

Expert Dialogue

Realizing the Promise of Offshore Wind



OurEnergyPolicy (OEP) hosted two discussions on policies around the emerging offshore wind market—first, an online discussion led by **Laura Morton** of the American Wind Energy Association with comments from energy professionals from across the country, and second, a live panel discussion in New York City as part of OEP’s Energy Leaders Luncheon Series. This summary features select excerpts and comments from both discussions. Access this document online at <https://bit.ly/3dzsXhi>.

Recommended Actions to Realize the Potential of Offshore Wind

Experts recommended the following actions:

1. Build out and optimize transmission lines. (more detail: pages 3–4)
2. Streamline offshore wind project approvals on the federal, state, & local levels. (pages 4–5)
3. Extend the federal offshore wind tax credit. (page 6)
4. Establish state policies to enable industry growth. (page 7)
5. Continue to fund research and development of offshore wind technologies. (page 8) (and see More on Offshore Wind Technologies: Hurricane Resilience, pages 8–9)

Things to Know About the Offshore Wind Industry



By 2030, the United States is projected to be the fourth largest offshore wind market in the world, said **Rudolph Wynter**, President and COO of Wholesale Networks and U.S. Capital Delivery for **National Grid**, in the live discussion. “It’s really going to be a sea change in how we generate electricity,” he said. The largest offshore wind market is currently the United Kingdom.

There is currently only one operating commercial offshore wind farm in the United States (the Block Island Wind Farm launched in 2016 off the coast of Rhode Island), but about 30 more projects are under development. “As the system changes...we’ve got to look at new technologies,” said **Bob Catell**, Chairman of the **National Offshore Wind Research and Development Consortium**.

Clint Plummer, Head of Market Strategies and New Projects for the U.S. division of **Ørsted** (now CEO of Ravenswood Generating) said in the live discussion that although offshore wind is not a “silver bullet” solution that works everywhere, it is becoming the lowest-cost option. It is especially becoming the best option in some regions where other forms of generation are difficult and

expensive to operate, for example, in densely populated areas in the Boston to Washington, D.C. corridor. “We think that over the coming next 10–15 years, [offshore wind] will become the low-cost, new built resource,” he said. “Offshore wind is, in certain cases, already cheaper than building anything else.”

Plummer said the Northeast coast has a “unique confluence of factors” that makes offshore wind one of the more cost-effective forms of new power generation: (1) electric demand, (2) strong wind in the American Northeast, referred to by some meteorologists as the “Saudi Arabia of wind,” and (3) a shallow, flat continental shelf that allows cost-effective wind farm construction. Ørsted—the world’s largest owner, developer, and operator of offshore wind, and current owner of the Block Island Wind Farm—is currently developing a 3-gigawatt (GW) U.S. portfolio. “[The industry] has got a lot of fundamental reasons why it makes sense,” Plummer said. “Now there are just some policy challenges that have to be unlocked.”

In the online discussion, **Laura Morton**, Senior Director, Policy and Regulatory Affairs for Offshore Wind at the **American Wind Energy Association**, called offshore wind the “next major source of American energy” and emphasized its many potential benefits as the industry grows and matures. She said offshore wind can generate clean electricity near many of the country’s largest population centers, revitalize coastal and port communities, and create thousands of jobs and a new U.S. supply chain. Offshore wind can provide opportunities even to oil and gas workers along the Gulf Coast. “However, policies still need to be enacted in order to realize these opportunities and ensure the continued growth of the emerging industry,” she said.

While European countries typically have a consolidated single permitting and regulatory framework, new wind projects in the United States need to go through multiple federal, state, and local approvals. Plummer said they needed more than 20 approvals for the Block Island Wind Farm.

See more about discussion participants on page 9.

Active Legislation

- [Extend the Investment Tax Credit \(30% for offshore wind through 2025\):](#)
 - **Offshore Wind Incentives for New Development (WIND) Act, S.1957** (Sen. Markey [D-MA] + 4 cosponsors, June 2019), **H.R.3473** (Rep. Langevin + 31 cosponsors, June 2019)
 - **Incentivizing Offshore Wind Power Act, S.1988** (Sen. Carper [D-DE] + 12 cosponsors, June 2019), **H.R.4887** (Rep. Pascrell [D-NJ]-9] + 3 cosponsors, Oct. 2019)
- [Offshore Wind Jobs and Opportunity Act, S. 1769](#) (Sen. Markey [D-MA] + 5 cosponsors, June 2019), **H.R.3068** (Rep. Keating [D-MA-9] + 33 cosponsors, Jan 2020)
- [Offshore Wind for Territories Act, S.499](#) (Sen. Cassidy [R-LA] + 1 cosponsor, Feb. 2019), **H.R.1014** (Rep. González-Colón [R-PR] + 4 cosponsors, Feb. 2019)
- [Expand revenue sharing for offshore wind, S. 3485](#) (Sen. Whitehouse [D-RI] + 2 cosponsors, March 2020)
- [Wind Energy Research and Development Act of 2019, H.R.3609](#) (Rep. Tonko [D-NY-20] + 15 cosponsors, July 2019), **S.2660** (Sen. Smith [D-MN] + 4 cosponsors, Oct 2019)

Recommended Actions to Realize the Potential of the Offshore Wind Industry

1. Build Out and Optimize Transmission Lines

Build Out Transmission Lines

“The transmission network has largely been built based on where the fossil fuel generation is. None of that was offshore. So obviously we’re going to see massive amounts of power flows change...whether it’s with a lot of onshore wind...or the emergence of offshore wind.

One of the things we’re doing [at National Grid is] **comprehensive analysis of transmission networks**—our own and others—around the region to look for opportunities where we can add value. **We think we can add value in building out the additional transmission that is needed.** We think we can add value in competing for additional transmission that needs to get built. And we think there is going to be a large transmission need and build that is going to be there.



Rudolph Wynter
National Grid,
Wholesale
Networks and
U.S. Capital
Delivery

One of the other things we’re doing is speaking to all the stakeholders— New York ISO [Independent System Operator], New England ISO, and regulators—**about the need to make these decisions early.... We always want our infrastructure to be an enabler and not an inhibitor....** It starts with analyzing the entire transmission networks that we own, as well as others, to understand where we think there are going to be some bottlenecks and then shar[ing] that with some decisionmakers.” [Event Recording](#)

Wynter says he sees the need for new construction to connect radial transmission lines from offshore wind to onshore grids and work to debottleneck and remove space constraints on existing transmission networks.

Drive More Power Through Existing Transmission Lines

“A tremendous amount of work has to be done to debottleneck and remove constraints on the existing transmission network.... [We] can solve that constraint by building out a lot of transmission. But that’s going to be on the backs of end-use customers.... We’re looking at the technologies like dynamic line rating technologies and other grid-enhancing technologies....” [Event Recording](#)

Wynter said National Grid is piloting four different vendors with dynamic line rating technologies and looking at technologies that can help optimize existing assets and deliver more power through a conductor on a transmission line.

- [Rudolph Wynter](#), *President and COO of Wholesale Networks and U.S. Capital Delivery for National Grid*

Build Out and Optimize Transmission Lines (cont.)

Plan Transmission on the State Level



Kevin Knobloch
New York
OceanGrid LLC at
Anbaric

“One solution that you’ll hear us advocating for in Anbaric is we should have a planned approach to an open access transmission grid. Long-standing FERC policy [for] onshore [wind farms] **separates ownership and development of transmission and generation**, and it has worked well. Going back to FERC Order 888, 1996 - Governor Cuomo, back in January [2019], as part of the state of the State, asked his team to **start thinking about planned transmission....”** [Event Recording](#)

“...Going back to 2005, the Texas State Legislature, in its wisdom, developed **competitive renewable energy zones**, planned transmissions from their wind fields first, and held a **transmission-only procurement**. And today, it’s no accident that Texas has one fourth of all installed wind capacity in the country, produced 25,000 jobs, \$370 million in annual payments to ranchers and farmers and in state-level taxes, \$46 billion in capital investment.” [Event Recording](#)

Knobloch noted that in contrast, transmission system limitations have hindered Maine’s ability to achieve its renewable energy targets. He said both New Jersey and Massachusetts are looking into how they can move planned transmission forward in their states.

- [Kevin Knobloch](#), *President, New York OceanGrid LLC at Anbaric*

2. Streamline Offshore Wind Project Approvals

Federal Government Should Continue Processing Projects Expeditiously



Laura Morton
American Wind
Energy
Association

“The federal government should continue processing offshore wind project plans in an expeditious manner consistent with the Administration’s directives and conduct new lease auctions. All capital-intensive energy industries need regulatory stability. A **timely, transparent and predictable regulatory environment is critical** to providing business certainty and securing tens of billions of dollars of additional investment in the United States....” [Full Comment \(Discussion Prompt\)](#)

“There is indeed an **opportunity for increasing the efficiency and effectiveness of regulatory approvals for offshore wind projects....** the **involvement of local communities** [is] critical for the success of any project....” [Full Comment](#)

- [Laura Morton](#), *Senior Director, Policy and Regulatory Affairs for Offshore Wind, American Wind Energy Association*

AWEA and the University of Delaware’s Special Initiative on Offshore Wind produced an [Offshore Wind Public Participation Guide](#) to help the public engage in the existing federal feedback process for U.S. offshore wind development.

Streamline Offshore Wind Project Approvals (cont.)

Elliot Taubman
Commissioner of
the Block Island
Utility District

Combine State and Federal Approvals, Involve Local Communities

“The state and federal approvals should be combined in no more than two approvals, and the record in state and federal approvals should be used in the other. As was done in Rhode Island, an intense **environmental review** could be done at the state level and if possible, at the regional level. **Land-based approvals should include local communities,** but they can be overruled by state findings in which localities can participate....” [Full Comment](#)

Taubman said that prompt regulatory approvals were an important part of what made the project work at Block Island, the first U.S. offshore wind project.

Set Reasonable Time Limits

“Reasonable time limits for approvals should be set. If there is a basis for it, **fees can cover the cost of regulatory approvals** so the proposed developers can justify the governmental staff time spent on their projects.” [Full Comment](#)

- [Elliot Taubman](#), *Commissioner of the Block Island Utility District*



Adam Pool
Member, Clean
Energy Venture
Group

Streamline & Standardize Review Process

“The choice of location should be optimized for the wind and the costs of generation, and if that happens to be on shore or offshore, the **review process should be streamlined to facilitate that optimal location.** The regulatory structure for siting energy plants should be standardized for as much of the process as possible, taking note that customization will need to occur for marine or terrestrial aspects and for the type of generation....” [Full Comment](#)

- [Adam Pool](#), *Member, Clean Energy Venture Group*



Clint Plummer
US at Ørsted

Many Permits Not Necessarily a Bad Thing

“The U.S. is a unique environment. And unlike Europe, **we don’t have a consolidated single permitting and regulatory framework...** When we developed and built the Block Island Wind Farm, we had to get over 20 different federal, state, and local approvals.... But, nonetheless, we are building massive infrastructure in the public trust, and it’s incumbent on us and our regulators to be able to demonstrate to the public that that trust is well founded....

It’s our job as responsible developers to be out front of this.... It’s not a bad thing. **We end up with better projects when we get his input,** & the projects will be designed and built & operated better with that degree of scrutiny.” [Event](#)

Plummer said there is no one thing that can be done to debottleneck the process at the federal government because there are multiple agencies involved.

- [Clint Plummer](#), *Head of Market Strategies and New Projects, US at Ørsted*

3. Extend the Federal Offshore Wind Tax Credit

Two bills in Congress would extend the investment tax credit (ITC) for offshore wind at 30% of the project's total value: **The Offshore Wind Incentives for New Development (WIND) Act (S. 1957, H.R. 3473)** (Senator Markey [D-MA], Senator Whitehouse [D-RI], Congressman Langevin [RI-02]); and the **Incentivizing Offshore Wind Power Act (S. 1988, H.R. 4887)**, (Senator Carper [D-DE] and Congressman Pascrell [D-NJ]-9]. The bills would extend the ITC for six or eight years, respectively, and they differ in how they are positioned in the tax code. A spending bill passed in 2019 extended the ITC for solar power and onshore wind but not for offshore wind and energy storage technologies.



Laura Morton
American Wind
Energy
Association

Tax Credit Can Establish Parity for Offshore Wind

"The American Wind Energy Association supports **energy tax policy that establishes parity between technologies to deliver clean energy at the lowest cost to consumers**, and we see several legislative options to get there.

Short of a broader agreement on energy tax policy, consumers would benefit from a **suite of policies like the offshore investment tax credit**.... States along the East Coast have made substantial offshore wind commitments, but tax parity and regulatory certainty are necessary to bring these pledges to fruition."

[Full Comment \(Discussion Prompt\)](#)

- [Laura Morton](#), Senior Director, Policy and Regulatory Affairs for Offshore Wind, American Wind Energy Association



Scott Sklar
The George
Washington
University

Tax Credit Would Accelerate Offshore Wind Deployment

"**Expanding and increasing the wind tax credit for offshore wind makes sense** to accelerate deployment, which will directly lower costs [and] increase jobs, yielding reliable stabilized electricity costs without pollution, greenhouse gas emissions, or loss of fresh water....

The United States and the world need to embrace as many advanced energy technologies as possible—especially ones that *do not* require fresh water, have wastes, have globalized fuels, and also produce greenhouse gas emissions.

Offshore wind meets every one of those requirements—its time has come." [Full Comment](#)

- [Scott Sklar](#), Energy Director, Environment & Energy Management Institute, The George Washington University

Elliot Taubman
Commissioner of
the Block Island
Utility District

Tax Credit Was Helpful for Block Island

"Having been involved in the offshore wind project off Block Island, which is the first working offshore wind project in the United States, I think the [three] things that made the project work was the political joining of the two parties and the unions in Rhode Island and the prompt regulatory approvals, and **the tax credit.**" [Full Comment](#)

- [Elliot Taubman](#), Commissioner of the Block Island Utility District

4. Establish State Policies to Enable Industry Growth

Establish State Policies to Allow Long-Term Contracts



Erik Peckar
Vineyard Power
Cooperative

"Vineyard Power Cooperative, based on the island of Martha's Vineyard in Massachusetts and the local community partner of Vineyard Wind, has developed a **new state policy, [Community Empowerment](#), that would empower cities and towns** in the Commonwealth to enter into **long-term PPAs** [power purchase agreements] with specific renewable energy projects of the community's choice. **Given one of the main barriers to renewable project development includes the need for long-term contracts with creditworthy buyers...**Community Empowerment, an enabling piece of legislation, pairs developers of renewable energy projects with local communities wanting to stabilize energy prices and purchase more renewable energy.... **Mechanisms that allow for these long-term contracts to occur with individual towns currently do not exist without** the town or developers taking on a certain amount of risk." [Full Comment](#)

- [Erik Peckar](#), General Manager, Vineyard Power Cooperative

Ensure that Utilities' Integrated Resource Plans Are Competitive



Henry Goldberg
Consultant

"It is critical that **states considering major introduction of offshore wind projects**, such as New York, New Jersey, Massachusetts, and California, are **looking at whether their utilities' IRP [integrated resource plan] processes are maximally-competitive for all clean energy options** including offshore wind and are considering key federal government policy scenarios necessary to reduce national net greenhouse gas emissions towards zero by mid-century.... **This is the largest barrier to overcome for offshore wind** or other clean-energy infrastructure, and will have a much **more significant impact than offshore wind tax credits.**" [Full Comment](#)

- [Henry Goldberg](#), Consultant, Independent

State Policies Drive Many Offshore Wind Procurements



Laura Morton
American Wind
Energy
Association

"The **processes to procure offshore wind in the Northeast varies by state.** In some cases, the **state itself is issuing the solicitations** and making the procurement decisions. In other states, **the utilities are doing so.** But, in all cases, the **procurements are happening as a result of state policies** that requirement procurement of offshore wind and other zero/low-carbon resources...." [Full Comment](#)

- [Laura Morton](#), Senior Director, Policy and Regulatory Affairs for Offshore Wind, American Wind Energy Association

5. Continue to Fund Research and Development



Clint Plummer
US at Ørsted

"We're not nearly funding enough research & development on this because offshore wind is just so big. The physical characteristics of this push the limits of modern material science. [We have a wind turbine so large that] you can literally fit 3 Airbus A380s inside of it.... **The blade tips approach the sonic barrier.** So, it's just **really big stuff.** There needs to be a lot of research done on continuing to advance this. Big investments [by] NYSERDA [the New York State Energy Research and Development Authority] and by the Department of Energy are starting to help move that forward." [Event Recording](#)

- [Clint Plummer](#), *Head of Market Strategies and New Projects, US at Ørsted*

*For remarks from **John Williams** and **Matt Vestal** from NYSERDA on their efforts to advance offshore wind, see the [event summary and recording](#).



Robert Catell
National Offshore
Wind Research
and Development
Consortium

"We're hoping industry players will invest in more research and development so that this effort will continue into the future, because it's got to be continuous. As the system changes... we've got to look at innovation; we've got to look at new technologies." [Event Recording](#)

- [Robert Catell](#), *Chairman, National Offshore Wind Research and Development Consortium.*

Catell said the [National Offshore Wind Research and Development Consortium](#) is working from a three-pillar roadmap for offshore wind technologies: (1) building better and cheaper, (2) how to make modeling of offshore wind power more efficient, and (3) developing the delivery system for the industry.

More on Offshore Wind Technologies: Hurricane Resilience

Wind Farms Can Withstand Storms



Robert Hobson
NKT (Cable Design)

"The [first installed floating wind farm](#) was installed in Scotland and **has already been through two hurricanes**.... Whilst the wind turbines shut down for safety reasons during the worst of these winds, they automatically resumed operation promptly afterwards. A pitch motion controller is integrated with the Hywind turbine's control system & will **adjust the angle of the turbine blades during heavy winds, which mitigates excessive motions** of the structure....

Offshore wind farms are designed for the environments that they will encounter, including hurricanes, and because they are properly designed, will survive the storms. The builders of these wind farms are not going to get financing unless the bankers know they will see their return." [Full Comment](#)

- [Robert Hobson](#), *Principal Designer, NKT*

More on Offshore Wind Technologies: Hurricane Resilience (cont.)



Clint Plummer
US at Ørsted

Wind Farms Are Built to Withstand Category 3 Hurricanes

"Here in the Northeast, the return period of a Category 5 hurricane is... in excess of 100 years, while the design life of a wind farm is something in the range of 30–35 years. So **in the case of our Block Island Wind Farm, the turbines are designed to withstand a Category 3 hurricane.** Anything above a Category 3, we simply have insurance for. If we get a Category 4 or a Category 5 and there is a catastrophic loss, then we have the insurance fund set aside to repair those, and that condition has been accounted for in our permit applications.... So anything less than that up to a certain speed is just a really good day for producing a lot of wind power." [Comment & Event Recording](#)

- [Clint Plummer](#), Head of Market Strategies and New Projects, US at Ørsted

Discussion Participants (Online and Live Events)

Laura Morton - Senior Director of Policy and Regulatory Affairs for Offshore Wind, American Wind Energy Association

Rudolph Wynter - President and COO of Wholesale Networks and US Capital Delivery at National Grid (multinational utility company)

Clint Plummer - Head of market strategies and new projects for the U.S. division of Ørsted (largest offshore wind developer and operator)

Kevin Knobloch - President of New York OceanGrid LLC at Anbaric (transmission)

Elliot Taubman - Commissioner of the Block Island Utility District; Attorney at Law, BIPCO

Adam Pool - Member, Clean Energy Venture Group, former venture capitalist

Scott Sklar - Energy Director, Environment & Energy Management Institute, The George Washington University; The Stella Group

Erik Peckar - General Manager of Vineyard Power (cooperative); helping to permit Massachusetts' first offshore wind farm

Henry Goldberg - Independent consultant, former visiting professor at Stanford University

Robert Catell - Chairman of the National Offshore Wind Research and Development Consortium.

Robert Hobson - Principal Designer at NKT; HVAC & HVDC cable design engineer

Quotes in this document are from an OurEnergyPolicy live panel discussion, "[New York's Emerging Offshore Wind Market](#)," and from an online discussion, "[Realizing the Promise of Offshore Wind](#)," held December 2, 2019, and December 2019 through January 2020, respectively.



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