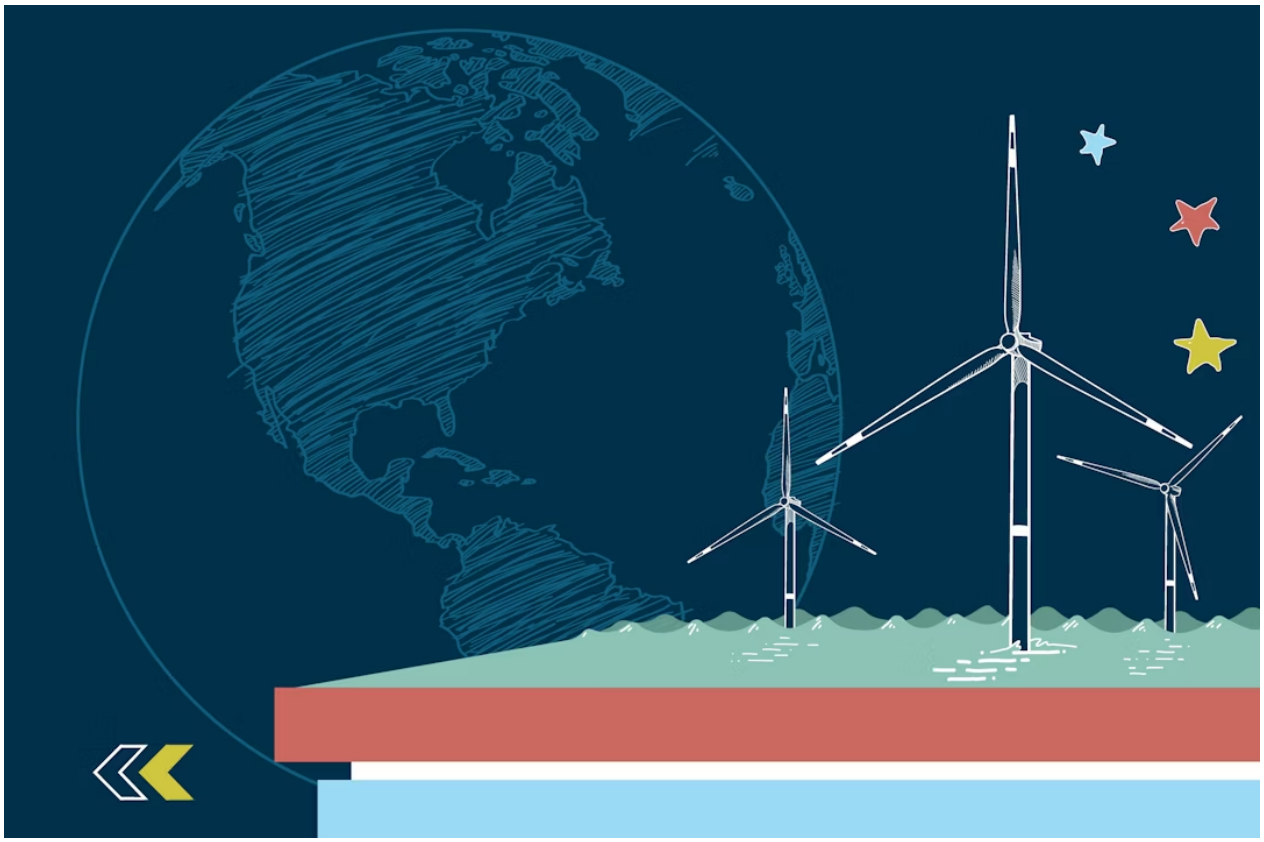
THIRD WAY

**MEMO** *Published July 23, 2024 • 9 minute read*

# Status Report: America's Competitive Advantage in Offshore Wind



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Experts forecast a sixfold increase in global offshore wind deployment over the next decade. At this scale, offshore wind will play a major role in global decarbonization efforts—and the US is getting in the game, setting a national goal to deploy 30 GW of offshore wind energy by 2030 and cut the cost of floating offshore wind energy by over 70% by 2035. Meeting these benchmarks would not only eliminate over 150 million tons of carbon emissions over the next three decades, but also save Americans $94 billion in energy costs.

Despite these ambitious goals and the substantial investments poured into offshore wind in recent years, US offshore wind is faltering. Regulatory hurdles, permitting delays, workforce shortages, lawsuits, and supply chain constraints have all made it difficult to deploy offshore wind in America. By contrast, countries in Europe and Asia have surged ahead, capturing the majority of the offshore

wind market. [1] If the US wants to become a competitive player in this industry, we have a lot of catching up to do.

It's worth the effort: the US has the chance to claim up to $1 trillion dollars of the global offshore wind market and create 90,000 jobs through 2050 in the process. This memo highlights the federal policies that have been implemented to accelerate deployment and reduce obstacles for offshore wind—and points to noteworthy milestones in the US's effort to catch up in the global marketplace.

# How Federal Investments are Boosting America's Offshore Wind Industry

The offshore wind industry has struggled with serious challenges–high costs, unpredictable permitting landscape, anti-wind sentiment, and a shortage of skilled labor. Landmark provisions across the Bipartisan Infrastructure Law (BIL), CHIPS and Science Act, the Inflation Reduction Act (IRA) have been playing a pivotal role in addressing these issues and helping give the private sector the security and confidence needed to continue investing in offshore wind technologies. Some of the most impactful federal incentives include:

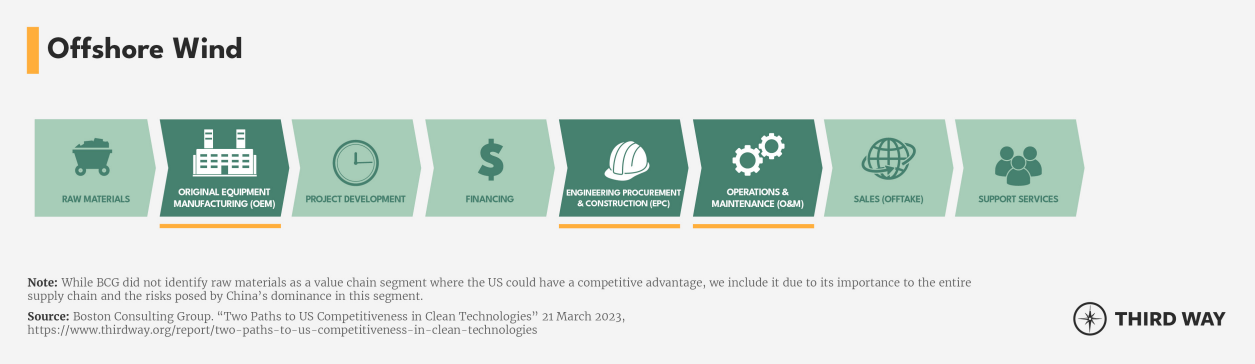
- Over $60 billion in Production Tax Credits to incentivize electricity generation from offshore wind and other low-carbon technologies; [2]

- Over $50 billion in Investment Tax Credits to support investments in clean energy projects including offshore wind; [3] and

- Over $40 billion in Manufacturing Tax Credits that can be used to support the production of components for offshore wind, among other technologies. [4]

These federal investments will be distributed over the next decade and will continue to pay dividends long after. And based on our analysis of Rhodium Group and MIT CEEPR's Clean Investment Monitor, it's clear that these policies are already working. Public and private investment in wind energy technologies in just the past three years has reached over $3 billion. [5]

# Road to Victory: Building on US Leadership in Offshore Wind Technologies




Competition in clean energy markets is intense. While the US is currently lagging behind leaders in Europe and Asia, that does not mean that we should sit on the sidelines. We have unique advantages across specific segments of the offshore wind value chain where we truly can make inroads and begin to close the gap and secure a larger share of this market.

Third Way's landmark analysis, in partnership with Breakthrough Energy and Boston Consulting Group, found that there are three segments of the offshore wind value chain where the US should make the most effort to build or maintain its advantage. These segments were identified based on their market size and the potential for American leadership—and we're already seeing progress in these key areas. Let's break this down:

## Original Equipment Manufacturing (OEM)

As offshore wind deployment accelerates, demand for turbine components—towers, blades, generators, and hubs—and foundation parts—monopiles, jackets, and floating foundations—will grow. Countries that develop advanced local manufacturing capabilities will be well-positioned to capture a significant portion of a $250 billion market and create over 7,000 jobs every year through 2050. The US, with substantial federal support for offshore wind component manufacturing and research, development, and demonstration activities, can carve out a portion of this economic growth for its businesses and workers. Here's how we're building this competitive muscle:

- **Building Supply Chain Hubs:** Ørsted and Eversource invested over $100 million in the ProvPort offshore wind hub in Rhode Island to support component construction for the Revolution Wind project. This includes $1 million for education, workforce training, and local supply chain development in Rhode Island. Ørsted and Eversource's investment, the largest offshore wind supply chain investment in Rhode Island's history, exemplifies how the US is strengthening its competitive edge by developing a robust domestic wind component manufacturing sector.

- **Domesticating Supply Chains**: Ørsted is collaborating with the state of Maryland to build the state's first offshore wind component center at Tradepoint Atlantic in Baltimore County. This initiative not only supports the construction of offshore wind projects in the US but also reinforces the development of a local supply chain, ensuring that American-made components play a critical role in the growing offshore wind industry.


## Engineering, Procurement, and Construction (EPC)

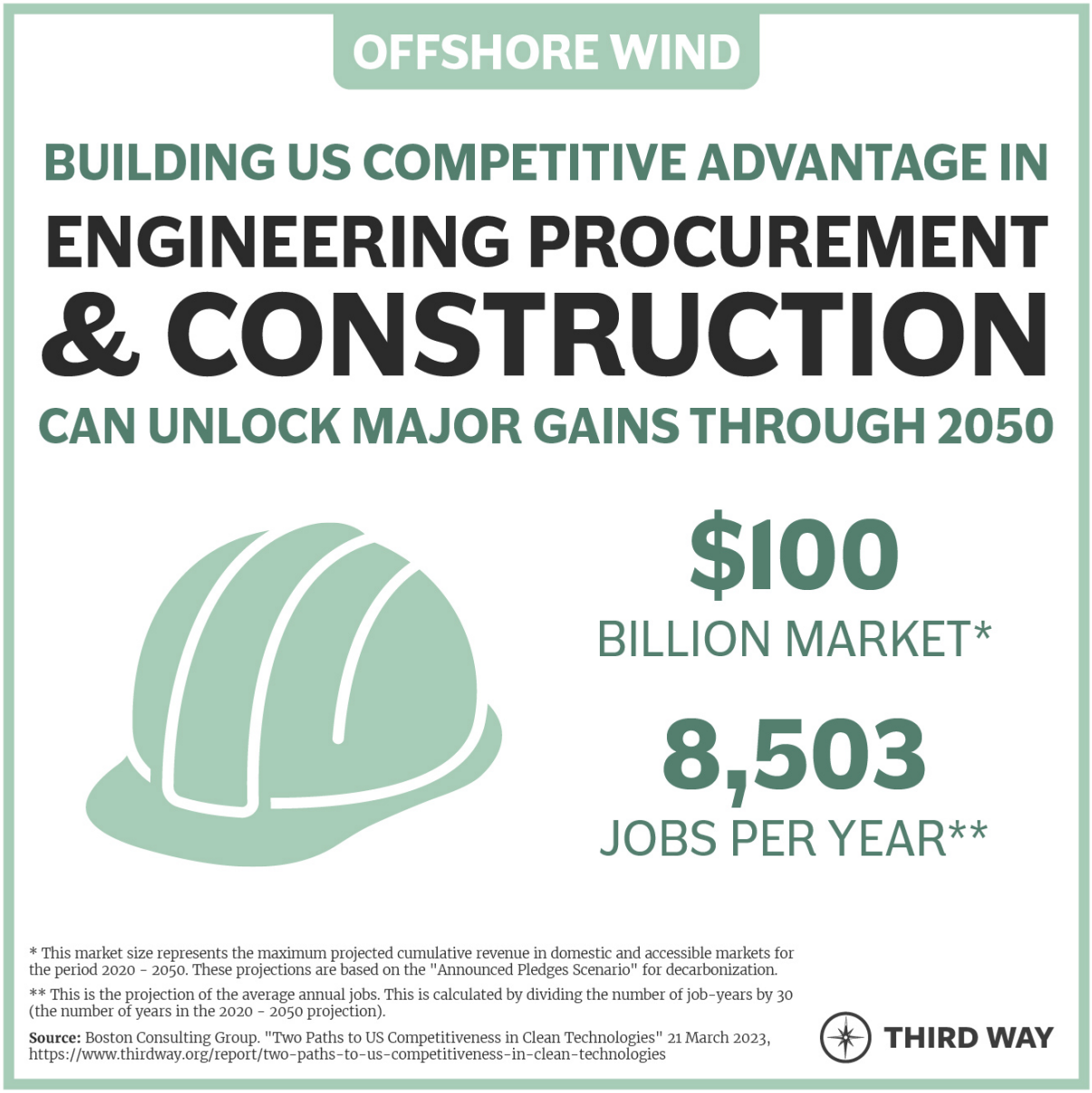
The offshore wind industry demands a wide range of expertise, including the design and construction of infrastructure projects, ocean mapping, and subsea cable installation. The US, with its skilled workforce from the offshore oil and gas sector, is uniquely positioned to fulfill these needs, bringing transferable skills that are critical for offshore wind projects. By leveraging this

early leadership, the US can capture a substantial portion of a $100 billion market and create over 8,000 jobs every year through 2050. Here's how we're already building on existing advantages:

- **Maintaining Compliance:** The Jones Act of 1920 mandates that ships transporting goods between American ports be made in the US, owned by Americans, and operated by Americans—a definition that also extends to offshore wind farms. As such, Dominion Energy is building the first-ever Jones Act-compliant ship specifically to support offshore wind installation. This $625 million project—*Charybdis*—taking place in Brownsville, Texas, will support Dominion's Coastal Virginia Offshore Wind Project and New England Wind Project by transporting essential foundations, nacelles, and turbine blades. *Charybdis* not only ensures compliance with the Jones Act but also underscores American innovation and capability in the offshore wind sector.

- **Leading Offshore Wind Innovation:** Over $1 billion in offshore wind investments are flowing into the Gulf of Mexico, showcasing innovative technology deployment tailored to the region's specific needs. Gulf Wind Technology and Shell New Energies are developing offshore wind technology that withstands windier conditions and powerful hurricanes, demonstrating how US innovation can overcome industry challenges and reinforce our leadership in this arena.

- **Building the Next Generation of Wind Workers:** The Department of Commerce awarded Maryland $23 million for its Maryland Works for Wind (MWW) This program partners with leading employers and local unions to build a training model that meets industry needs, fostering the emerging offshore wind industry in the state and helping Americans secure good-paying employment opportunities while growing a globally competitive workforce.




## Operations and Maintenance

As offshore wind energy scales up globally, the challenges of costly operations and maintenance at sea are becoming increasingly apparent. The US is well-positioned to tackle these emerging issues, leveraging extensive experience from the offshore oil and gas industry and other marine operations. By integrating this industry experience, the US has the potential to not only deliver much-needed subsea and platform maintenance, but to export their expertise internationally. Building on these advantages, the US has the potential to capture a significant share of a $180 billion market and create over 8,000 jobs every year through 2050. Here's how we're already racking up wins:

- **Delploying Wind Solutions to Meet Demand:** Vineyard Wind 1, Massachusetts' first offshore wind project and the country's first large-scale offshore wind farm, began initial operations and started delivering power to the New England electric grid. Though it faced some challenges with the operation of its initial five turbines, the project will ultimately feature 62 turbines upon completion. This not only helps the region meet seasonal peak electrical demand but also demonstrates America's capability to deploy and maintain innovative clean energy solutions.

- **Demonstrating Effective Management:** Ørsted and Eversource completed construction of all 12 turbines for their South Fork Wind project. Now, with all turbines installed, the wind farm is successfully delivering clean power to the Long Island electrical grid, with commissioning currently in its final stage. South Fork's seamless integration within the Long Island grid not only underscores effective system maintenance and management but demonstrates the efficiency of US project execution.


## Other Value Chain Segments

Broadly, the US has achieved significant progress in the offshore wind industry. Here are some standout projects worth noting:

- **Modernizing Offshore Energy Regulations:** The Department of the Interior's Bureau of Ocean Energy Management (BOEM) and Bureau of Safety and Environmental Enforcement (BSEE) have finalized regulations for renewable energy activities on the US Outer Continental Shelf. These regulations streamline regulatory processes and reduce costs, clarifying provisions that previously impeded offshore wind development. Over the next 20 years, this rule is expected to save the offshore wind industry nearly $2 billion and ensure the safety of offshore workers. By eliminating unnecessary requirements and establishing comprehensive safety systems and regulations, the US is providing the certainty the private sector needs to increase investment.

- **Fast-Tracking Offshore Wind Projects:** Dominion Energy's Coastal Virginia Offshore Wind Project (CVOW) is set to be the largest offshore wind farm in the US, supporting the production of 2.4 GW of electricity. This project officially completed its federal permitting process in April 2024, after its permitting was fast-tracked through the Federal Permitting Improvement Steering Council's FAST-41 program. While the majority of CVOW has yet to be built, a pilot offshore wind project (12 MW) from this larger wind farm is currently operational off the coast of Virginia and is the first wind project built in federal waters. It now joins three other wind projects that have undergone streamlined permitting processes, highlighting a positive trend of fast-tracking clean energy projects.

# So, What's Next?

Offshore wind is a powerful means of generating clean electricity—but the US has faced stubborn obstacles to deploying the offshore wind needed to meet our climate goals. While the US is currently positioned to secure some portion of the offshore wind market, we face fierce competition from established and emerging players around the world. But as we've shown, this race is worth every ounce of effort. Our targeted investments, innovative policies, and robust industrial strategy can sharpen our edge and put the US back at the forefront of this important technology.

TOPICS

COMPETITIVENESS AND COMMERCIAL DIPLOMACY 22

# ENDNOTES

1. Based on total global offshore wind capacity deployment in 2022, "Of the 8,385 MW new installed capacity in 2022, more than two-thirds (68.2%) was commissioned in China, totaling 5,719.6 MW. The United Kingdom was the next-largest contributor, with 1,386 MW of new installations, followed by France (480 MW), Germany (342 MW), and Vietnam (331 MW). Japan, Italy, and the rest of the world installed 126.5 MW combined in 2022." Musial, Walter, et al. *Offshore Wind Market Report: 2023 Edition*. DOE, 24 Aug 2023, https://www.energy.gov/sites/default/files/2023-09/doe-offshore-wind-market-report-2023-edition.pdf. Accessed 10 July 2024.

2. This includes $51 billion in Production Tax Credits for renewable electricity production, as noted in Section 45 of the Internal Revenue Code and extended and expanded by Section 13101 of the Inflation Reduction Act and $11.2 billion for qualifying facilities generating clean energy through the Clean Electricity Production Credit, created through section 13701 of the Inflation Reduction Act.

3. This includes $13.96 billion for investments in clean energy property through the Energy Investment Tax Credit, extended and modified by Section 13102 of the Inflation Reduction Act, $50.585 for investments in qualifying zero-emission electricity generating facilities through the Clean Electricity Investment Tax Credit, established through Section 13702 of the Inflation Reduction Act, and additional investment tax credits allocated for facilities located in low-income communities, as directed by Section 13103 of the Inflation Reduction Act.

4. $10 billion to incentivize investment in advanced energy projects through the 48C Advanced Energy Project Credit, expanded through Section 13501 of the Inflation Reduction Act, and $30.6 billion for the 45X Advanced Manufacturing Production Tax Credit, specifically to support US-made wind, solar, and battery components manufacturing, as established by Section 13502 of the Inflation Reduction Act.

5. Sourced from Rhodium Group/MIT-CEEPR Clean Investment Monitor data spanning from Q1 2021 to Q1 2024. Offshore wind investment includes the manufacturing of blades, nacelles, foundations, and towers. Onshore wind investment since Q1 2021 has reached over $43 billion.