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Siemens and Iljin Electric develop the first SF6-free 170 kV gas-insulated switchgear with vacuum switching technology

- **The world's first gas-insulated switchgear without SF6 for 170 kV / 50 kA**
- **Vacuum interrupter unit and purified air replace SF6 as the quenching/insulating medium**

Siemens and Iljin Electric, a Korean manufacturer of electrical systems and gas-insulated switchgear (GIS), have signed an agreement to develop an SF6-free GIS for the 170 kilovolt (kV) voltage level. The technology has already been developed by Siemens for applications up to 145 kV. This GIS uses treated air, known as "Clean Air", instead of sulfur hexafluoride (SF6) as the insulating medium. "This makes the GIS environmentally friendly and does not require any special precautions to be taken during manufacturing, operation, and recycling. The GIS can also be used at extreme temperatures, and there is no need to report the quantities of fluorine gas used.", explains Ralf Christian, CEO of the Siemens Division Energy Management.

High-voltage circuit-breakers and gas-insulated switchgear with SF6 as the insulating, switching, and quenching gas remain in our product range. They form the basis for the new development, whose vacuum switching, and so-called clean air technologies allow them to work without any SF6 at all. A vacuum interrupter unit handles the switching and arc quenching functions, while industrially treated and purified air provides the insulation for the current-carrying conductors inside the housing. "We are very pleased to have the opportunity to work with Iljin on the development and production of an environmentally friendly 170 kV GIS in Korea," says Cedrik Neike, Member of the Managing Board of Siemens AG. "By developing these innovative products, we play our part in Korea's future environmentally friendly

energy landscape.”

After the recent milestone of commissioning the first Vacuum-Clean-Air Circuit-breakers and Clean-Air Instrument Transformers in the German 110 kV high-voltage grid was reached in June 2018, the next step is the further development for the 170 kV level.

Jung-Suk Huh, CEO of Iljin, says, “By developing this modern GIS, based on the extensive technological experience and knowledge of the two companies, we will be able to meet Korea’s demand for environmentally friendly products.”

The press kit for CIGRE 2018 is available at

www.siemens.com/press/cigre2018

This press release is available at

www.siemens.com/press/PR2018080270EMEN

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