Network attended panel sessions focusing on the critical aspects of offshore wind development. Sessions highlighted the declining costs associated with technology improvements, port infrastructure, overcoming installation challenges, coordinating with other marine industries and the future of floating offshore wind. The insights from the leaders in each of these aspects of offshore wind are invaluable and offer problem-solving tools based on real life experiences in the European industry. Showcasing European experts helps the Network provide key information to our members and ensuring the future of offshore wind in the United States.

**INTERNATIONAL OFFSHORE WIND PARTNERING FORUM (IPF)**

Our annual International Offshore Wind Partnering Forum (IPF) is the most robust technical conference on offshore wind in the U.S. Designed with the goal of creating and growing the U.S. offshore wind supply chain, the IPF features panels and presentations geared toward conveying technical information and facilitating business deals in the U.S. This year the Network hosted both the 2016 IPF in October and the 2017 IPF in April.

The 2016 IPF was held in Newport, Rhode Island - close to the nation’s first offshore wind farm. The Block Island Wind Farm was constructed in the fall of 2016 and operational by the time of the IPF. For the first time, Americans no longer need to travel to Europe to get a perspective of the magnitude of the offshore wind industry and the economic potential derived from offshore wind.

The Block Island Wind Farm Study Tour included two separate three-hour boat tours for IPF attendees, and MD and NJ policy-makers to visit the project and learn about the economic potential. Participants viewed the newest installation of wind turbines and met project leaders.
suppliers and developers. The Network designed the Block Island Wind Farm Tour brochure to illustrate the success of the project, featuring the companies who contributed and the role each played.

There was palpable optimism and energy at the 2017 IPF in Annapolis, Maryland, with industry members encouraged by recent legislative and technical developments in the U.S. offshore wind industry. More than 130 speakers offered insights and expertise that will help attendees participate in the emerging offshore wind industry. There were 90 panel discussions, including panelists from NYSERDA, BOEM, DOE, NREL, as well as industry leaders. Panels covered a variety of topics, such as Cost-Effective and Jones Act Compliant OSW Installation; Transmission Planning and Cable Circuit Design; Optimizing Floating Wind; Grassroots Supply Chain Engagement; and Leveraging Supply Chain Experiences from Block Island Wind Farm to Future Projects.

“The International Partnering Forum (IPF) has become a place for critical discussions and unprecedented networking opportunities that attracts experienced leaders in the wind industry. At this time of great potential in the market, it’s valuable for industry discussion to move the market forward.”

Kevin Pearce, Business Development Manager for U.S. Offshore Grid Access, Siemens

“The Network is the only organization that can guarantee the attendance of the right players in this rapidly growing U.S. market. You can be assured that this forum is run by the only organization whose sole focus is offshore wind energy and with it, the support and participation of developers and hundreds of supply chain member companies.”

Paul Rich, Director of U.S. Development, US Wind

The Network’s IPF by the Numbers

- More than 600 attendees from around the world
- More than 403 different companies leading the industry
- 93% decision-makers from senior management/executive level
- 90 technical presentations
- 10 networking opportunities
- 3 focuses: education and technical transfer, business partnering/supply chain networking/deal-making
- 1 the #1 offshore wind conference in the US
- 6 benefits of attending: 1 robust seminars with provocative discussions, 2 most current exchange of technology, 3 abundant networking opportunities, 4 deal-making, 5 supply chain matchmaking, 6 industry leaders sharing their knowledge
- 7 Windmatch sessions
WORKING IN OFFSHORE WIND
The Network held a webinar and panel in September 2016 called “Working in Offshore Wind” which covered topics relating to working in the offshore wind industry within the context of facilitating the U.S. offshore wind pipeline around the time that the Block Island wind farm was starting to function and Massachusetts committed to install 1,600 MW of offshore wind in the state over the next 10 years. Presentations were given by M&T Bank, US Wind, CSI Bonds, and Maryland Energy Administration; topics included logistics and supply chain management; typical interface management pitfalls; best practices for offshore wind farm installation; growth and diversification; and surety bonding.

PUBLIC EDUCATION
This year the Network broadened outreach to the public by embarking on a public educational campaign elevating the benefits of offshore wind and promoting its members as industry leaders. The Network participated in two educational opportunities planned by the Climate Coalition: a telephone town hall for 15,000-30,000 participants and a March webinar aimed to re-engage public citizens about offshore wind in Maryland.
PROMOTING THE OFFSHORE WIND STORY: PRESS & MEDIA RELATIONS

As the only U.S. non profit organization solely focused on offshore wind, the Network touts the economic benefits associated with the commercial-scale development of offshore wind. The Network has quickly emerged as the leading voice on offshore wind in the U.S., as well as a trusted source of information for the media and the public. The Network has provided national thought leader opinion pieces on the Trump Administration’s impact on offshore wind and responses to President Trump’s withdrawal from the Paris Climate Accord. Our goal is to ensure that objective analysis on the U.S. offshore wind market is presented and that unfounded speculation is not perpetuated.

THE 2016 NATIONAL OFFSHORE WIND STRATEGY PROJECTS AS MANY AS 34,000 OSW JOBS AROUND THE U.S. BY 2020, WITH THAT NUMBER EXPECTED TO GROW AS HIGH AS 181,000 BY 2050. ACCORDING TO THE DOE, DEPLOYMENT OF 86GW OF OSW HAS THE POTENTIAL TO SUPPORT 160,000 GROSS JOBS. AMERICA’S FIRST OFFSHORE WIND FARM, BLOCK ISLAND IN RHODE ISLAND, CREATED MORE THAN 300 JOBS. THERE ARE 13 WIND ENERGY AREAS IN DEVELOPMENT AMOUNTING TO 14.6GW OF CLEAN ENERGY OUTPUT, INCLUDING COMMITMENTS FROM NEW YORK, MASSACHUSETTS AND MARYLAND TO CREATE A PIPELINE OF 75,000 JOBS THROUGH PURCHASING 5.46GW OF OFFSHORE WIND POWER.

Our communication efforts promoting the national and local economic benefits of offshore wind to help increase support for market expansion include television, news articles, trade and media journals, podcasts, op-eds, blogs, email blasts and earned media placement.
We call ourselves a Network for a purpose: we promote cooperation, collaboration and partnering among our members. The offshore wind industry functions at a more optimal rate when we all work together.

The Network works with many cooperating partners such as the Maine Offshore Wind Initiative, U.S. Bureau of Ocean and Energy Management, U.S. Department of Commerce, National Renewable Energy Laboratory and United Kingdom Trade and Investment, along with state, regional, national and international agencies and organizations. We utilize these vital partnerships as both communication channels and avenues for promoting and securing resources for our members.

In 2016, the Network prepared a Member directory to help facilitate connections. Consisting of member company profiles with company description, contact information, website and specialization, the directory is available on our website and was given to developers, Tier I suppliers and others seeking business partners.

During a “share day” organized by the Network between industry members and Maryland’s offshore wind developers Deepwater Wind and US Wind, 150 attendees had the opportunity to share their corporate profile with the developers and ask questions about the developers’ plans for using Maryland-based companies and their vision for how offshore wind is expected to ramp up in the coming years. Members were able to provide the developers with rapid and comprehensive insight into the variety and full spectrum of corporate capabilities that are available for mid-Atlantic offshore wind deployment. The Network connected the developers with a list of our supply chain members and more than 80 in-state aerospace and defense companies, many of which could be a local resource for the offshore wind developers.

CARBON TRUST AND THE NETWORK WORK TOGETHER TO HELP ACCELERATE NORTH AMERICA’S OFFSHORE WIND AMBITIONS

In late 2016, Carbon Trust and the Network partnered to signed a Memorandum of Understanding (MoU) to support the development of the North American offshore wind market. Through the collaboration, the Network and Carbon Trust supported the U.S. offshore wind market by utilizing Carbon Trust’s successful Offshore Wind Accelerator model of cooperation in Europe. In forming the union, Carbon Trust was able to contribute their expertise to North American projects that matched their experience. Partnering with Carbon Trust also offered the Network and affiliates more technical experts to call upon, thereby expanding the technical capacity and expertise of the Network.

The GARC rescue boat, developed by Maritime Applied Physics Corporation, was developed for open-ocean rescues of pilots, crew, and passengers of aircraft that go down a long distance from shore.

THROUGH THE NETWORK, IP SUBSEA PARTNERED WITH GEOMATX AND MARITIME APPLIED PHYSICS CORPORATION TO PURSUE MORE COST-EFFECTIVE SURVEYS OF OFFSHORE INFRASTRUCTURE. USING TECHNOLOGY DEVELOPED BY MAPC, IP SUBSEA UTILIZED AUTONOMOUS UNDERWATER VEHICLES AND SURFACE VESSEL TECHNOLOGY WHICH REMOVES HUMAN ERROR AND COSTLY MAN-HOURS OF SUPPORT AND LOWERS FUEL USAGE AND COSTS. IP SUBSEA IS “DEVELOPING A NEW APPLICATION TO CREATE A NEW MARKET FOR SUBSEA SURVEY USING UNMANNED SURFACE VESSELS,” SAID IPSUBSEA. “WE PLAN ON WORKING WITH OTHER NETWORK COMPANIES AS OUR DEMONSTRATION AND SERVICE WORK INCREASES.”
Clint Plummer, Deepwater Wind (far left), presented detailed insights into each of the steps the company took during the permitting, constructing, and commissioning of the Block Island Wind Farm project. Chris Van Beek, Deepwater Wind (middle right) went on to share the plans to develop the mid-Atlantic with staggered increments to match demand and business rate payers’ appetite. Paul Rich, US Wind (middle left) underscored a fundamentally different approach; with a more accelerated goal for scale to attract and to anchor original equipment manufacturers (OEMs) such as JDR cables from the UK, and possibly Heavy Metal Fabricators from Rhode Island. Sam Beirne, Maryland Energy Administration (far right), concluded the formal part of the program by providing a history of the OREC; an overview of the process; and assistance programs for small businesses, minority-owned businesses and the specific industry skills needed.
Research and development is critical to the U.S. offshore wind industry and leads to innovations that lower the cost of offshore wind energy and help encourage commercial-scale development.

The Network brings academic researchers together with industry to discover solutions to real-world industry problems, encourages the development of new technology, and foster a U.S. leadership position in innovation.

"The models [the Network is] developing for collaboration across sectors, meaningful linkages with overseas partners and visionary technological advances is noteworthy. I am particularly impressed with your commitment to a ‘code of conduct’ expected of board members that serves to reinforce trust throughout the development process.

Glenn Page, President/CEO, Sustainametrix

NATIONAL OFFSHORE WIND RESEARCH AGENDA

In 2017, we collaborated with Massachusetts Research Partnership (POWER-US) and NOW-I-C on the development of a National Offshore Wind Research Agenda. The scale is estimated to be $400-500M, containing a network of physical laboratories, cyber infrastructure and research funding sufficient to facilitate a multi-disciplinary, systems-level framework for innovation.

FLOATING LiDAR

In December, the Network attended a workshop focused on LiDAR (Light Detection and Ranging) technology in Scotland. The discussion was robust and presented key areas of concern, such as site resource characterization and power curve verification. Although the conference ended without any concrete conclusion on how to proceed with LiDAR, the participants were intrigued and eager to learn more about the technology.

The U.S. Department of Energy (DOE) accepted on technical merit our proposal to be a potential “bailee” of a WindSentinel, making us eligible to receive the floating AXYS WindSentinel as soon as we secure funding.

U.S. OFFSHORE WIND STANDARDS

The Network attended the Spring 2016 Technical Workshop on the State of Practice for Structural Modeling of Offshore Wind Energy Generation Systems in the U.S., hosted by BOEM in collaboration with the National Renewable Energy Laboratory (NREL). As a direct outcome of this workshop, a new collaboration was established between the DOE, NREL, BOEM, the Bureau of Safety and Environmental Enforcement (BSEE), the Business Network, and others. The Network is a subcontractor in this initiative, working with NREL to develop a new suite of offshore standards and guidelines that clarify requirements for developers and original equipment manufacturers in U.S. waters and allow U.S. regulators to adopt best industry practices. The end goal is to implement unambiguous national standards and guidelines for offshore wind that are recognized under the American National Standards Institute (ANSI) rules.

The Network is working with NREL to form and manage the Offshore Wind Technical Advisory Panel (OWTAP) and four new technical working groups: Maintenance of AWEA OCRP 2012; Floating Offshore Wind Turbines in U.S. Waters; Geo-technical Data Requirements for U.S. Waters; and Met-Ocean Data Requirements for U.S. Waters. The National Offshore Wind Standards Subcommittee and the underlying working groups rosters will be finalized by the end of 2017. The respective working groups will begin working on researching and writing the offshore wind standards in 2018, with the Network managing the process and engaging with the subcommittees over the course of the project.
FIVE MARYLAND SCHOOLS ORGANIZED UNDER THE NOW-I-C PROGRAM

Through our National Offshore Wind Innovation Center (NOW-I-C) program, we have helped bring together five Maryland universities to focus on several specific academic interests of their composite members. The program involves the collaborative effort of Johns Hopkins University, University of Maryland College Park, University of Maryland Baltimore County, University of Maryland Eastern Shore and Morgan State University, each of which specializes in its own field of research.

The Johns Hopkins WINDINSPIRE program, a NSF-supported international collaboration, addresses (primarily through computer simulations) the pressing research questions that arise when adding inherently intermittent wind energy sources to the grid. WINDINSPIRE facilitates international research experiences in Denmark, Switzerland, Netherlands, Spain, Belgium and Norway, along with U.S. researchers at Johns Hopkins, Texas Tech, Smith College, the University of Texas at Dallas and the University of Michigan.

At University of Maryland College Park, researchers are making efforts to understand the value of integrated turbine health monitoring systems to reduce the cost of offshore wind operation and maintenance through its MOWER-funded research. This work, which provides the kinetic starting-point for the development of NOW-I-C, is beginning to achieve international recognition.

Morgan State University brings dedication to understanding the economic impact of wind turbines on the offshore recreational fishing industry, and the Morgan PEARL, a 22,000 square foot laboratory on part of the Chesapeake Bay watershed near the Patuxent River, which promotes better management and protection of coastal ecosystems.

The University of Maryland Baltimore County contributes an engaged student body that has rallied in Annapolis for wind energy, as well as their Atmospheric Profiling for Advancing Offshore Wind Research (U-SPARC) team to the NOW-I-C team. U-SPARC is striving to develop methodologies for more accurately characterizing an offshore wind project’s economic viability pre-construction and address the inherent under-performance bias of wind.
MICHAEL MOSS, MOSS MARINE USA, INC.

Last year at the 2016 International Offshore Wind Partnering Forum, we provided special recognition to Michael Moss. Michael has been involved with the Network for more than three years and has helped lead this organization as it grows in importance as a national leader. His technical knowledge and commitment to this industry really stands out.

His enthusiasm is contagious and he is always willing to make partnering connections, promote the Network and serve as an offshore wind ambassador. We are pleased to recognize him in appreciation of his time and commitment to establishing a U.S. offshore wind industry.

OUTSTANDING ACHIEVEMENT IN OFFSHORE WIND:
PAT HADDAD, MASSACHUSETTS STATE REPRESENTATIVE

The Business Network for Offshore Wind Outstanding Achievement In Offshore Wind is awarded to a recipient who demonstrates outstanding leadership, inspiration, and unwavering perseverance resulting in significant contributions to the expansion of offshore wind in the United States.

In 2016 the Network recognized Patricia Haddad, Speaker Pro Tempore of the Massachusetts House of Representatives. The Speaker Pro Tempore led the legislative initiative to pass the Massachusetts Energy Diversity Act (H. 4568). This is the first state legislation that includes a specific carve-out for offshore wind at a scale necessary to create a viable market in the U.S. The Network commends Speaker Pro Tempore Haddad for having the vision and commitment to set the Nation on a path toward commercial-scale offshore wind development.
MEMBER OF THE YEAR: KEYSTONE ENGINEERING

The Business Network for Offshore Wind recently recognized Louisiana-based Keystone Engineering’s long-standing contributions to the offshore wind industry with the 2016 Business Network for Offshore Wind Member of the Year award.

The Business Network Member of the Year Award is presented to the member company that provides technical input into developing solutions that shape government programs and standards setting, volunteers time and resources, and engages in partnerships to advance the U.S. offshore wind industry.

Keystone Engineering started 28 years ago as a business servicing the oil and gas industry. Over the years, the company came to see how the insights and experience they had in oil and gas could be relevant to the newly emerging offshore wind sector.

Keystone devoted its expertise and commitment as a pioneer to the U.S. offshore wind industry through its initial work with Long Island, then winning recognition from Carbon Trust with its innovative twisted jacket. Keystone’s reputation led to its involvement in the Cape Wind project, today’s successful Block Island project led by Deepwater Wind, the planned projects of Fishermen’s Energy in New Jersey, and the potential Virginia Demonstration Project.

“Keystone has demonstrated its innovation, vision, diversification and resilience to early setbacks in the U.S. offshore wind industry, and has helped the nation by matching design to meet the abilities of the growing U.S. supply chain,” said Liz Burdock, Executive Director of the Business Network for Offshore Wind.

On hand to accept the award was Rudy Hall, Keystone’s Co-Founder and Ben Foley, Keystone GM of Offshore Renewables. Hall said of the award, “We are honored to receive this recognition from the Network. The Keystone team has worked diligently to help make offshore wind a reality in the U.S. The timing and location of the award is especially significant, as just 25 miles away, the first offshore wind farm in the U.S. is preparing to come online next month and provide power to Block Island. Keystone designed the jacket foundations for the groundbreaking project, which is heralded as the turning point for offshore wind in the U.S.”

Previous recipients of the award include Cianbro and Apex Companies, LLC.
FUNDING NETWORK OPERATIONS
The Network is a non profit 501(c)(3) organization dedicated to the advancement of the U.S. offshore wind industry and supply chain. Your corporate support through membership dues and sponsorship is vital to carrying on our work and the achievement of our collective goals.

REVENUE SOURCES
The Network received revenue from the following sources for the fiscal year ended June 30, 2017:

FINANCIAL METRICS

- Sponsorship Revenue: 37.9%
- Grant Revenue: 3%
- Membership Dues: 4.3%
- Private Corporate Funding: 13.1%
- Registration Fees, Net of Direct Event Expenses: 35.9%
- In Kind Donated Services: 5.8%
The Network works for you—building industry supply chain clusters, connecting businesses and advancing the industry. As we work toward self sustainability and grant revenue diminishes, your membership becomes more and more significant in enabling us to carry out our mission and support your business.

**PROJECTED GRANT REVENUE**

Projected grant revenue in future years compared to the year ended June 30, 2017:

**USE OF FUNDS**

The following represents our use of funds to accomplish Network goals:
NETWORK MEMBERS
(AS OF OCTOBER 13, 2017)

Aeolus Energy Group
Alpha Energy, LLC
Alpine Ocean Seismic Survey, Inc.
Amerigo Offshore, LLC
Anne Arundel Community College
Apex Companies, LLC
ARCON Welding Equipment, LLC
Atkins Global
Atlantic Wind Connection
Atlantic Wind Transfers
AWB Engineers
AWS Truepower, LLC
AXYS Technologies Inc.
BITHENERGY
Blank Rome LLP
Blue Water Shipping
BMT Nigel Gee Ltd.
BVG Associates, Inc.
Caldwell Marine International, LLC
Cathie Associates
Chet Morrison Contractors, LLC
CIANBRO Corporation
CohnReznick, LLP
Cook Maritime Finance
Cowi North America
Creadis Inc.
Crew Boat Chesapeake
Crowley Marine Solutions
CSI Bonds
DeepOcean
Deepwater Wind
Delmar Systems, Inc.
DHI
DNV-GL
DONG Energy Wind Power
Durocher Marine, Division of Kokosing Industrial, Inc.

E.ON
Ecology and Environment, Inc.
Ecosse Subsea Systems
EDF Renewable Energy
EEW Group
EnerG Magazine
Energy Industries Council
Environmental Defense Fund
Fay i+icon USA Company
Fishermen’s Energy
FoundOcean
Fugro Marine GeoServices, Inc.
Gardit A/S
GE Renewable Energy
GEOmatx Surveying and Mapping
Global Carbon-Cats Ltd.
Greenworks Partners, LLC
GTA, Inc.
GustoMSC
H.U. Dove
Harbor East, LLC
Hawser Off Port Services
Hobbs & Towne, Inc.
Houlder Ltd.
HR Wallingford
Huisman US Inc.
Humanim
Hytoc
International Brotherhood of Electrical Workers
JDR Cable Systems Ltd.
John S. Connor, Inc.
Johns Hopkins University
Keystone Engineering, Inc.
Lake Erie Energy Development Corporation
Law Office of Todd Sumner
LM Wind Power
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PETER SANDBORN University of Maryland
DR. LORRY WAGNER LEEDCo
JOEL WHITMAN  Whitman Consulting Group
(from left to right) Derek Stilwell, Liz Burdock, Cindy Truitt, Jim Baeder, Elia Golfin, Kevin Pearce
WHY WE LOVE
THE NETWORK & OFFSHORE WIND

Offshore wind is a key renewable energy resource with a bright future in the United States. As part of the Network staff, I am able to support this new industry while learning from the experiences of our Network in business, renewable energy, and offshore wind.

Elizabeth Barminski, Working Groups Coordinator

Offshore wind is a proven technology that generates solid jobs, shows care and respect for the earth, and gets more and more innovative every year. Our members are remarkable and visionary—I love meeting, supporting, and working with people who are passionate about growing this industry in the United States.

Courtney Malvik, Art Director

I like working for the Network because I’m a lifelong environmentalist. I’ve known since about 2006 that climate change is the biggest environmental challenge facing the planet—and I wanted to do something about it. As a part of the clean energy revolution, offshore wind is our best chance to provide millions of homes on the east and west coasts with non-polluting, renewable electricity, while at the same time building a new industry and creating tens of thousands of local jobs that can’t be outsourced.

The Network gives me the position to use my communications and policy skills to get “steel in the water” faster, and I like our organization’s focus on the business side of offshore wind, because, as John Kerry said, “Clean energy is one of the greatest economic opportunities the world has ever seen.”

Bill O’Hearn, NY & NJ Communications / Outreach Manager

Offshore wind energy…what’s not to love about it? This form of energy is kind to the earth, produces jobs, generates revenue for the financial sector and is beautiful.

Lori Rugh, Events Coordinator

Offshore wind is an industry that requires the assets, skills and knowledge of so many varying sectors, which combined brings clean energy from the ocean directly to the load.

Ross Tyler, Strategy & Development Advisor
NETWORK STAFF

HILARY BALLIN  Marketing
ELIZABETH BARMINSKI  Working Groups Coordinator
LIZ BURDOCK  Executive Director
TAYLOR DeVILLE  Communications
MATT GRELLER  NJ Director
KELSEY HESS  Marketing
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COURTNEY MALVIK  Art Director
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REISA OTTO  Office Manager / Member Advocate
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LORI RUGH  Events Coordinator
ROSS TYLER  Strategy & Development Advisor