OES-NA Training Modules To Go

DC Electricity

ACTIVITY TITLE:	DC Electricity
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: 3.0 NERC Standards CE Hours: 0.0 Simulation CE Hours: 0.0 Professional Related CE Hours: 3.0
NERC EMERGENCY TRAINING HOURS:	3.0 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 3.25 hour period with 3.0 hours intended for material deliveries and activity exercises and .25 hours for activity assessment.

Educating System Operators in the New Millennium!

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A. ACTIVITY OVERVIEW

This course is intended for real-time system operators and support personnel operating on the Bulk Electric System who wishes to gain the basic knowledge associated with Direct Current Electricity. The activity addresses the fundamentals of direct current, current and voltage, basic properties of an electrical circuit, resistance, and Ohm's and Kirchhoff's laws.

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.

C. ACTIVITY OBJECTIVES

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

1. Review Basic Concepts of D.C.
2. Define Current and Voltage
3. Describe Basic Properties of an Electrical Circuit
4. Introduce Concept of Resistance
5. Introduce Ohm's and Kirchhoff's Laws
6. Define Analogy of Water to Electrical Power

D. ACTIVITY CONTENT

1. Current
2. Voltage
3. Electrical Circuits
4. Resistance
5. Ohm's Law
6. Kirchhoff's Laws
7. Power and Energy

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E. ASSESSMENT VEHICLE

The activity assessment is accomplished through a multiple choice quiz that addresses the activity objectives and content.

F. MISCELLANEOUS ELEMENTS

None identified for this activity.