



Via Electronic Filing
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Public Service Commission of Maryland
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COMMENTS OF THE WATT COALITION

The WATT Coalition (“WATT”) appreciates the opportunity to provide the following comments regarding the Public Service Commission of Maryland (“Commission”) investigation, designated as PC56, into funding available under the Infrastructure Investment and Jobs Act, H.R. 3684, 117th Cong. (2021) (“IIJA”).

The WATT Coalition is a non-profit organization focused on facilitating the adoption of advanced technologies on the US electric transmission system that improve reliability, lower cost, and accelerate decarbonization, benefiting American citizens and businesses. The WATT coalition is comprised of associate members benefiting from Grid Enhancing Technologies and 7 technology members, offering Advanced Power Flow Control, Dynamic Line Ratings (DLR), and Topology Optimization:

Ampacimon is a global leader in grid monitoring solutions that utilize patented sensors and software to increase the capacity of transmission and distribution assets. Their dynamic line rating systems, with grid monitoring sensors and software, have been deployed worldwide.

Lindsey Manufacturing Company provides innovative and cost saving products to the global electric utility industry. Lindsey is an industry leader in transmission line monitors and software for measuring and forecasting dynamic line ratings and line capacity. They produce a variety of other systems designed to enhance grid resiliency and optimize distribution networks.

LineVision provides utility solutions that leverage advanced sensors and analytics to increase the capacity, flexibility, and reliability of overhead lines. Their non-contact monitoring systems provide real-time situational awareness and anomaly detection, unlock additional capacity on existing lines, and provide condition-based health analysis to optimize asset management and grid reliability.

NewGrid is a software firm that provides transmission topology optimization tools and services. NewGrid’s software automatically identifies grid reconfigurations to route power flow around congested or overloaded transmission facilities (it is, in a sense, a “Waze” for the grid), increasing the transfer capability of the grid and delivering savings and increased reliability and resilience.

Smart Wires develops and implements technologies that advance the delivery of electricity around the world. With their technology, electric utilities can maximize transfer capacity on their grids, creating a more flexible and efficient network. Their power flow control technology dynamically controls transmission line reactance to direct power away from overloaded lines onto lines with spare capacity.

WindSim has developed a wind farm design software based on computational fluid dynamics that optimizes wind turbine placement. Using accurate simulations, WindSim software can more realistically capture terrain effects on wind conditions than many traditional technologies. WindSim Power Line (WPL) is a state-of-the-art forecast solution for overhead line operations and provides transmission

owners an enhanced view of the conditions of their transmission lines by modeling wind at high-spatial resolution and computing thermal interactions (using IEEE-738) for every transmission span on which the system is deployed.

Heimdall Power provides cost-efficient dynamic line rating-based solutions to support data-driven decision-making for operations and planning of high-voltage overhead power lines. Their sensors and software optimize power grid utilization by maximizing power line capacity, control, and uptime. Real-time and forecast insights allow for swift detection of issues & predictive maintenance, and increased flexibility through energy flow & bottleneck analysis.

Associate members of the WATT Coalition include **Vermont Electric Power Company, EDF Renewables, Invenery, and Pine Gate Renewables.**

Grid Strategies LLC serves as the convener of the WATT Coalition.

The IJA will invest more than \$65 billion in the transmission grid, creating opportunities for Maryland and the country to create a resilient, reliable grid capable of deploying energy in a timely manner. Maryland should provide effective incentives and standards for grid modernization in order to maximize these opportunities.

Grid Enhancing Technologies (GETs) are essential tools for building a modern grid that is prepared for electrification of transportation and other industries and capable of meeting federal, state, and local clean energy goals. GETs, also referred to as advanced transmission technologies, are hardware and software solutions that increase the capacity, efficiency, and reliability of the transmission grid, and they are ready for widespread deployment. GETs can double capacity for new renewable energy on the power grid, and the yearly cost savings from GETs far exceed their one-time installation cost. Additionally, GETs can be installed in weeks, quickly creating a modern transmission grid and integrating renewable energy.

The main types of GETs are Advanced Power Flow Controls, hardware that actively balances flows on transmission lines by pushing power off overloaded lines or pulling it onto under-utilized lines; Dynamic Line Ratings, software and hardware which identifies the real-time capacity of transmission lines; and Topology Optimization, software that identifies ways to reroute power flow around congested areas while maintaining reliability.

These breakthrough technologies, developed here in the United States, have been identified by bipartisan lawmakers, energy experts and a diverse set of advocates as key to a next-generation smart grid that can meet America's growing energy needs.

Ensuring these cost-saving and resilient technologies are part of the investment decisions made will accelerate clean energy projects by unlocking transmission capacity, allowing wind and solar projects to actually connect. It will improve grid resilience and reliability by providing data-driven decisions and digital controls to optimize the grid's efficiency and ensure safe, continuous operations in the face of growing demands and disruptions, whether from heat waves, winter storms, hurricanes or other disasters that place additional pressure on outdated transmission lines. And it will maintain affordable power rates by providing cost-effective options to modernize transmission grids.

IIJA SECTION 40107

IIJA allocated \$3 billion in new funding for the deployment of technologies to enhance grid flexibility under the Smart Grid Investment Matching Grants (SGIG) Program (Section 40107), explicitly naming GETs as eligible investments.

In order to capitalize on the investments in projects that accelerate the clean energy transition, improve grid resilience, and reduce customer costs, the Commission should prioritize allocating at least 50 percent of grant funds for transmission, such as adding intelligence, control, and capability to the electric grid, in order to ensure funding is split between transmission and distribution. Additionally, the Commission should direct their utilities to submit grant proposals to DOE based on impact as measured by congestion relief, capacity created for renewable energy, and/or ability to quickly deliver results.

ADDITIONAL IIJA SECTIONS

GETs are also well positioned to help deliver the desired outcomes of other programs aiming to build a modern, reliable transmission grid created or expanded under IIJA, including \$5 billion toward preventing outages and enhancing grid resilience (Section 40101); \$5 billion for the Energy Infrastructure Federal Financial Assistance Program (Section 40103); and \$500 million for the State Energy Program (Section 40109).

CONCLUSION

IIJA made an unprecedented commitment to modernize our grid and ensuring that GETs are a key part of those investments will be essential. WATT looks forward to working with federal, regional, and state entities to maximize opportunities related to investments made in new energy generation and transmission. At every level of government, there is a chance to ensure that programs designed to stoke U.S. manufacturing, job training, and innovation are properly scoped to accelerate this high-employing, in-demand, and long-term growth field.

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Signed,
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