

News Release

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ComEd Awarded Grant from Department of Energy for Microgrid Controller

Collaboration of innovators will create platform for future microgrid development

CHICAGO (September 16, 2014) – ComEd announced that it has been selected by the United States Department of Energy (DOE) to receive a \$1.2 million grant to build a master controller that could drive the operations of clusters of microgrids. ComEd assembled a group of leading science and technology partners for the DOE proposal including Alstom Grid, Argonne National Laboratory, Illinois Institute of Technology, Microsoft, OSISOFT, Quanta Technologies, S&C Electric, Schneider Electric and University of Denver.

A microgrid is a localized power system with the ability to self-supply and operate independently of, or in concert with, the main grid to meet the energy needs of multiple entities. Microgrids offer enhanced grid resiliency and flexibility by mitigating the impact of power outages resulting from severe weather or other disruptions. The master controller is considered to be the brain of the microgrid as it collects data from a variety of individual energy resources, centrally determines how to control and operate those energy resources (i.e., generators, energy storage, adjustable loads, smart switches, etc.) and sends out the control signals that ultimately execute the power activity.

"Creating a master controller is a critical step in unleashing the value and potential of microgrids," said Joe Svachula, Vice President, Engineering and Smart Grid, ComEd. "While working with our technology partners to develop a first-of-its-kind microgrid controller that could work in a single or clustered environment, ComEd also will gain essential insights into the foundational building blocks for deploying a robust microgrid."

Mohammad Shahidehpour, Director of the Robert W. Galvin Center for Electricity Innovation and Bodine Chair Professor at Illinois Institute of Technology, agrees.

"This award from the Department of Energy will allow IIT faculty and staff to collaborate with ComEd, Argonne National Laboratory, and the other partners in order to help position Chicago as a hub for promoting energy sustainability and independence in the United States. Through this award, IIT will be able to help further promote the Galvin Center's mission for excellence in smart grid education, research and workforce development."

Microgrids can take power generation from the traditional electric grid as well as from sustainable sources including solar and wind. They will operate independently should disruptions occur on the main grid. For example, even in the midst of the sweeping devastation of Hurricane Sandy, some east coast communities were able to maintain power during and after the severe weather impacts by leveraging micro grids.

Support for the ComEd proposal came from several Chicago officials, including Mayor Rahm Emanuel.

"ComEd's community-based microgrid has the potential to provide benefits to the city through improved reliability and enhanced resiliency in response to weather related events," said Mayor Rahm

Emanuel. "I look forward to seeing the benefits of ComEd's plan to the efficiency and economy of energy systems in Chicago and across the country."

Each of the partner companies will contribute services to help make the master controller a reality.

"There is no doubt that microgrids will be core components of the future integrated grids and extensive research and development efforts will be undertaken in upcoming years. The truly remarkable and distinguishing feature of this project is that it is initiated and will be led by a utility company," said Amin Khodaei, Ph.D., Assistant Professor, Department of Electrical and Computer Engineering, Ritchie School of Engineering and Computer Science, University of Denver. "It is a privilege for University of Denver to collaborate with ComEd as a forward-looking utility and its visionary team on this important and time-critical effort. This award will allow University of Denver to collaborate with ComEd and leading authorities in various aspects of microgrid controller design and planning to institute interconnected microgrids as viable energy systems and help address ongoing challenges of national energy security, sustainability, and resiliency."

"Quanta Technology greatly values this opportunity to support ComEd and contribute to this important U.S. DOE energy initiative to advance the utilization of microgrids in the U.S.," said Damir Novosel, President, Quanta Technology. "ComEd's leadership role in the development of the microgrid controller is an important step for safe, efficient and reliable microgrid deployment. We thank ComEd for asking us to partner with them to execute the planning, design, testing and deployment of the controller."

"S&C is delighted to be working with one of the most forward thinking utilities in the country on this microgrid project," says David Chiesa, director, Microgrid Business Development, S&C Electric Company. "This project shows how utilities are not only embracing microgrids, but leading the way in their wide scale adoption."

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Commonwealth Edison Company (ComEd) is a unit of Chicago-based Exelon Corporation (NYSE: EXC), the nation's leading competitive energy provider, with approximately 6.6 million customers. ComEd provides service to approximately 3.8 million customers across northern Illinois, or 70 percent of the state's population. For more information visit ComEd.com, and connect with the company on [Facebook](#), [Twitter](#) and [YouTube](#).