MEGGiTT

SUCCESS STORY

vibro-meter®

ABOUT THE PROJECT

A large gas turbine OEM supplied two sets of **gas turbines to a large coal fired power plant**, located in Delta, Utah. It is the beginning of a plant conversion from **coal** to **100% renewable hydrogen** using two advanced power trains to feed power to Southern California via an existing high-voltage direct-current (HVDC) line.

Overview of coal fired power plant in Utah

Estimated delivery to the site is in March 2023.It is the **first Advanced Class Gas Turbine** in the industry specifically designed to transition from natural gas to renewable hydrogen fuel. These turbines have a track record of generating **more than 1 million hours of operating hours.**

The turbines are designed to run on a mix of 30% hydrogen and 70% natural gas upon **phase 1 completion in 2025**. CO2 **emissions will be reduced by 75%** with the beginning fuel mixture.The plan is to have the turbines run on **100% hydrogen by 2045**.

SOLUTION

- The turbines will be equipped with **Meggitt** sensors.
- The **Meggitt CPFM** (**Combustor Pressure Fluctuation Monitoring**) **System** for each turbine is comprised of 16 pressure sensors (**CP515**), 4 accelerometers (**CA134**), and cables and signal conditioners
- The signal conditioners will be built into NEMA4X enclosures at the Meggitt Londonderry office by the Technical Services Team before being tested and delivered to site

CHALLENGE

- Conversion from coal to renewable hydrogen fuel.
  The existing power plant is one of the largest coal -fired facility of 1800MW that will switch to natural gas and eventually burn 100% hydrogen

BENEFIT

- The power plant will be connected to the Southern California grid by existing lines. Energy from the plant will be used toward meeting California's goal to be completely decarbonized by 2045.
- The gas turbine OEM is also building a renewable hydrogen generation and storage facility near the plant. Excess renewable energy from across the Western U.S. will be used to generate "green hydrogen" via electrolysis and store it in an existing underground salt dome under the power plant.
- The first phase of the storage project will have an energy storage capacity of **150,000 MWh**, which is **150X** the current installed US LI battery capacity.

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