

# Managing distributed energy

Siemens Innovation Day 2017

## Taking a strategic view toward distributed energy resource management

Edison International, a public utility holding company based in California, is one of the United States' largest electric utilities and providers of industrial commercial energy services nationwide. A parent company to Southern California Edison, the organization manages over \$51.3 billion in assets.

In recent years, the landscape of those assets has continued to change to include an increasing amount of distributed energy resources, a growing call from consumers for greater participation in their power usage, and the need to meet aggressive greenhouse gas emission reduction targets. Edison has remained a leader in turning these challenges into opportunities and value for their customers. They have embraced a strategy to bring build a future-ready grid by embracing digitalization. Using modern technologies, Edison International can further employ a data-driven grid that can better integrate renewable resources, turn their consumers into "prosumers", and reduce carbon footprints.

## A case for advanced control of the grid

Under the strategic direction from Edison International, Southern California Edison will further this future-ready grid vision by using Siemens Distributed Energy Resource Management System (DERMS) software to intelligently manage its growing footprint of distributed energy resources (DER) such as grid-scale batteries, rooftop solar and electric vehicles.

The technology will be implemented and integrated by Omnetric Group, a joint venture between Siemens AG and Accenture, and will provide the utility with data and visibility across the entire distribution network, from grid planning to market forecasting, for more effective management of DERs. The technology will also allow the utility to better define, forecast and control customer-owned distributed energy resources across their territory, enabling customers to become energy "prosumers". The first phase of the DERMS implementation is scheduled for early 2018.

The accelerating adoption rate of distributed energy resources across SCE's distribution network challenges traditional utility methods used to plan, design, operate, and maintain the electric grid. As DER adoption grows, the complexity of grid management also increases, requiring intelligent software to optimize



## To realize distributed energy benefits through intelligent management

Siemens' Distributed Energy Resource Management System (DERMS) is a culmination of best-in-class planning, operations, and customer-facing platforms seamlessly integrated to solve the multifaceted challenges of incorporating and benefiting from distributed energy resources on the grid.



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network operations and network economics in an integrated, efficient way. With Siemens DERMS technology, SCE can respond to changing grid-edge conditions in real-time and capture full value of available distributed energy resources.

#### **Siemens' solution features distribution control center functionalities**

Siemens' DERMS features advanced distribution control center functionalities that provide insight to the entire power system state, operations planning to define how the system should be operated in the coming days and weeks, and customer-oriented applications that define, aggregate, forecast, settle and control customer-owned distributed energy installations within a utility's service territory. These functions improve system reliability, increase automation, communication and analytic capabilities, and drive additional revenue opportunities for SCE.

Siemens Digital Grid partners with leading utilities and industrial energy consumers worldwide to provide expertise and innovative technologies. In North America, Digital Grid has worked with more than 1,000 energy customers to deliver proven solutions and services that improve operational efficiencies, enhance reliability and resiliency, and empower consumers to better manage their energy use.

#### **Further information**

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