

September 9, 2025

Stephen Astle  
Director, Defense Industrial Base Division  
Office of Strategic Industries and Economic Security  
Bureau of Industry and Security (BIS)  
U.S. Department of Commerce  
1401 Constitution Avenue NW  
Washington, DC 20230

**Re: Notice of Request for Public Comments on Section 232 National Security Investigation of Imports of Wind Turbines and Their Parts and Components [Docket No. 250818-0143] [XRIN 0694-XC133]**

Dear Director Astle,

The American Council on Renewable Energy (“ACORE”) respectfully submits these comments to the Bureau of Industry and Security (BIS) in response to the Notice of Request for Public Comments on the Section 232 National Security Investigation of Imports of Wind Turbines and Their Parts and Components [Docket No. 250818-0143] [XRIN 0694-XC133] (90 FR 41380, August 25, 2025) (“the Investigation”).

ACORE is a nonpartisan nonprofit organization that promotes investment in American clean energy infrastructure, development, and innovation. In partnership with a broad membership that spans the energy value chain, ACORE advances the public policies, market research, and industry convenings to position the United States as a global leader in clean energy deployment.

ACORE’s membership includes clean energy investors, developers, energy buyers, power generators, manufacturers, and energy providers. In 2024, nearly 80 percent of the booming utility-scale domestic clean energy growth was financed, developed, owned, equipped, or contracted for by ACORE members.

**Introduction and Executive Summary**

On August 13, 2025, the Secretary of Commerce initiated an investigation to determine the effects on the national security of the United States of wind turbines and their parts and components under section 232 of the Trade Expansion Act of 1962, as amended (“Section 232”). In the Federal Register Notice requesting public comments, BIS expressed particular interest in input on several questions related to domestic and foreign sourcing of wind turbines, parts, and components.

These comments are divided into four sections that focus on:

- Wind energy is an abundant, affordable, secure, and domestically produced electricity resource that supports U.S. national security and the industrial base.
- How the U.S. wind sector is a manufacturing success story and supports a robust defense industrial base.
- Information on the supply chain for wind energy equipment which is substantially domestic, with imports primarily coming from allies and partners with shared national security interests.
- An overview of current trade policies and recommendations.

### **1.) Wind Energy is an Abundant, Affordable, Secure, and Domestically Produced Electricity Resource that Supports U.S. Energy Security, Digital Infrastructure, National Security Objectives, and the Defense Industrial Base.**

Any policy that slows clean energy deployment has national security consequences, including less overall electricity generation to meet technology and operational requirements, higher energy prices for all consumers, including the U.S. military and public safety operations, and less resilient infrastructure and facilities.

Wind energy is produced in 42 of 50 U.S. states and provides more than 10 percent of this country's electricity<sup>1</sup>, supporting American national security and the industrial base. As of the end of 2024, wind provided the majority of power in five U.S. states and generates enough electricity to power more than 46 million American homes nationwide.<sup>2</sup> Wind energy produces affordable, reliable, and secure electricity that is essential to the economy and defense and industrial applications, including by supporting innovation and American leadership in advanced technologies like artificial intelligence (AI) which have substantial civilian and national security applications.

After nearly two decades of flat electricity demand growth, our nation has entered a period of spiking demand driven in part by national security imperatives, including support for AI technology and data center growth. Forecasts indicate that meeting our advanced technology objectives and other energy needs will require at least 120 GW of new electricity generation to be brought online by 2029.<sup>3</sup> This is the equivalent of adding 125 Oklahoma Cities to our energy grid within only a few years. Policies that constrain electricity generation sources like wind will impact our ability to meet this need effectively, and unnecessarily risk undermining one of America's great strengths—the breadth of

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<sup>1</sup> Lawrence Berkeley National Laboratory. Land-Based Wind Market Report (August 2024), available at: <https://emp.lbl.gov/publications/land-based-wind-market-report-2024>.

<sup>2</sup> Id.

<sup>3</sup> Wilson, J.D., Zimmerman, Z., & Gramlich, R. Strategic Industries Surging: Driving US Power Demand (April 2025), available at: <https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024-April-Update-Presentation.pdf/>

different energy resources available to us to provide a strong foundation to our defense and security industrial base.

Advancements in technologies such as AI have heightened the role of access to affordable, reliable, and secure electric power as a foundational component of U.S. national security, technological leadership, and economic prosperity. The recently released “America’s AI Action Plan” highlights the myriad potential benefits of AI, while also noting that, to meet those objectives, “We need to build and maintain vast AI infrastructure and the energy to power it.”<sup>4</sup> The Department of Energy predicts that power demand from data centers could triple by 2028<sup>5</sup>, creating unique challenges for America’s electric grid. The data centers being built across the country need electricity sources that are reliable, consistent, easy to build, quick to market, and low-cost.

In addition, next generation national security innovations are reliant on access to affordable, reliable, and secure American electricity resources. For example, the Department of Defense’s (“DoD”) Defense Innovation Unit’s priorities undergird the importance of electricity-dependent applications to future national defense needs. Specifically, the agency’s areas of focus include AI, Autonomy, Cyber and Telecom, Emerging Technology, Energy, Human Systems, and Space.<sup>6</sup> All of these areas are substantially tied to affordable, secure electric power.

Assured access to affordable electricity is essential to the U.S. manufacturing industrial base, including in the defense sector. Each year power outages cost the U.S. economy over \$150 billion, and a quarter of U.S. manufacturing businesses experience outages at least once a month, with nearly 60 percent reporting outages of an hour or longer—for large manufacturers, outages of one hour can increase costs by \$5 million.<sup>7</sup>

However, communities with more clean energy online are less susceptible to fuel cost spikes in the face of extreme weather and have seen lower electricity rate increases.<sup>8</sup> For example, from 2010 to 2023, the percentage of electricity generated by wind in Iowa grew from 15 percent to nearly 60 percent—and Iowa’s electricity rates increased more slowly than 42 other states with a compound annual growth rate of under 2 percent.<sup>9</sup>

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<sup>4</sup> The White House. Winning the Race. America’s AI Action Plan (July 2025), available at: <https://www.whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf>.

<sup>5</sup> U.S. Department of Energy. “DOE Releases New Report Evaluating Increase in Electricity Demand from Data Centers” (December 2024), available at: <https://www.energy.gov/articles/doe-releases-new-report-evaluating-increase-electricity-demand-data-centers>.

<sup>6</sup> U.S. Department of Defense, Defense Innovation Unit. Solutions-Portfolio Overview. (Accessed August 2025), available at: <https://www.diu.mil/solutions/portfolio>

<sup>7</sup> Russo, D. The Importance of Transmission to American Reindustrialization and Economic Security. (September 2024), available at: <https://safe2020.wpenginepowered.com/wp-content/uploads/2024/09/Grid-Security-Reindustrialization-Fact-Sheet.pdf>.

<sup>8</sup> Pierpont, B. Clean Energy Isn’t Driving Power Price Spikes. (July 2024), available at: <https://energyinnovation.org/publication/clean-energy-isnt-driving-power-price-spikes/>

<sup>9</sup> Id.

## 2.) The U.S. Wind Sector is a Manufacturing Success Story and Supports a Robust Defense Industrial Base

In addition to providing affordable, reliable, secure American electricity resources, the production of wind turbines and related parts and components is also a major driver of U.S. manufacturing and in turn contributes to our defense industrial base.

The U.S. wind energy industry supports over 131,000 jobs across 50 states.<sup>10</sup> Of those jobs, more than 35,000 individuals are directly employed in wind manufacturing at over 400 facilities nationwide.<sup>11</sup> These facilities currently support 80 percent of nacelle assembly and 70 percent of tower manufacturing for U.S. wind projects, while paying manufacturing employees approximately \$2.5 billion in wages and yielding roughly \$9.7 billion in total U.S. economic output.<sup>12</sup> Wind manufacturing projects under development represent an additional 46,000 jobs, \$3.3 billion in wages, and \$13.1 billion in total economic output.<sup>13</sup>

In addition to the direct manufacturing capacity, jobs, and investment supported by the onshore wind sector, the offshore wind sector also generates demand for new American shipbuilding capacity. This includes the need for constructing new, specialized offshore vessels, as well as for more shipyard workers and mariners.

For example, in August 2025, the first-ever domestically manufactured Jones Act compliant wind turbine installation vessel, the *Charybdis*, began sea trials.<sup>14</sup> The \$715 million ship has been under construction since 2020 in Brownsville, Texas,<sup>15</sup> and was produced using more than 10,000 tons of domestically produced steel from suppliers in Alabama, West Virginia, and North Carolina.<sup>16</sup> Including *Charybdis*, four other ships representing a total of \$1.2 billion in investment are being built or completed in U.S. shipyards, with supply chains for equipment such as pipes and valves, watertight doors, electrical components, and engines extending across dozens of U.S. states.<sup>17</sup>

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<sup>10</sup> American Clean Power Association. Wind Power Facts (Accessed August 4, 2025), available at: <https://cleanpower.org/facts/wind-power/>.

<sup>11</sup> American Clean Power Association. The State of Clean Energy Manufacturing (May 2025), available at: <https://cleanpower.org/resources/america-builds-power/>.

<sup>12</sup> Id.

<sup>13</sup> Id.

<sup>14</sup> Ferry, T. Giant Installation Vessel Heads for U.S. Sea-Trials and Service. (August 2025), available at: <https://www.upstreamonline.com/rigs-and-vessels/giant-installation-vessel-heads-for-us-sea-trials-and-service/2-1-1853515>

<sup>15</sup> Haun, E. Cost of U.S.-built WTIV Charybdis Balloons to \$715 million. (August 2024), available at: <https://www.marinelink.com/news/cost-usbuilt-wtiv-charybdis-balloons-516103>.

<sup>16</sup> Dominion Energy. Dominion Energy Reaches Major Milestone in Construction of Charybdis, the First Jones Act-Compliant Offshore Wind Turbine Installation Vessel. (April 2025), available at: <https://investors.dominionenergy.com/news/press-release-details/2024/Dominion-Energy-Reaches-Major-Milestone-in-Construction-of-Charybdis-the-First-Jones-Act-Compliant-Offshore-Wind-Turbine-Installation-Vessel/default.aspx>.

<sup>17</sup> DeMichele, N. America's Offshore Wind Fleet: Reigniting Domestic Shipbuilding. (August 2025), available at: <https://oceantic.org/americas-offshore-wind-fleet-reigniting-domestic-shipbuilding/>.

Expanding U.S. shipbuilding capacity is a priority for the Administration, and that capacity has both civilian and defense applications.

Shipbuilding is not the only sector with civilian and defense applications to benefit from U.S. onshore and offshore wind energy sectors. Steel, aluminum, copper, cast iron, concrete, and rare earths are all components of wind turbines.<sup>18</sup> Each of these inputs has substantial defense as well as civilian applications, and robust domestic demand is critical to supporting the Administration's goal to develop additional domestic capacity for each of these key inputs.

Ultimately, policies that impact demand for U.S. onshore and offshore wind capacity only serve to reduce domestic demand for these inputs, which in turn undermines the Administration's objective of boosting U.S. capacity.

### **3.) Domestic Production of Wind Energy Equipment is Substantial, and Most Imports Are from Allied Countries**

The U.S. onshore and offshore wind sector are domestic manufacturing success stories. Domestic production capacity is spread across the nation, as are supply chains for necessary inputs such as steel, aluminum, and others. In addition, the firms most active in the market are U.S. and European firms most of whom are close allies or strategic partners.

As previously noted, domestic production of wind energy is robust; however, with over 8,000 parts and components that make up a modern wind turbine,<sup>19</sup> imports are necessary for certain items for which there may be no U.S. manufacturers. Of the approximately \$3 billion in wind components imported by the U.S. last year, over 85 percent were supplied by U.S. allies and strategic partners such as Germany, Mexico, and France, with China accounting for only 3.8 percent.<sup>20</sup> With respect to imports, the U.S. sources simpler wind components (e.g., blades, hubs) from strategic partners such as India and Mexico, and relies primarily on allied European countries such as Denmark and Germany for more technologically complex systems (e.g., gearboxes, generators).<sup>21</sup> For context, China supplied just \$1 million worth of total U.S. wind imports in the first half of 2025.<sup>22</sup>

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<sup>18</sup> Wilburn, D. Wind energy in the United States and materials required for the land-based wind turbine industry from 2010 through 2030: Scientific Investigations Report 2011–5036. (2011), available at: <https://pubs.usgs.gov/sir/2011/5036/sir2011-5036.pdf>.

<sup>19</sup> American Clean Power Association. The State of Clean Energy Manufacturing (May 2025), available at: <https://cleanpower.org/resources/america-builds-power/>.

<sup>20</sup> International Trade Administration. Energy Trade Dashboard. (Accessed August 2025), available at: <https://www.trade.gov/data-visualization/us-energy-trade-dashboard>.

<sup>21</sup> BloombergNEF. Trump's Probe on Wind Imports First Step to More Duties (September 2025), available at: <https://www.bnef.com/insights/37385>.

<sup>22</sup> Id.

Strong domestic production, coupled with diversified imports from close allies and strategic partners, makes the U.S. wind sector a strong contributor to providing secure and affordable domestic electricity and supporting domestic manufacturing capacity and demand that benefits both civilian and national security applications.

#### **4.) Current Trade Policies and Recommendations**

##### **Existing Policies and Restrictions**

Globally, trade restrictions on clean energy technologies have risen substantially since 2015. During that time, restrictions on wind turbines have increased from two in 2015 to 32 in 2024.<sup>23</sup> In addition, given that steel and aluminum are key inputs for both onshore and offshore wind equipment, tariffs imposed in 2025 impact the sector as well.

To enhance U.S. national security and the strength of the defense industrial base, the Administration should pursue policies that build on our nation's broad, strong foundation of electricity generation resources, and ensure that policies such as tariffs and other restrictions are calibrated to meet clearly identified national security objectives.

##### **Recommendations**

- As outlined above, there is substantial domestic production capacity for wind turbines, parts, and components and imported components are substantially sourced from close partners and allies with shared national security interests. The Secretary should carefully consider how to incentivize greater domestic or allied production of parts and components that may be sourced abroad and consider providing U.S. industry with appropriate time to adjust supply chains accordingly if new tariffs are imposed.
- The Secretary should explore the use of duty drawbacks or a similar "deduction" mechanism for imported products that are then exported to certain allies and partners that are critical to U.S. defense and energy supply chains or sold domestically, and should look to ensure that tariff "stacking" is minimized.
- The President's recent executive order indicating that trading partners that reach agreements on reciprocal trade and tariffs may see 232 tariffs decreased, similar to the agreement reached with the European Union, is encouraging and should be pursued and applied accordingly for wind turbines, parts, and components.

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<sup>23</sup> International Energy Agency. Cumulative new trade policies covering clean technologies, 2015-2024 (September 2024), available at: <https://www.iea.org/data-and-statistics/charts/cumulative-new-trade-policies-covering-clean-technologies-2015-2024>.

- Similar to the periodic review of financial sanctions conducted by the U.S. Department of the Treasury, Commerce should consider conducting similar reviews within set time frames for the suite of 232 and other tariffs—particularly those with cross-cutting sectoral impacts—to determine if they are accomplishing stated goals and modifying or calibrating as appropriate to achieve those goals.
- The Department has capacity within the International Trade Administration’s Supply Chain Center, such as the SCALE tool, that should be employed alongside resources and activities ongoing at other agencies such as the Department of Energy’s Office of Manufacturing and Energy Supply Chain with the findings briefed to industry on regular intervals to help illuminate areas that the private sector can continue to direct investment and attention to.
- Given the complexities in the U.S. clean energy manufacturing supply chain, the U.S. Department of Commerce should work to engage with U.S. stakeholders at all levels of the supply chain during its investigation to ensure that the final recommendations clearly reflect a strategic vision for how to incentivize various levels of the supply chain without harming U.S. manufacturing efforts. This consultation could be particularly helpful with respect to tariffs which, if deployed without careful consideration and monitoring, can have unintended consequences that could undermine the development of the necessary commercial ecosystem U.S. wind turbine manufacturing efforts will need to thrive.

## **Conclusion**

The American wind sector is and can remain a key contributor to achieving numerous Administration objectives, including the objectives and priorities identified in: America’s AI Action Plan, Restoring American Maritime Dominance Executive Order, and the numerous activities to promote U.S. manufacturing and production of steel and other key inputs. However, policies that impact the wind sector risk the affordability and reliability of electricity, and undermine the Administration’s national security, technology, and economic objectives.

Additional Section 232 tariffs on wind turbines and related products will raise costs, delay infrastructure modernization, reduce grid resilience and reliability, and impact supply chains with close U.S. allies and partners. ACORE encourages the Secretary to consider building on existing tariff and import restriction policies by aligning these existing policies with new and more deliberately applied programs that will advance our energy security, national defense and manufacturing industrial base, and technology goals.

ACORE appreciates the consideration of our comments and respectfully requests that BIS prioritize national security and policy certainty for U.S. industry.

Should you have any questions about this submission, please contact –

**Jeremy Horan**

Vice President, Government Affairs

American Council on Renewable Energy (ACORE)