

Press release

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Siemens Energy Commissions First Emissions-Free, Clean Air Circuit Switcher

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- Blue Clean Air Circuit Switcher eliminates Green House Gas (GHG) emissions, thus contributing positively to the decarbonization of energy
- Advanced current interrupting capability prolongs the lifespan of the technology over 5 times longer than conventional SF₆ circuit switchers, resulting in 40% lower lifecycle cost
- System is virtually maintenance free with higher reliability in extreme cold conditions

Siemens Energy and Traverse City Light and Power (TCL&P) have installed the first circuit switcher that utilizes clean dry air in place of traditional sulfur hexafluoride (SF₆) insulating gas.

Built at the Siemens Energy plant in Richland, Mississippi, and commissioned at TCL&P in October 2020, the Blue Clean Air 72.5 kV CPV2V Circuit Switcher is the first in the U.S. to provide reliable short-circuit interruption without emitting harmful gases into the atmosphere. By contrast, SF₆, the insulating gas typically used in gas insulated equipment (GIE) has a global warming potential of 23,500x that of CO₂.

Siemens Energy is focused on creating environmentally friendly products like this carbon neutral technology that are sustainable and help drive the energy transition. The Blue line of Clean Air vacuum technology for Circuit Breakers and Switchers is capable of reliable short-circuit interruption at voltage levels above 69 kV with no Global Warming Potential (GWP) emissions over the lifetime of the equipment.

TCL&P is a community-owned municipal utility serving over 12,700 customers in Traverse City, Michigan, as well as parts of East Bay, Elmwood, Garfield and Peninsula townships. It has adopted renewable generation sourcing goals of 40% by 2020, and 100% by 2040. Known for its focus on environmental stewardship, TCL&P has implemented many programs and standards to reduce its carbon footprint. Tony Chartrand, system engineer at TCL&P, says the utility chose to upgrade to the Blue Clean Air technology to “Provide more reliability to our customers and save maintenance costs along with being more environmentally friendly.”

The Blue Clean Air Circuit Switcher is designed to reliably operate in conditions as low as -50° C, making it ideal for cold weather climates by eliminating the need for external heaters. The design and reliability of the components make it maintenance free over the lifetime of the circuit switcher.

Additionally, the circuit switcher is easily filled with clean dry air as needed, eliminating the need for costly fluorinated gas storage and use of complex gas carts to handle SF₆ gas. Replacing an existing circuit switcher with the Blue Clean Air model is simple because it shares a similar footprint. Clean air vacuum technology offers estimated life cycle cost advantages up to 40% over SF₆ circuit switchers.

“By investing in reliable and ecologically responsible products, like our Blue Clean Air technologies, our customers increase their production cost competitiveness while also helping to protect the environment,” says Wade Lauer, senior vice president, Transmission Products and Systems North America for Siemens Energy.

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