



GE Power Launches New Innovations at CIGRE 2018 Including Revolutionary HVDC Control System

Product launches emphasize commitment to deliver innovative, software-enabled solutions to help customers navigate the shifting energy landscape

- Exciting product innovations to help customers meet evolving challenges include eLumina™ HVDC Control System, 72.5kV compact Gas Insulated Switchgear (GIS), new “Digital Twin” for Power Transformers, Intelligent Digital Substations, Asset Lifecycle Management Services and advanced Energy Management System (EMS) with full Wide Area Monitoring Systems (WAMS) enhancement
- New products will help improve grid utilization, increase access to renewable energy sources, and improve reliability and efficiency throughout the energy value chain for customers and citizens around the world
- Through its Digital Energy portfolio of software solutions and services, GE supports the transformation of energy networks

Paris, France – August 27, 2018 – The role of the grid is experiencing a pivotal change. GE Power’s Grid Solutions business (NYSE: GE) today unveiled product innovations at [CIGRE 2018](#) to address customers’ needs to adapt to a more digitalized, decentralized and decarbonized energy landscape.

In the past, a simpler grid model transmitted electricity from large generation plants to end users. With [carbon dioxide levels](#) the highest they have ever been in 800,000 years, a modern grid is key to integrate renewable energy resources effectively as they are forecasted to [represent two-thirds](#) of global net electricity by 2050.

“The global energy landscape is undergoing a massive transformation. The grid of the future will require smarter, faster and more interoperable solutions to ensure resiliency, efficiency and security. That’s why our Grid Solutions team is focused on investing in and delivering new digital, automation and HVDC technologies to transform energy networks across the globe. Our new product innovations will help our customers not only navigate the ever-changing energy landscape, but also unleash the full potential of electric grids worldwide,” said Reinaldo Garcia, president and CEO of GE Power’s Grid Solutions business.

At this year’s CIGRE, GE Power’s Grid Solutions business launched the following new products and services as part of their holistic approach to grid modernization:

- [eLumina™ HVDC Control System](#): Introducing the industry’s first HVDC solution to implement a world-class digital measurement system fully based on IEC 61850. eLumina delivers a 50 percent smaller footprint and 80 percent reduction in field connections that simplifies system architectures, improving maintenance and operational efficiency. With 10 times more computing power, eLumina brings more data to operators to enable actionable intelligence through improved analytics and situational awareness. This new powerful platform is designed around a “single-source-of-truth” system model, enabling a more scalable, flexible, interoperable and adaptive HVDC solution.
- [F35 Gas Insulated Switchgear \(GIS\) with 72.5kV](#): By [2050](#), 66 percent of the world’s population will be living in urban communities, requiring more power in compact areas. Simultaneously,



offshore wind is predicted to reach a cumulative capacity of 115 GW by 2030, and these wind farms are moving into deeper waters that require larger turbines with higher power ratings. To address these shifts, GE Power's Grid Solutions business has launched a new compact F35 Gas-Insulated Substation (GIS) for 72.5 kV networks. With a bay volume reduced by 23 percent and a 30 percent reduction in SF₆ mass this new GIS delivers reliable power to urban, industrial and windfarm applications. For wind turbines and collection platforms specifically, this enhanced design allows the power voltage transformer to feed auxiliaries under "no wind" conditions, making it the ideal interface for offshore wind applications.

- **Modernizing the Grid through Digital Transformers, Intelligent Digital Substations, Asset Lifecycle Management Services and advanced EMS with full WAMS enhancement:** As automation grows across the energy industry, digital control systems will play a vital role in the machines, grids and systems that deliver energy to the people and places that need it most. With these devices in place, the grid of the future will be able to recalibrate itself in real-time so that it can balance demand and integrate multiple-generation resources reliably. From the field to enterprise, GE Power's Grid Solutions business has created digitally connected solutions to increase efficiency and reliability of the network and its connected assets, including:
 - ["Digital Twin" for Power Transformers](#) enables effective asset performance management to extend asset life and maximize operational performance. Advanced sensor technology with a digitalized secondary system delivers condition-based data and statistic models to build a software-enabled model of the transformer or even the entire substation: the twin. This interactive model allows operators to move from reactive to predictive maintenance solutions and improve system efficiency.
 - [Intelligent Digital Substations](#) enable utility operators to maximize asset and substation utilization up to 30 percent. Coupling powerful visualization tools with the digitization of primary substation equipment and secondary systems, operators can collect and analyze critical data to proactively detect potential failures up to six months in advance.
 - [Asset Lifecycle Management Services](#) include a comprehensive portfolio of methods to collect distribution and transmission asset health data through a set of proven analytics and consulting services. These services are tailored to reduce failure rates by up to 50 percent, reduce maintenance costs by up to 25 percent and extend asset life by up to 20 percent. By incorporating the use of data, these end-to-end services optimize grid asset management strategies.
 - [Advanced EMS with full WAMS enhancement](#) provides the situational awareness operators need to increase network utilization and stability allowing more renewable integration and network automation.

With GE's hundred plus years of domain expertise and the power of digital integration, GE Power's Grid Solutions business is playing a critical role in boosting efficiency throughout the energy value chain across the globe.

If you are attending [CIGRE](#), visit [GE's stand #330](#) on the third floor of Palais des Congrès de Paris, France and contact us for on-site interviews with our industry experts. For daily updates, follow us at @GE_Power and the hashtag #CIGRE47.

About GE:

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services,



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technology and scale, GE delivers better outcomes for customers by speaking the language of industry.
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About GE Power

GE Power is a world energy leader providing equipment, solutions and services across the energy value chain from generation to consumption. Operating in more than 180 countries, our technology produces a third of the world's electricity, equips 90 percent of power transmission utilities worldwide, and our software manages more than forty percent of the world's energy. Through relentless innovation and continuous partnership with our customers, we are developing the energy technologies of the future and improving the power networks we depend on today. For more information please visit www.ge.com/power, and follow GE Power on [Twitter](#) and on [LinkedIn](#).

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