



Securing the U.S. Supply Chain for the Wind Energy Industry

Wind Energy Technologies Office

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Wind energy is essential to achieving the Biden Administration's goals of a [100% clean electricity sector by 2035](#) and [30 gigawatts of offshore wind by 2030](#). On February 24, the U.S. Department of Energy (DOE) released a deep dive assessment of the land-based and offshore wind supply chains in the United States today, highlighting challenges and opportunities for strengthening these supply chains to help achieve the Administration's goals and create U.S. jobs and economic opportunity.

The [Wind Energy Supply Chain Deep Dive Assessment](#) finds that the U.S. wind supply chain is nascent for offshore wind and mature for land-based wind, but U.S. competitiveness is declining in key wind turbine components. Continued decarbonization of the U.S. grid and economy with domestically supplied wind technology will require innovation to increase U.S. manufacturing competitiveness; investment in logistics and infrastructure, such as offshore wind ports and vessels; and policies to provide a strong and stable demand signal to support accelerated investment in the wind supply chain.

The report identifies several key U.S. wind supply chain challenges and opportunities to help advance grid decarbonization and create jobs and economic opportunity for U.S. workers:

- Accelerating the growth of domestic manufacturing for offshore wind
- Developing offshore wind port facilities and specialized vessels
- Increasing the skilled workforce through wind-specific training and development
- Developing alternatives to rare earth permanent magnet generators (such as superconducting magnets)
- Developing and commercializing additive manufacturing of large iron and steel castings and forgings, such as rotor hubs and nacelle bedplates
- Reversing the decline in blade manufacturing facilities in the United States
- Scaling up and commercializing wind industry recycling.

DOE's accompanying report, [America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition](#), highlights strategies and recommendations to capitalize on these opportunities:

- Tax incentives to support domestic clean energy manufacturing and deployment, including incentives for clean energy production, and building and operating new manufacturing facilities
- Financing offshore wind ports and vessels through federal programs
- Funding transportation improvements and standardizing transport permitting requirements for large wind components that need to cross jurisdictional boundaries, in partnership with the Department of Transportation and state and local governments
- Expand technology research, development, and demonstration through the public and private sectors to enhance U.S. wind supply chain competitiveness and reduce logistical requirements, such as blade manufacturing automation, additive manufacturing of large castings and forgings, and modularization and onsite manufacturing of large components such as blades and towers.

Additional Resources

- Download the full [Wind Energy Supply Chain Deep Dive Assessment](#)

- Download the [wind supply chain fact sheet](#)
- Read the [DOE press release](#)
- Read the [EERE progress alert](#)
- Read the other DOE [energy sector industrial supply chain reports](#)
- Learn more about [wind energy research and development](#).

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