



# Meet your requirements with NERC - approved training

## System Operators' time is at a premium.

So the training they receive not only needs to meet their NERC Continuing Education Hours (CEH) requirements, but must also be effective in making their job more productive. As a NERC-Approved Provider, General Physics Corporation (GP) can help. With over 40 years of experience specializing in the energy industry, no one knows better how to help you achieve your training, business, and compliance goals. Whether you need our training to boost performance or to meet your CEH requirements, you can rest assured you're getting the best with these courses from GP.



General Physics Corp. is recognized by the North American Electric Reliability Corporation as a continuing education provider who adheres to NERC Continuing Education Program Criteria.



## NCE\_001

1 CEH, 1 Hr STD, 1 Hr Operating Topic

### Introduction to Power System, Sabotage Reporting, and Disturbance Reporting

When you have completed this course, you will be able to identify the organizations and events that affect the Bulk Electric System (BES), including the regulating body, users of the BES, sabotage event identification, required corrective actions, and the identification and response to a disturbance.

#### Objectives:

- Identify the regulating body of the BES, and describe its function.
- Identify the entities that use the BES, and describe their functions.
- Describe the normal interaction required between the Generator Owner (GO) and Generator Operator (GOP) and other entities within the BES.
- Identify potential sabotage events.
- Describe how to respond to potential sabotage events.
- Describe the reporting requirements for potential sabotage events.
- Explain what qualifies as a disturbance and what qualifies as a reportable disturbance.
- Describe how GOPs respond to reportable disturbances.
- Describe how to complete disturbance reports.



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## NCE\_002

2 CEHs, 1.5 Hrs STD, 2 Hrs Operating Topic

### Facility Ratings, System Reliability, Protection Coordination, and Generator Operation for Maintaining Network Voltage Schedules

When you have completed this course, you will be able to explain:

- The need and use of Facility Ratings Methodology
- How system reliability is achieved by operating within limits, and using scheduling and system modeling information
- How system protection coordination is affected by protective relays, including general requirements, device failure or scheme change, and operation investigation

#### Objectives:

- Explain how equipment and facility operating limits are used to maintain the BES in a secure, safe, and reliable state.
- Describe the methodologies GOs/GOPs use to establish facility operating limits.
- Explain the responsibility of GOs/GOPs to communicate facility operating limits to relevant BES entities.
- Review the hierarchical structure that has been established to ensure the reliable operation of the BES.
- Explain the importance of operating within equipment and facility limits.
- Explain the consequences of violating equipment and facility limits.
- Describe how scheduling and system modeling information is used.
- State the communication requirements between the GOs/GOPs and other registered entities to ensure the safe, reliable, and secure operation of the BES.
- State the purpose and general requirements for protective relays on the BES.
- Explain how relay failures and changes in relay schemes may affect the reliability of the BES.
- Explain how to investigate and analyze protective device operation.
- State the function and importance of generator excitation systems in the voltage control, reactive power control, and overall stability of the BES.
- Describe the role of voltage regulators in the control of generator excitation systems.
- State the responsibilities of the GOs/GOPs in maintaining the voltage schedules of the BES.
- State the tools available to maintain the voltage schedules.

## NCE\_003

1 CEH, 1 Hr Operating Topic

### General Relaying and Instrument Transformers

At the completion of this course, you will be able to identify the proper use and application of relays, potential transformers, and current transformers that are used for system protection.

#### Objectives:

- Describe the role protective relays play in the station service system.
- Describe the construction and operation of electromechanical and solid state relays.
- Describe the National Electrical Manufacturers Association (NEMA) protective relay device numbers.
- Describe relay coordination (including zones of protection).
- Define the term potential transformer.
- Define the term current transformer.

Learn more about GP's system operator training, compliance training, and custom programs at [gpfusion.gpworldwide.com](http://gpfusion.gpworldwide.com)



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