



CREATING A U.S. NATIONAL INITIATIVE ON INTEGRATING DISTRIBUTED ENERGY RESOURCES IN ELECTRICITY SYSTEMS

Better integration of distributed energy resources into the electricity system can increase demand flexibility, increase consumer choice, accelerate innovation, and enhance the grid's reliability and resilience

Reston, Va. – The Energy Systems Integration Group (ESIG) has released two new reports on the integration of distributed energy resources (DERs) into the electricity system. One report, [Lessons Learned for the U.S. Context: An Assessment of UK and Australian Open Networks Initiatives](#), assesses DER integration initiatives in the UK and Australia, distilling insights that would be instructive for the development of a national initiative around DER integration in the United States. The second report, [The Transition to a High-DER Electricity System: Creating a National Initiative on DER Integration for the United States](#), proposes a comprehensive, national initiative to develop greater consistency and consensus around DER integration in the United States. These are the second and third reports in the [ESIG series on DER integration](#), building on the first report, [DER Integration into Wholesale Markets and Operations](#).

DERs can provide a wide range of benefits to the U.S. electricity system and its customers. They can increase the flexibility of the demand side (an important element of a system with rising levels of variable renewable generation); help to lower emissions of greenhouse gases and criteria pollutants; increase consumer choice, competition, and rapid innovation; and enhance the reliability and resilience of the grid. However, realizing these benefits will require integrating DERs into electricity system planning processes, markets, and regulatory processes.

“DERs have tremendous potential to help decarbonize the grid,” said Debra Lew, associate director of ESIG. “But unleashing that potential will be difficult if every jurisdiction has to reinvent the wheel in terms of coordinating planning and operations and establishing frameworks and practices.”

The goals of a U.S. national initiative on DER integration could include: (1) creating consistency in terminology, concepts, and vision around distribution planning and operations, DER interconnection, data access and communication, utility regulation and tariffs, and markets; (2) defining nearer-term, least-regrets strategies for expanding functionality and operational capabilities on the distribution system; and (3) advancing structured dialogue on longer-term issues.

“The UK and Australian initiatives demonstrate that multi-stakeholder conversations are very important for addressing near-term, least-regrets strategies while developing a vision of long-term challenges,” said Priya Sreedharan of GridLab and the task force chair. “A national-level

DER integration initiative in the United States can learn from their experiences, developing consensus strategies that can be adapted to local conditions and tackling a range of technical challenges from operations to planning, interconnection, and data access.”

The U.S.-focused report proposes three tracks for a national initiative: Track 1 on the technical foundations, Track 2 on least-regrets strategies, and Track 3 on dialogue around longer-term issues. A successful initiative would have benefits for regulators, utilities, DER service providers, system operators, manufacturers, and customers, providing critical support for the development of a reliable and affordable high-renewables grid.

For more information on ESIG, visit www.esig.energy.

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