



Energy Facility Compliance Testing and Modeling

Powertech's Compliance Services team will support your facilities' grid compliance needs with testing, modeling, and consulting services in accordance with North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and other regional reliability standards.

Over the years, NERC, WECC, and other regional regulatory entities have required owners' compliance with generator testing and model validation programs. Non-compliance may be subject to substantial fines or delay of unit interconnection.

Powertech's Compliance Services team provides field testing, modeling, and consulting services to support grid compliance. With more than 25 years of experience, our engineers have tested over 600 energy facilities (including thermal, hydraulic, nuclear, solar, wind, BESS, etc.) as well as FACTS devices (synchronous condenser, HVDC, etc.) in US, Canada, Australia, and many Asian and Mideast countries. We work with clients to develop detailed test plans, perform on-site testing, and develop models based on comparison of computer simulation results with field measurement data. Powertech offers the following services in accordance with the NERC standards and other applicable compliance requirements:

- **MOD-025-2:** Real and reactive power capability testing and verification of generating units
- **MOD-026-1:** Testing and modeling of generator excitation control system or plant volt/var control functions
- **MOD-027-1:** Testing and modeling of turbine/governor and load control or active power/frequency control
- **PRC-006-5:** Evaluation Study of Automatic Underfrequency Load Shedding Schemes
- **MOD-032-1:** Gathering generating facilities' steady state, dynamic, and short-circuit data
- **PRC-019-2:** Coordination of generating unit or plant capabilities, voltage regulating controls, and protection

- **PRC-024-3:** Setting generator frequency and voltage protective relays to ride through defined frequency and voltage excursions
- **PRC-025-2:** Analysis of the generator load-responsive protective relay settings to prevent unnecessary generator tripping
- **PRC-026-1:** Analysis of the generator load-responsive protective relay performance during stable power swings
- **PRC-027-1:** Coordination of Protection Systems for Performance During Faults
- **AVR and PSS Tuning Study and Testing:** Theoretical study and field tuning for generator AVR and PSS parameter settings

Powertech's engineers are also active members in various NERC standard drafting teams, modeling work groups and task forces, such as NERC Project 2020-06 (MOD-026/027) and Project 2021-01 (MOD-025/PRC-019) drafting teams, Inverter-Based Resource Performance Subcommittee (IRPS), and WECC Modeling Validation Subcommittee (MVS). We ensure our customers always get up-to-date information and achieve compliance with the latest standards.

Compliance Services:

The Powertech Compliance Services team provide both field testing and modeling study services for energy facility to meet grid compliance requirements. Under the Power System Studies Division, the full division can provide a wide range of power system consulting study and field testing services, including comprehensive power system stability assessment, generation and load interconnection, electromagnetic transient, short circuit and arc flash, protection relay coordination and many other studies.

FOR MORE INFORMATION CONTACT:

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ABOUT POWERTECH LABS:

Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.

Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.

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