

INTEGRATING DISTRIBUTED ENERGY RESOURCES INTO WHOLESALE MARKETS AND OPERATIONS

Moving Toward Closer Coordination Between Distribution and Transmission Systems

Reston, Va. – The Energy Systems Integration Group has released a new report, <u>DER Integration into Wholesale Markets and Operations</u>, examining the changes in regulation, market rules, planning, and operating practices needed to better integrate distributed energy resources into U.S. wholesale markets and operations. The report covers the nearer-term implementation of FERC Order 2222, the order's implications for electricity distribution systems, and broader gaps related to DER integration in wholesale markets and distribution systems.

"For those utilities that had not planned for DER coordination in operations and markets, FERC Order 2222 compliance can be challenging. This report provides a path forward," said Debra Lew, associate director of the Energy Systems Integration Group. "As levels of DERs increase and as types of DERs proliferate, it is essential to consider how DERs interact with the transmission and distribution system in planning, operations, and markets. The report details this coordination and is a useful guide for utilities, regulators, and policymakers alike."

DERs can provide a range of benefits for electricity systems and customers. However, realizing these benefits will require enhancements to distribution system operations as well as closer coordination between distribution and transmission systems. Without coordination, electricity systems risk being exposed to inefficient capital spending and operational challenges, leading to unnecessarily high costs and potentially lower reliability.

"FERC Order 2222 brings new opportunities for integrating DERs into our power system, but successful implementation is going to require actions beyond the ISO/RTO, specifically by utilities and state regulatory commissions. This report provides guidance to these entities around where to put their attention," said Priya Sreedharan of GridLab, the task force chair. "The report was developed from a 10-month process which drew from the broad expertise of grid operators, utilities, technology and DER providers, and state regulators."

DER Integration into Wholesale Markets and Operations describes three structural participation models for DERs, discusses specific tasks for nearer-term implementation of FERC Order 2222, and outlines several higher-level needs for DER integration into wholesale markets more broadly. It calls for a national, industry-wide dialogue in anticipation of growing DER adoption, where solutions can be accelerated through joint, creative problem solving.

The Energy Systems Integration Group is a nonprofit organization that marshals the expertise of the electricity industry's technical community to support grid transformation and energy systems integration and operation, particularly with respect to clean energy.

<u>Click here</u> to download the full report.

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