



GE Engineers Tackle Grid Congestion on Europe's Low Voltage Networks

- *UK Power Networks and Scottish & Southern Energy adopt new operational techniques*
- *GE Redefines Low Voltage Management Strategies; Optimize Existing Infrastructure*
- *Industry Best Practice Can Be Applied Globally*

PARIS - August 25, 2014 - GE (NYSE: GE) today announced that it has set a new industry milestone to support global utilities in their management of grid congestion on their low voltage networks. GE made the announcement on the first day of CIGRE, a global Transmission and Distribution trade show, to focus more attention on the growing challenge of grid congestion.

Grid congestion is caused when electricity demand exceeds the capacity of the network, and the uncertainty in energy patterns from low carbon resources.

Working with leading utilities in the United Kingdom, [UK Power Networks \(UKPN\)](#) and Scottish & Southern Energy (SSE), GE implemented new solutions to improve situational awareness on their networks and enhanced their visibility to network data. This increased awareness, together with the introduction of new operational tools, enabled better operational decisions.

Combined, both utilities are projecting savings of more than €300M in avoidable capital expenditures which allowed them to maximize their existing infrastructure and improve operational efficiency - from the control room to their field crews.

"Together we were able to rethink how to optimize their low voltage networks and anticipate issues that could lead to grid congestion," said Luis Perez, GE Digital Energy's EMEA Regional General Manager. "The end result was a more reliable power network and resilient grid that is delivering cleaner energy."

GE's engineers delivered the industry milestone by creating an integrated solution combining GE's PowerOn™ Advantage - Advanced Distribution Management System (ADMS) with the Geographical Information Systems (GIS) Smallworld Electric Office®, and metering head-end Smart Metering Operational Suite (SMOS). GE's engineers constructed a fully functional low voltage network model, from multiple data sources, which provides the platform for power flow analysis, integration of power electronics and advanced automation.

The solutions included:

- A GIS hosted low voltage network model that can be passed seamlessly via the Common Information Model (CIM) to the DMS optimizing data management and improving efficiency;
- Integration of smart meters providing information on customer energy consumer and modeling customer future energy consumption patterns;
- Software solutions (SMOS, ADMS, Smallworld Electric Office) – to increase productivity and efficiency with active network optimization and controls; and
- Grid intelligence solutions (Multilin DGCM) – to support power flow analysis and active network management.

UK Power Networks and Scottish & Southern Energy and are now better positioned to measure power imbalances, dispatch generation and improve customer service levels.

“Historically grid congestion on low voltage distribution networks was not a challenge because consumer consumption habits were predictable and generation on the low voltage grid was not as complex,” said Perez. “Our industry has gone through many changes in the last ten years and renewable energy is playing a bigger role. To meet this growth we have invented solutions to effectively manage low voltage networks and mitigate grid congestion challenges. These breakthroughs are helping our customers achieve their renewable targets, reduce carbon emissions and deliver affordable electricity to their customers.”

About GE

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