ABB presents digital grid approach at leading power sector event in Paris

Zurich, Switzerland, August 22, 2016 – Digital substations as key elements in future-oriented power grids to improve efficiency, safety and system visibility

ABB is presenting its digital substation model at the Cigré conference and exhibition, in Paris from August 22-26, 2016, a leading global platform for power experts and a showcase for the latest technology developments in the sector. Digital substations will be a key component of next generation grids as they enable smarter power systems. This innovative technology concept supports the digital transformation of the power sector and reinforces ABB's Internet of Things, Services and People approach.

The entire electricity system is undergoing changes on a scale and pace not seen since its inception. While there is a rapid growth in renewables, which are by nature subject to supply fluctuations, generation is now distributed over a myriad of locations and the traditional model of one-way electricity flows is giving way to multi-directional flows. This is not only bringing about changes in the transmission infrastructure itself but also the way it is operated, necessitating more intelligent management of supply and demand. This requires sophisticated monitoring, communication and control systems across the power value chain of generation, transmission, distribution, storage and consumption and calls for a smarter power system that makes greater use of digital technologies.

Digital substations will play a key role in the power system of the future. They will incorporate digital communications via fiber optic cables, replacing traditional copper connections using analog signals. They will also enable greater flexibility, availability and safety, while reducing cost, risk and environmental impact. Digital substations will also feature Intelligent Electronic Devices (IEDs) with integrated information and communication technology. An IED is a microprocessor-based protection and control device for power equipment, such as circuit breakers, transformers and capacitor banks. The increasing amounts of data available in a digital substation will also enable more sophisticated monitoring, diagnostics, protection and optimization of assets.

"Digital substations are a key component in shaping the evolving grid and ABB's latest technology offering in this area will enable customers to optimize their operations" said Claudio Facchin, President of ABB's Power Grids division. "Facilitating grid automation and the convergence of information and operational technologies are an integral part of our Next Level strategy and ABB's Internet of Things, Services and People approach."

Claudio Facchin delivered the keynote address at the opening ceremony of Cigré 2016 on August 21, presenting the evolution of the power sector and related technology trends including the digital substation.

ABB's digital substation showcase at Cigré includes disconnecting circuit breakers (DCB) with Fiber Optic Current Sensors (FOCS), a hybrid high-voltage switchgear with a digitally compatible motor drive, Relion® protection and control IEDs, the FOX family of communications devices, a MicroSCADA Pro monitoring

system and an Asset Health Center solution. The exhibit also demonstrates ABB's Transformer Intelligence® concept, in which sensors, monitoring platforms and software are combined to enable the extraction and analysis of data to optimize performance, improve safety and optimize costs.

ABB (www.abb.com) is a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 135,000 people.

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