Testimony of Rebecca O'Neil

Research Principal, Energy and Environment Directorate

Pacific Northwest National Laboratory

Before the Energy Subcommittee, U.S. House Energy and Commerce Committee

January 13, 2026

Hearing on *Protecting America's Energy Infrastructure in Today's Cyber and Physical Threat Landscape*

Chairman Latta, Ranking Member Castor, and members of the Subcommittee, thank you for the opportunity to testify today.

My name is Rebecca O'Neil. I execute and oversee research projects at Pacific Northwest National Laboratory (PNNL), a Department of Energy national laboratory. My research programs focus on innovation and security for energy infrastructure, with a special focus on transmission infrastructure and wildfire hazards. Before my decade of service at the laboratory, my career includes several years with the Oregon state Department of Energy, and so I have a keen sense of the hard work and indispensable role of state governance on the topics we discuss today. It is a privilege to be here before you, and to represent a very dedicated team of researchers across many disciplines who contributed to state energy security planning successes.

States have a critical role to play in the energy security of the United States. Due to the complex interdependent character of infrastructure services and ownership, states have visibility at a unique scale and understand the relationships and operational realities to build energy security from the ground up. The work of the federal program that supports energy security planning for U.S. states and territories is to empower them technically and to deliver practical and actionable insights to help them do their jobs well.

One of the proposals under consideration today, the SECURE Grid Act, discusses "state energy security plans." Since August 2023, I have led a team of researchers at PNNL to support the U.S. Department of Energy's CESER office and all fifty-six states and territories to deliver complete energy security plans that met all requirements of the law. Many of the states did not satisfy the requirements in the first attempt, but by December 2024 all states had achieved this milestone. An essential partner in this effort, the National Association of State Energy Offices, or NASEO, provided the platforms, peer-sharing, network and expertise that made this story a success. It has been a full turn-about from when we engaged two years ago to the story today, and I am proud that we were able to work as a team with our Department of Energy colleagues and NASEO in support of our states and territories.

As my state colleague said to me last week, we are all safer and more secure because of these plans and the planning work we did together.

How did a national laboratory come to be involved here? Most national laboratory activities in support of the Department deliver original research or innovative technologies. In this case, my laboratory was tapped by CESER to execute a fair, objective, consistent, swift and accurate federal review. We did it— through the complex work of reviewing around 14,000 pages of energy security plans, providing direct and specific recommendations on steps to meeting the requirements in law, and throughout offering tailored and sometimes state-specific technical guidance through training, data, and tools. While every state has a unique plan there are many common themes, and so we focused on topics shared by states. With NASEO and CESER, we built state cohorts with monthly exercises on risk mitigation and risk assessment design, capped by an in-person energy security event in Minnesota in June 2024, in time for states to revise their plans and submit them by the annual September 30th deadline.[1] As I mentioned above, today all states and territories have met the requirements for their energy security plan, officially confirmed by DOE in a formal letter in December 2024.

In my testimony I will provide a short overview of state (or territory) energy security plans, how states and territories can and do benefit from strong plans and planning effort, and the continuous state energy security planning that happens after the document is complete.

To fulfill the planning requirement, states took a hard look at state governance of energy security. Energy security connects a constellation of agency responsibilities that vary from state to state, with expertise, oversight, emergency response, grid resilience, and other authorities like hazard mitigation planning spread out among state energy offices, utility commissions, natural resource agencies, and so forth. One of the notable outcomes of state energy security planning activities is a fresh collaboration, between multiple state agencies and offices but also partners such as utilities, energy suppliers, research universities and data resource hubs, in order to create a credible statewide plan. In the end, the plan is the product, but the planning process itself is the lasting value.

Here are six things that energy security plans are NOT:

- Energy security plans are not new. In the early 2010s, states and territories wrote "Energy Assurance" plans, where states specifically received funding from the Department of Energy to improve their energy security plans and planning. Since then, many states were limited to the most basic maintenance on their plans – just keeping it running. When the energy security plan requirement was reissued along with funding, many states took the Energy Assurance Plan as their starting point. For some of those states, the 2012 plan was taken off the shelf, dusted off, and revisited meaningfully for the first time. In other states, mitigation actions identified in the plan were well

[1] https://www.pnnl.gov/projects/doe-energy-security-and-grid-resilience-cohorts

underway, but the state had neither funding nor clear reasons to conduct a renewed risk assessment until this most recent requirement.

- Energy security plans are not only about electricity. Energy security engages fuels –home and industrial heating fuels such as propane, as well as transportation fuels from jet fuel to gasoline and diesel – in addition to natural gas and electricity systems. Some of the most difficult but valuable assessments in these plans are about these seams and interdependencies, between energy sectors as well as with other critical infrastructure sectors such as water and communications.
- Energy security plans are not a template or a set of emergency response protocols. The plans are designed to look at trends, cascading consequences, infrastructure conditions, emerging technologies, supply chains, reliability and performance gaps. Throughout the process, states and territories were given complete deference on their priorities and insights; our job was to help them produce the plan that met the terms of the law and represented the greatest value to them. As my colleague says, "if you have read one plan, you have read one plan" – each state plan is unique.
- Energy security plans are not the same as an infrastructure owner's security plan. The state does not own or operate assets. They have a wider outlook on consequences and engineer different strategies to mitigate risk. They have to take a bird's eye view across the state and all systems and all energy consumers to analyze and track risks.
- Energy security plans are not a piece of cake. By law, the plans are required to meet multiple elements, connected in a logical chain. In shorthand, these elements are: an energy profile for all sectors; an inventory of critical energy infrastructure, hazards and threats (natural and man-made); a risk assessment that evaluates the hazards and threats to the energy sector infrastructure; a risk mitigation approach; and a collaboration plan. One of the tricky aspects of this logic is that it takes time and iteration: it becomes obvious what energy and hazard data is needed once you put pencil to paper for the risk analysis.
- Energy security plans are (generally) not public. These plans are protected, which is why I have few specifics to offer you. I can tell you that two states, Oregon and Kentucky, have from the beginning provided their plans online.[2] As Kentucky put it: we cannot recruit partners to our efforts if they don't know what we are working on and why. Oregon convened meetings across the state to inform its plan and its priorities.

The plans are protected, and I am unable to share many specifics with you today. Still, I can relay themes about these plans, benefits that states leveraged from the plans, and activities that keep energy security planning moving ahead.

[2] https://eec.ky.gov/Energy/Documents/KY%20Energy%20Security%20Plan%202024%20FINAL.pdf (Kentucky) and https://www.oregon.gov/energy/safety-resiliency/Documents/2025-Oregon-Energy-Security-Plan.pdf (Oregon)

Let me offer standout practices in preparing the plans:

- Data and GIS: States invested in GIS data and skills to analyze infrastructure and hazards. Florida's plan stands out for building maps to show spatial relationships between hazard probabilities and types of infrastructure. Hawaii instituted a more permanent GIS capability and tool to support data analysis and tracking over time.
- New Collaboration: States developed working groups to discuss protected information or define critical energy infrastructure together. Alaska, Georgia, and others convened groups that designed features of the plans together and built stakeholder capital in the plan's success and future use.
- Fresh Risk Analysis: States evaluated the specific interactions, vulnerabilities and consequences, between hazards and infrastructure in order to characterize and prioritize risk in their state. States already have extensive expertise to identify priorities from experience, but planning requirements pushed experts to place their knowledge into a comprehensive analysis. These risk assessments help transfer institutional knowledge, create a clear basis for decisions, and help states learn something new. For example, Maine analyzed emerging and novel hazards, and Delaware was able to prioritize their mitigation actions.

Once written, many states used their plans to excellent effect.

States were able to recruit and retain increased staff and responsibilities. Legislatures requested briefings and became interested in mitigation strategies. New partnerships were founded across government. With clarity on energy security risks and priorities, states were able to target grid resilience investments and state-led actions such as incentives and studies.

Under the direction of CESER, PNNL continues to support state energy security planning and leverage value from the plans, based on gaps and the analysis from two cycles of plan reviews. Let me share a few areas where PNNL is working for states:

- **Scale energy security risk to the region** – almost all energy systems are multi-state, and so are the supply chains and distribution services that surround them. This multi-state effect is true for most hazards and the resulting risks to energy security. Cooperation at the regional level spotlights geographical interdependencies and also new mitigation opportunities. For these reasons, we are investing in regional energy security planning approaches, guidance and risk assessment strategies, built upon state efforts.
- **Develop state roles and expertise in cyber and physical security of energy systems** – the Cybersecurity for Energy Resilience Summit, known as CYFERS, attended by over 100 participants from state government representatives and partner organizations, was held in Utah last year. To continue to take a deeper dive into the specific threats and identify actionable risk assessment and mitigation strategies, the Cyber and Physical Security Working Group launched in 2025 and meets regularly. We anticipate hosting a

second cybersecurity conference this spring in Wisconsin as a capstone to the working group.

- **Produce technical studies for decision-support** – for example, we produced studies on refinery markets and fuel supply chain effects for Oregon and worked with Tennessee energy security leaders to document energy system performance in East Tennessee after Hurricane Helene.

Additionally, our work extends to supporting states with technology assessments, innovative mitigation design, and developing local energy security practices for hazard mitigation planning.

In closing, we cannot have national energy security without state energy security. Due to the unique public-private balance in this sector, achieving a secure energy system will take collaboration between industry, state, and federal partners.

Thank you for the opportunity to testify today. I hope these statements provide insights for you as you consider the future of this provision. I look forward to answering any questions you may have.