

GE ENERGY CONSULTING

# Generator Protection Study and Relay Settings

NERC PRC Standard Compliance Services



Maintaining high reliability for the bulk electric system (BES) is essential to grid stability. As such, the North American Electric Reliability Corporation (NERC) has adopted several standards that require the coordination of protection between BES equipment and entities, including setting load responsive relaying to prevent unnecessary tripping during system disturbances.

And GE's Energy Consulting team can help you cost-effectively implement these standards through our NERC Protection and Control (PRC) standard compliance services.

As a world leader in heavy duty turbine and generator manufacturing, GE has decades of experience evaluating the design and operation of all generator frame sizes for gas, steam, combined cycle, nuclear, synchronous condensers and renewable generation, including hybrid and battery energy storage system (BESS) power plants. With the completion of hundreds of power plant protection studies, more than 20 years of experience in generator protection industry standard development, and the development of GE-specific generator protection and operation technical references, our Energy Consulting team is uniquely qualified to evaluate NERC PRC compliance and provide coordination recommendations.

## Key benefits provided by GE's Energy Consulting team:

- Experience: Proven track record conducting more than 300 thermal and renewable generating plant protection studies
- Expertise: Decades of involvement in developing industry standards and technical references related to power plant protection
- Efficiency: Unique knowledge of GE's units as well as wide-ranging experience with non-GE turbines, generators, controls, automatic voltage regulators (AVRs), and protective relays
- Education: A team of experts with a thorough understanding of equipment capabilities and limitations

## NERC PRC Standards

- PRC-019-2: Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection
- PRC-024-2: Generator Frequency and Voltage Protective Relay Settings
- PRC-025-1: Generator Relay Loadability
- PRC-026-1: Relay Performance During Stable Power Swings
- PRC-027-1: Coordination of Protection System Performance During Faults

## Data Requirements

GE's Energy Consulting team works with you to gather the specific generator, turbine control, excitation system, and other data needed. All NERC PRC standard compliance services are performed from our offices in Schenectady, NY.

For more information visit:  
[www.geenergyconsulting.com](http://www.geenergyconsulting.com)