N A R U C
National Association of Regulatory Utility Commissioners

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NARUC Team Selected to Study Solar Energy and Grid Resiliency

First Comprehensive Look at Solar Plus Storage as a Black Start Resource

WASHINGTON – The National Association of Regulatory Utility Commissioners was selected by the U.S. Department of Energy's National Renewable Energy Laboratory to participate in a collaborative research effort to explore new ways solar energy can improve the affordability, reliability and resiliency of the nation's electric grid.

NARUC is working closely with PJM Interconnection and Converge Strategies LLC to explore the resilience benefits of solar photovoltaic energy. Billions of dollars of damages from hurricanes in 2017 demonstrated the importance of building a resilient electricity grid that can quickly bounce back from failures. NARUC's team will look at how states and other energy stakeholders are approaching system resilience, with a particular focus on opportunities for solar PV plus storage, including as a black start resource. The team will work closely with state regulators and PJM stakeholders to identify knowledge gaps and will produce resources to address these gaps.

NARUC is part of just nine teams selected to join the program, known as the Solar Energy Innovation Network.

"We selected teams that are experimenting with promising ideas to use solar power to improve the future of grid security and reliability in their communities," said Kristen Ardani, who leads the Innovation Network at NREL.

Specifically, the Innovation Network's technical assistance approach is a unique way of getting cohort teams to think creatively and collaboratively about solar PV deployment. NARUC will work closely with NREL experts to guide the team in asking the right questions and taking advantage of existing research. The technical assistance team has a suite of models that will enable them to test their conclusions rigorously under a variety of real-world circumstances.

"NARUC's Solar Energy Innovation Network project with PJM Interconnection and Converge Strategies LLC has excellent potential to uncover new opportunities for solar energy to make our energy supply both more environmentally friendly and more resilient to natural disasters, cyber and physical attacks and other emerging threats," said NARUC President John Betkoski III. "Grid resilience is an increasingly important topic for regulators, policymakers, utilities, grid operators and customers. This project will demonstrate how solar photovoltaics paired with storage can make our electricity system more resilient."

“Our project is the first thorough examination of solar plus storage as a black start resource,” said NARUC Center for Partnerships and Innovation Director Danielle Sass Byrnett. “To our knowledge, no other RTO or ISO in the country has taken advantage of this potential application of solar PV. We aim to quantify the benefits of solar PV as a resilience resource in the hope that other electricity stakeholders will replicate our results throughout the country.”

“PJM can bring to this research an extensive body of data, knowledge and expertise,” said Stu Bresler, Senior Vice President of Operations and Markets for PJM. “At the same time, the research aligns with our ongoing efforts to cost-effectively advance resilience. As renewable electricity generation expands in our region, this initiative will help the states, markets and grid operators understand the range of potential resilience benefits renewable resources could provide.”

NARUC’s participation in the Solar Energy Innovation Network will include financial, analytical and facilitation support as it works to anticipate and address new challenges and opportunities stemming from solar energy and other distributed energy technologies. The solutions developed and demonstrated by NARUC will serve as a blueprint for communities facing similar challenges and opportunities.

“A secure and resilient electric system is critical to U.S. national security,” said Michael Wu, Principal at Converge Strategies, LLC. “This project will expand the tools available to ensure our grid can absorb and recover from disruptive events that are becoming more frequent and consequential.”

“We will begin our project with a review of how states and other energy stakeholders plan for and value system resilience. NARUC and our partners will work closely with the NREL technical assistance team to refine our focus and create blueprints for the resources we will produce by the end of the project,” said Byrnett.

NREL is operating the Solar Energy Innovation Network with funding from the U.S. Department of Energy Solar Energy Technologies Office. NREL pursues fundamental research and development of renewable energy and energy efficiency technologies to transform the way we use energy.

About NARUC
NARUC is a non-profit organization founded in 1889 whose members include the governmental agencies that are engaged in the regulation of utilities and carriers in the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands. NARUC's member agencies regulate telecommunications, energy, and water utilities. NARUC represents the interests of State public utility commissions before the three branches of the Federal government.

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