

## AC Electricity

**ACTIVITY TITLE:** AC Electricity

**TARGET AUDIENCE:**

<input checked="" type="checkbox"/> Transmission Operator	<input checked="" type="checkbox"/> Market Operator
<input checked="" type="checkbox"/> Reliability Operator	<input checked="" type="checkbox"/> Operations and Planning Eng
<input checked="" type="checkbox"/> Balancing & Interchange	<input checked="" type="checkbox"/> Supervisor/Manager/Support
<input checked="" type="checkbox"/> Generator Operator	<input type="checkbox"/> Other _____

**NERC CEHs:**

Operating Topics CE Hours: 2.5

NERC Standards CE Hours: 0.0

Simulation CE Hours: 0.0

Professional Related CE Hours: 2.5

**NERC EMERGENCY TRAINING HOURS:** 2.5 hours

**ACTIVITY SUBJECT MATTER:**

<input checked="" type="checkbox"/> Basic Concepts	<input type="checkbox"/> Power System Restoration
<input type="checkbox"/> Power Transfer	<input type="checkbox"/> Market Operations
<input type="checkbox"/> System Protection	<input type="checkbox"/> Tools
<input type="checkbox"/> Interconnected Operation	<input type="checkbox"/> Operator Awareness
<input type="checkbox"/> Emergency Operations	<input type="checkbox"/> Policies and Procedures

**DELIVERY SCHEDULE:** Activity is expected to be delivered over a 2.75 hour period with 2.5 hours intended for material deliveries and activity exercises and .25 hours for activity assessment.

*Educating System Operators in the New Millennium!*

## **AC Electricity**

---

### **A. ACTIVITY OVERVIEW**

This course is intended for real-time system operators and support personnel operating on the Bulk Electric System who wish to gain the basic knowledge associated with Alternating Current Electricity. It is intended to provide attendees with the basic skills and knowledge associated with AC Electricity. The activity addresses the fundamentals of alternating current, magnetism and magnetic fields, circuit elements that include: capacitance, inductance, and impedance, and three phase power.

### **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 examples that are imbedded into the material.

### **C. ACTIVITY OBJECTIVES**

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

1. Define Alternating Current
2. Identify Magnetism and Magnetic Fields
3. Identify Capacitance and Inductance
4. Identify Impedance
5. Define Three Phase Power

### **D. ACTIVITY CONTENT**

1. Alternating Current
2. Magnetism and Magnetic Fields
3. Capacitance and Inductance
4. Impedance
5. AC Power
6. Three Phase Power

*Educating System Operators in the New Millennium!*

## **AC Electricity**

### **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.

*Educating System Operators in the New Millennium!*