

Grid Solutions



GE VERNOVA

QScale

SUCCESSFUL **POWER-UP** OF QSCALE'S Q01 CAMPUS **HIGH-DENSITY COMPUTING CENTER**



Project Overview

PROJECT	GE Vernova's Grid Solutions business provided critical electrical infrastructure in the development of QScale's Q01 Campus, including a double busbar substation that can deliver 142 MW of capacity and is powered by nearly 100% renewable energy.
COUNTRY	Quebec, Canada
CUSTOMER	QScale
TECHNOLOGY	• DT1-145 Dead Tank Circuit Breakers • CGVB-08 145 kV vertical break disconnectors, including a DWatch smart operating mechanism • OTCF oil-filled coupling capacitor voltage transformers
SCOPE	QScale built its Q01 Campus – a high-density computing center anchored by a 266 MVA 120 kV substation – with the goal to reduce its customers' computing carbon footprint through the injection of nearly 100% renewable power. GE Vernova's Grid Solutions business provided critical electrical equipment in support of the project's success.

The Benefits

QScale's Q01 High-Density Computing Center benefits from a tailor-made substation allowing QScale to upscale its computing capacity and face growing power demand while prioritizing decarbonization goals. The Q01 Campus was recognized as the North American Data Center Project of the Year at the DCD Global Awards 2023.



The Customer Challenge

QScale, a developer of environmentally responsible data processing centers for high-performance computing, is a Canadian-based company founded in 2018 with a mission to power artificial intelligence with renewable energy.

The company's Q01 Campus is QScale's first large-scale hosting facility, requiring unprecedented scalability for its clients. As a result, the company needed a high-capacity substation to supply its new campus with high-voltage power, with an additional focus on improved sustainability in the face of growing decarbonization objectives.

The Solution

QScale worked closely with contractor [Revenco](#) on the implementation of Grid Solutions' substation equipment, including four DT1-145 Dead Tank Circuit Breakers; seven CGVB-08 145 kV, 650 kV vertical break disconnectors, including a DWatch motor operator; and six OTCF capacitor voltage transformers. The disconnectors with the DWatch installed featured monitoring and motor control capabilities, communication of monitoring data according to IEC 61850 in fiber optics, and a touchscreen panel for easy diagnostics without the need for additional tools such as a PC or tablet.

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