SIEMENS

Press

Zug, December 17, 2020

Siemens introduces new solution for monitoring high-voltage lines

- **One single device for lines of up to 500 km**
- **Monitoring for powered, unpowered or grounded lines**
- **Highly precise localization of line faults**
- **Simplifies maintenance and increases network reliability**

Siemens Smart Infrastructure recently launched its new PowerLink CM, a condition monitoring solution for high-voltage AC and DC transmission lines. To ensure reliable power supply, optimize grid utilization and prevent blackouts the device is designed to precisely locate faults in the transmission grid and continuously track line conditions. One single PowerLink CM device is sufficient to monitor line lengths of up to 500 km. Faults as well as line condition can be detected in powered, unpowered or grounded lines. Fault reports are received by the affected substation and are forwarded from there to the control room. For continuous line monitoring, the device can be connected to MindSphere, the open cloud-based Internet of Things (IoT) platform from Siemens, which facilitates transparent processing of all line data in the cloud. This allows grid operators to analyze status reports and optimize maintenance activities.

“With the new PowerLink CM solution, transmission grid operators can detect and locate possible line problems before causing major transmission network issues,” said Robert Klaffus, CEO Digital Grid at Siemens Smart Infrastructure. “PowerLink CM supports predictive operations management. Transmission grid operators can better manage their assets, avoid blackouts, and guarantee a reliable supply of electricity.”

Siemens AG
Communications
Head: Clarissa Haller

Werner-von-Siemens-Straße 1
80333 Munich
Germany

Reference number: HQSIPR202012116092EN

Existing fault localization solutions for power lines use detectors based on traveling wave technology. For condition monitoring, they are often supplemented with specialized sensors installed along the line supported by regular visual inspections via drones or helicopters. This approach is very costly, however, and not suitable for use on the unpowered or grounded lines typically found in the high-voltage direct-current transmission environment or for maintaining existing or building new power lines. The new system provides real-time monitoring of every type of transmission power line by continuously measuring line profile. Location information is available at the time of the event, but can also be determined after the fact. Copper theft, common in some countries, can be detected even in unpowered lines.

In addition, PowerLink CM can detect sporadic or gradual changes in the condition of continuously operating lines, such as changes in ground clearance, clearance to trees, impact of weather events such as ice load or temperature fluctuations, as well as peak loads. This makes it possible to detect potential line problems early on and take countermeasures before a serious fault occurs.

This press release as well as a press photo can be found at https://sie.ag/37UY05e

For more information about power line condition monitoring, see https://new.siemens.com/global/en/products/energy/energy-automation-and-smart-grid/smart-communications/powerline-condition-monitoring-powerlink-cm.html

Contact for journalists
Eva-Maria Baumann
Phone: +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. Active around the world, the company focuses on intelligent infrastructure for buildings and distributed energy systems and on automation and digitalization in the process and manufacturing industries. Siemens brings together the digital and physical worlds to benefit customers and society. Through Mobility, a leading supplier of intelligent mobility solutions for rail and road transport, Siemens is helping to shape the world market for passenger and freight services. Via its majority stake in the publicly listed company Siemens Healthineers, Siemens is also a world-leading supplier of medical technology and digital health services. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power that has been listed on the stock exchange since September 28, 2020.
In fiscal 2020, which ended on September 30, 2020, the Siemens Group generated revenue of €57.1 billion and net income of €4.2 billion. As of September 30, 2020, the company had around 293,000 employees worldwide. Further information is available on the Internet at www.siemens.com.