

Principles for System Reliability

Instructor-Led Training

Audience

Operating personnel in generation and transmission, either veterans who haven't reviewed these concepts in some time or new operators who will gain a vital understanding of the key components of reliability and how they operate together to form the Bulk Electric System.

What Do You Receive?

- 32 CE hours
- 8 NEC Standards hours
- 16 simulation hours
- 24 EOP hours
- Licensed engineers can earn as many as 32 continuing professional development hours towards their PE requirements

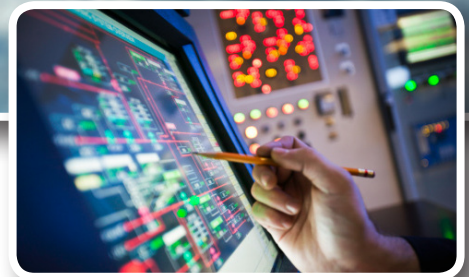
Basic Course Information

During the first two days, students learn the basic principles of electric generation and transmission, review selected NERC operating standards that govern generator and transmission operations, and study the capabilities of generation and transmission facilities and their effect on emergency conditions.

- Power Plant Principles
- Substation Equipment
- Power Plant Characteristics, Configurations and Response
- Transmission Line Characteristics
- Power Plant Controls, Loadability and Protection
- Voltage and Angle Instability

During the second two days, students learn to operate the PowerSimulator®, then use it to visualize, monitor, and control a complex power system. During these exercises, specific operating principles, communications, and decision-making processes are reviewed, discussed, and practiced again to reinforce each student's understanding. Debriefings are conducted after each drill to review and learn from operational and team decision-making strategies.

- Reliable switching, especially related to transferring equipment, opening lines and restoring lines safely and reliably
- Managing megawatt flows with consistent maintenance and monitoring the flows using MW controls within operating security limits
- Preventing voltage collapse, including how VC occurs, characteristics of components in VC and how to avoid collapse under multiple contingencies
- System shutdown, including how both planned and unplanned shutdowns occur and how to manage an orderly, planned shutdown under a variety of situations
- System restoration, including working from a restoration plan, modifying the plan as needed and restoring a system under various contingencies



CREDIT HOURS:

32:CEH 8:STD 16:SIM 24:EO*

* For PER compliance, EO training must be applicable to each individual organization. SOS hours are recommendations only. Please check with your compliance group for eligibility.



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SOS Intl. and NERC ID SOS_INTL_001 is recognized by the North American Electric Reliability Corporation as a continuing education provider who adheres to NERC Continuing Education Program Criteria.