

Meeting the Daily Challenge

ACTIVITY TITLE: Meeting the Daily Challenge

TARGET AUDIENCE: ☒ Transmission Operator ☒ Market Operator
☒ Reliability Operator ☒ Operations and Planning Eng
☒ Balancing & Interchange ☒ Supervisor/Manager/Support
☒ Generator Operator ☐ Other _____

NERC CEHs: Operating Topics CE Hours: 16.0
NERC Standards CE Hours: 2.0
Simulation CE Hours: 8.0
Professional Related CE Hours: 16.0

NERC EMERGENCY TRAINING HOURS: 16.0 hours

ACTIVITY SUBJECT MATTER: ☒ Basic Concepts ☐ Power System Restoration
☒ Power Transfer ☐ Market Operations
☒ System Protection ☐ Tools
☒ Interconnected Operation ☐ Operator Awareness
☐ Emergency Operations ☐ Policies and Procedures

DELIVERY SCHEDULE: Activity is expected to be delivered over a 2-day period. This 2-day period is expected to consist of two 9-hour days with 1 hour allotted for lunch each day. In accordance with NERC CEP criteria, a 10-minute break every hour can be accommodated. The activity assessment does not require any additional time allotment.

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A. ACTIVITY OVERVIEW

This activity is intended to provide system operators with knowledge and operating principles to survive the daily challenges of operating in the control center. The content of the activity includes topics related to Transmission Operations and Generation Operations. The course includes the following content: Operator Responsibilities, Generation Control Concepts, Resource Scheduling, System Reserves, Disturbance Control Standards, Transmission Control Concepts, Voltage Control, Thermal Control, Generation Shift Factors, Contingency Analysis, and Emergency Outages.

B. METHOD OF INSTRUCTION

The activity is expected to be delivered in an Instructor Led environment. The activity is expected to be delivered utilizing a PowerPoint presentation in conjunction with the various exercises that are integrated into the material. The activities also require the utilization of the EPRI Generic Simulator for completion of the simulation exercises.

C. ACTIVITY OBJECTIVES

Upon completion of this training activity, the trainee shall be able to:

1. Identify the roles and responsibilities as defined by NERC for the Balancing Authority and Transmission Operator
2. Identify and utilize the operation and concepts related to control of generation on the bulk electric system
3. Identify and utilize the transmission equipment used for controlling the bulk electric system
4. Identify equipment used for switching

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D. ACTIVITY CONTENT

1. System Operator Roles and Responsibilities
2. Generation Control Concepts
3. Balancing Area Operations
4. Resource Scheduling
5. Load Forecast
6. ACE
7. Inadvertent
8. Reserves
9. CPS 1, CPS 2, and DCS
10. Transmission Control
11. Voltage Control Equipment and Concepts
12. Thermal Control
13. Causes of Thermal Problems
14. Generation shift factors
15. Switching
16. Isolating Equipment
17. Switching and System Preparation
18. Contingency analysis – Planned Outage
19. Emergency Outages

E. ASSESSMENT VEHICLE

The activity assessment is accomplished through a series of simulation and tabletop exercises imbedded in the classroom activities. The instructor will observe individual participation and completion of the assignments and document completion of the assignments utilizing an activity checklist. Attendees must successfully complete all of the activities in order to satisfy the assessment requirements.

F. MISCELLANEOUS ELEMENTS

Many of the exercises included in this activity requires the utilization of the EPRI Generic Simulator.

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