SIEMENS

European Utility Week, November 12-14, 2019, Paris Expo Porte de Versailles, Pavilion 1, Booth C60

Siemens expands offerings for IoT based energy automation applications for smart grids

- **New Grid Diagnostic Suite offers unique comprehensive insights**
- **Gain a grid-wide view of energy automation systems**
- **Market launch of initially four cloud-enabled applications**
- **Enhances cost efficiency and availability of smart grids**
- **Support through digitalization in increasingly complex power grids**

Siemens is presenting for the first time its new Grid Diagnostic Suite at the European Utility Week in Paris. The Grid Diagnostic Suite initially includes four cloud-based applications which collect data from new or existing field devices for protection, distribution automation and power quality. These data are stored and analyzed in the cloud. This requires almost no additional engineering effort. Distribution grid operators and operators of electricity grids in industrial parks can quickly tap into useful information from devices installed anywhere in the smart grid. This will enable grid faults, for example, to be detected at an early stage and quickly rectified. After information is collected, vulnerabilities can be identified, and necessary measures can be implemented before any damage occurs. In this way, Internet of Things (IoT) applications in the Grid Diagnostic Suite enhance the availability of power grids while enabling them to be operated cost-efficiently.

"With our new IoT-based offering for energy automation, we are helping our customers to manage the increasing complexity of power grids and prepare for future challenges," said Robert Klaffus, CEO of the Digital Grid business unit at Siemens Smart Infrastructure. "Data can now be accessed quickly and easily via existing communication channels. In the central MindSphere Cloud, users can then smoothly consolidate, visualize and evaluate data and, if necessary, react quickly. We are paving the way for truly smart grids."

Siprotec and Sicam devices with IoT interfaces are connected via the open standard OPC UA PubSub protocol with the cloud-based, open IoT operating system MindSphere from Siemens. Data transmission satisfies the most stringent cyber security requirements, allowing end-to-end authentication and encryption based on certificates. With *Sicam GridPass*, Siemens offers a product that securely creates and automatically manages certificates.

The *Siprotec Dashboard* displays data from the Siprotec 5 series of protection relays, which was previously difficult to access, quickly and clearly in a map view or as a diagram on a mobile device. For the first time, data from the entire grid is available in the cloud without any additional engineering effort. Intuitive navigation eliminates the need for extra training.

The *Sicam Navigator* enables comprehensive monitoring of medium- and low-voltage grids as well as secondary distribution substations. The app provides detailed information about messages, alarms and specific grid parameters. This makes it possible, for example, to present the performance of power grids in a transparent manner, allowing operators to estimate where new charging points for electric vehicles should be set up, for instance. In addition, in the event of a fault, the exact grid section affected can be pinpointed.

Siemens has now developed the cloud-based application *Sicam Localizer* for distribution grids with overhead lines. Detailed information about the status of individual grid segments, such as faults, is displayed clearly and concisely. Individual operating values such as phase currents can also be displayed. For example, in the event of fallen trees or branches in forest areas, a service team can be deployed exactly where the problem occurs and restore grid stability quickly. In this way, the *Sicam Navigator* and the *Sicam Localizer* help reduce and even prevent power outages, better plan service calls and enhance the availability of power supply.

For operators of industrial parks and data centers, power quality (PQ) is of great importance for the quality of supply. The app *PQ Advisor Premium* can record and display grid parameters such as electrical voltage and frequency, minute by minute and without any gaps from an entire fleet of PQ devices. The collected information is displayed in a clearly laid-out format on a dashboard. A traffic light-style display signals violations of tolerability limits, allowing users to take necessary action early on when anomalies occur.

New challenges for electricity grids are posed in particular by the expansion of e-mobility along with increasing infeed of volatile generating capacity. The cloud-based applications of the Grid Diagnostic Suite will help operators of power grids to operate their grids and systems more cost-effectively with the aid of previously unused data, leading to even smarter grids.

This press release and a press picture are available at https://sie.ag/32eWCVW

More information about Siemens Smart Infrastructure is available at
www.siemens.de/smart-infrastructure

More information about the Grid Diagnostic Suite can be found at
www.siemens.com/iot-energy-automation

Contact for journalists

Eva-Maria Baumann

Tel.: +49 9131 17 36620; e-mail: eva-maria.baumann@siemens.com

Follow us on Twitter: www.twitter.com/siemens_press

Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. SI creates environments that care. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland, and has around 72,000 employees worldwide.

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of power generation and distribution, intelligent infrastructure for buildings and distributed energy systems, and automation and digitalization in the process and manufacturing industries. Through the separately managed company Siemens Mobility, a leading supplier of smart mobility solutions for rail and road transport, Siemens is shaping the world market for passenger and freight services. Due to its majority stakes in the publicly listed companies Siemens Healthineers AG and Siemens Gamesa Renewable Energy, Siemens is also a world-leading supplier of medical technology and digital healthcare services as well as environmentally friendly solutions for onshore and offshore wind power generation. In fiscal 2019, which ended on September 30, 2019, Siemens generated revenue of €86.8 billion and net income of €5.6 billion. At the end of September 2019, the company had around 385,000 employees worldwide. Further information is available on the Internet at www.siemens.com.