



This document includes a list and descriptions of the 2021 Reliability Course offerings.

**Customer Training Department**  
Reliability Training Courses

# CUSTOMER TRAINING - RELIABILITY TRAINING COURSE CATALOG

2021

## Introduction

The SPP Customer Training - Reliability 2021 Course Training Catalog provides course descriptions and sessions scheduled for the 2021 calendar year. Registrations for these classes will open at **1400 (CST) on Tuesday, November 17, 2020, in the [SPP Learning Center \(LMS\)](#)**. Once registration opens, sessions will be displayed on, and can be requested from, the SPP LMS Session Calendar.

**Note:** You must have an account in the SPP LMS in order to log on. Links to create an account can be found on the sign-in page of the SPP LMS.

This document is owned and maintained by the SPP Customer Training Department. It is a living document and will be updated as new courses and materials become available. Please e-mail questions or comments to [training@spp.org](mailto:training@spp.org).

This document contains a complete schedule of the SPP Customer Training Department's Reliability Training offerings for 2020. You can read a description of each course by clicking the links under [Schedule of Classes](#). Registration information through our Learning Center (LMS) is also included.

## Types of Training



- **Self-Studies** – Self-studies are computer-based modules available through the SPP LMS. These training courses are self-paced at the discretion of the learner. *Most of our self-study courses offer Continuing Education Hours (CEHs).*
- **Learning Burst** – Learning Bursts are short, targeted segments of online training that deliver basic and valuable knowledge in short “bursts” or sessions of 10 minutes or less. Learning Bursts do not offer CEHs.



SPP currently offers two types of Instructor-Led training.

- Instructor-Led Training (ILT)
  - Live training delivered face-to-face in a real-time environment
- Virtual Instructor-Led Training (VILT)
  - Live interactive training delivered via the internet and sometimes referred to as a Net Conference or Webinar.

## SPP Learning Center (LMS) Registration Information

Learners will use the SPP Learning Center (LMS) to search and register for:

- Self-Studies
- Learning Bursts
- Instructor-Led Training (ILT)
- Virtual Instructor-Led Training (VILT)

First-time visitors to the LMS must create an account to gain access.



### Creating an Account in the SPP LMS

- Go to [spp.csod.com](http://spp.csod.com) and click the appropriate link:
  - Member Registration - Employees of [SPP Member companies](#)
    - (For a list of SPP Member companies, go to the Member page of [SPP.org](http://SPP.org).)
  - Non-Member Registration - Employees of [non-member companies](#) (this includes Market Participants, Registered Entities who are not SPP Members, etc.)
  - Once you have created an account, log into the LMS.

Contact [LMS@spp.org](mailto:LMS@spp.org) with any questions.

## **Schedule of Classes**

(Click the title to view the course description, NERC Continuing Education hours, course fees, contact information and dates offered.)

## **Online Courses**

### **Self-Studies with CEHs:**

[Outage Coordination – CROW](#)

[Control Performance Standards \(CPS\)](#)

[System Restoration Principles](#)

[Transmission Loading Relief \(TLR\)](#)

[Voltage Control and System Stability](#)

[Operator Awareness](#)

[Power System Protection: Curriculum](#)

[Reserve Sharing System \(RSS\)](#)

[SPP BA EOP Conservative Operations and Capacity and Energy Emergencies](#)



### **Self-Studies (without CEHs):**

[Adventures in Training - Subject Matter](#)

[Expert \(SME\) Training](#)

[SME – Learning the R.O.P.E.S](#)

### **Learning Bursts (no CEHs):**

[What is ACE?](#)

[How to Calculate ACE](#)

## **Instructor-led (ILT) and Virtual Instructor-led (VILT) Courses**

### **January, 2021**

[26-27 Power System Restoration Drill](#)

### **February, 2021**

[2 Mimimum Generation and Load Shed \(VILT\)](#)

[2 Natural Gas Fundamentals \(VILT\)](#)

[3 Outage Coordination Methodology \(VILT\)](#)

[3 Emerging Technology \(VILT\)](#)

[4 Reliability Communication Tool \(VILT\)](#)

[4 Event Reporting and Analysis \(VILT\)](#)

[9 Reliability Communication Tool \(VILT\)](#)

[9 Event Reporting and Analysis \(VILT\)](#)

[10 Mimimum Generation and Load Shed \(VILT\)](#)

[10 Natural Gas Fundamentals \(VILT\)](#)

[11 Outage Coordination Methodology \(VILT\)](#)

[11 Emerging Technology](#)

### **March, 2021**



**April, 2021**

[13 Mimimum Generation and Load Shed \(VILT\)](#)

[13 Natural Gas Fundamentals \(VILT\)](#)

[14 Outage Coordination Methodology \(VILT\)](#)

[14 Emerging Technology \(VILT\)](#)

[15 Reliability Communication Tool \(VILT\)](#)

[15 Event Reporting and Analysis \(VILT\)](#)

[20-21 REOPS \(VILT\)](#)

[27-28 Power System Restoration Drill](#)

**May, 2021**

[4 – 6 REOPS \(VILT\)](#)

[6 Train-the-Trainer \(VILT\)](#)

[11-12 Power System Restoration Drill](#)

[24 - 217 System Operations Conference – Virtual \(Jigsaw\)](#)

**June, 2021**

[1 Outage Coordination Methodology \(VILT\)](#)

[1 Emerging Technology \(VILT\)](#)

[2 Reliability Communication Tool \(VILT\)](#)

[2 Event Reporting and Analysis \(VILT\)](#)

[3 Mimimum Generation and Load Shed \(VILT\)](#)

[3 Natural Gas Fundamentals \(VILT\)](#)

[8 - 9 Blurring the Lines: Markets and Reliability](#)

[14-17 System Operations Conference – Virtual \(Jigsaw\)](#)

**July, 2021**

**August, 2021**

[3 Train-the-Trainer \(VILT\)](#)

[4 Train-the-Trainer \(VILT\)](#)

[10 Mimimum Generation and Load Shed \(VILT\)](#)

[10 Natural Gas Fundamentals \(VILT\)](#)

[11 Reliability Communication Tool \(VILT\)](#)

[11 Event Reporting and Analysis \(VILT\)](#)

[12 Outage Coordination Methodology \(VILT\)](#)

[12 Emerging Technology \(VILT\)](#)

[23 - 26 System Operations Conference – Omaha, NE](#)

[31 – Sept. 1 REOPS \(VILT\)](#)

**September, 2021**

[13-16 System Operations Conference – Columbus, OH](#)

[21-22 REOPS \(VILT\)](#)

[28-29 Power System Restoration Drill](#)



**October, 2021**

5 - 6 Blurring the Lines: Markets and Reliability

7 Train-the-Trainer (VILT)

11-14 System Operations Conference – Kansas City, MO

19 - 20 Power System Restoration Drill

26-27 REOPS (VILT)

**November, 2021**

1-4 System Operations Conference – Kansas City, MO

9-10 REOPS (VILT)

**December, 2021**

7 Mimimum Generation and Load Shed (VILT)

7 Natural Gas Fundamentals (VILT)

8 Reliability Communication Tool (VILT)

8 Outage Coordination Methodology (VILT)

8 Emerging Technology (VILT)

9 Reliability Communication Tool (VILT)

9 Event Reporting and Analysis (VILT)

14-15 Power System Restoration Drill

## Course Descriptions

### SPP System Operations Conference

SPP will host six System Operations Conferences (SOCs) designed to provide participants valuable training on current and relevant topics, NERC continuing education hours, and opportunities to collaborate and network with others who serve in system operations.

Members of Southwest Power Pool, Inc. may participate in SOCs at no additional cost. Non-members wishing to participate will be charged according to SPP's Customer Training pricing structure. This is an **Intermediate** level training event designed primarily for persons who have some previous experience in system operations.

#### Course Fee for Non-members:

**System Operations Conference - SOC (24 hours)** - \$1,420/per person (\$55/Continuing Education Hour plus \$25 per/day for meals) for in person sessions.  
Virtual sessions will be \$1,080/ per person.

All payments are made through the SPP Learning Center (LMS). SPP does not invoice, but accepts all major credit cards for payment.

#### Other Details

**NERC ILA ID: SPP\_025\_SOC\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

#### Estimated NERC CE Hours Breakdown:

Totals: 24 Operating Topics hrs. *Partial Credit **may** be awarded per day or session. Complete CE hour break down will be available in the LMS after ILA approval.*

**Other Details:** Agenda and other details TBA.

**Event Contact:** [Kim Burnside](#) – 501-482-2056

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#### 2021 Dates and Locations:

May 24 - 27 Virtual (Jigsaw)

September 13 – 16 Columbus, OH

June 14 – 17 Virtual (Jigsaw)

October 11 – 14 Kansas City, MO

August 23 – 26 Omaha, NE

November 1 – 4 Kansas City, MO

**Please Note: SPP will not have designated hotel room blocks. You will be responsible for choosing and securing your hotel room for each conference.**

## REOPs Classroom Simulation Training VILT

SPP's REOPs (Regional Emergency Operations) simulation course consists of two eight-hour training sessions that will focus on such topic areas as Congestion Management, Voltage Control principles, SPP's Synchronization Process, and Contingency Analysis and mitigations. Each session will be offered virtually. SPP will provide initial training on its DTS upon request.

This is Intermediate level training.

Course Fee for Non-members: (16 hours) – \$720/per entity (\$45/Continuing Education Hour)  
All payments are made through the SPP Learning Center (LMS). SPP does not invoice, but accepts all major credit cards for payment.

Other Details

**NERC ILA ID: SPP\_025\_REOPs\_VILT\_2021** (Pending approval) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

Estimated NERC CE Hours Breakdown:

Totals: 16 Operating Topics hrs. Partial Credit may be awarded in eight-hour session increments.

**Event Contact:** [John Gunter](#) – 501-688-2526

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<b>2021 Dates:</b>	April 20 - 21	August 31 –Sept. 1	October 26 - 27
	May 4 - 5	September 21 - 22	November 9 - 10



## Power System Restoration Drill

SPP's Power System Restoration Drills are designed to provide participating entities an opportunity to practice the implementation of their system restoration plans including the assessment, coordination and communication necessary for system restoration. Drills will be conducted virtually, enabling entities to participate from their own facility. SPP's Dispatcher Training Simulator (DTS) will be available through remote access. The drills will emphasize the application of NERC Standards, SPP Criteria and industry principles and guidelines related to system restoration. Facilitators, or their proxy, must be registered and present to assess each participant's performance in the simulation activity.

***This is an intermediate level training session that will require participants have an existing knowledge of NERC Standards, SPP Criteria and industry principles and guidelines related to system restoration. We strongly recommend learners planning to participate in a system restoration drill first complete SPP's Restoration Principles Self-Study virtual training or other comparable restoration-focused training.***

Members of Southwest Power Pool, Inc. may participate in customer training events at no additional cost. Non-members wishing to participate in SPP training events will be charged according to SPP's Customer Training pricing structure.

### Course Fee for Non-members:

Restoration Drill (16 hours) – \$720/entity (\$45/Continuing Education Hour)

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice, but accepts all major credit cards for payment.

### Other Details

**NERC ILA Number: SPP\_025\_PSRD\_2021** (*Pending approval*) NERC ILA is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and that Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

**Estimated NERC CE Hour Breakdown:** Totals: 16 Operating Topic hrs. 16 Standards hrs. 15 Simulation hrs.

*Partial Credit available – Partial credit will be awarded in whole-day increments only.*

Day 1 – 8 Op Topics hrs. 8 Standards hrs. 7.5 Sim hrs.

Day 2 – 8 Op Topics hrs. 8 Standards hrs. 7.5 Sim hrs.

**Event Contact:** [Greg Reed](#) – 501-482-2463

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<b>2021 Dates:</b>	January 26 – 27	May 11 – 12	October 19 – 20
	April 27 – 28	September 28 – 29	December 14 – 15

## **Blurring the Lines: Markets and Reliability VILT**

SPP's 2021 Blurring the Lines – Markets and Reliability course will be a 1.5 day virtual instructor-led course focused on identifying and evaluating BES reliability-related tasks that the SPP Integrated Marketplace helps to perform. During this course, participants will learn which marketplace processes help SPP comply with various industry standards. They will also learn how the marketplace performs specific reliability tasks, such as unit commitment, regulation scheduling, contingency reserve deployment, and congestion management.

**Members of Southwest Power Pool, Inc. may participate in customer training events at no additional cost. Non-members wishing to participate in SPP training events will be charged according to SPP's Customer Training pricing structure.**

Course Fee for Non-members: (12 hours) – \$540/per entity (\$45/Continuing Education Hour)  
All payments are made through the SPP Learning Center (LMS). SPP does not invoice, but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_BLMR\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **Estimated NERC CE Hours Breakdown:**

Totals: 12 Operating Topics hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0800 – 1700 Day 1 and 0800 – 1200 Day 2 (CPT).

**Event Contact:** [Gay Anthony](#) – 501-688-1722

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### **2021 Delivery Dates:**

June 8 - 9

October 5 - 6

## Virtual Instructor-Led Training – Emerging Technologies (and Their Impact on Real-Time Operations)

This two-hour VILT session will discuss some of the newer existing and emerging technologies in the power industry, and the opportunities and challenges they bring to real-time operations within SPP. Solar power and grid energy storage technology will be discussed, as well as other emerging technologies with impact to the BES. Any NERC Standards, SPP Criteria, and other SPP business rules related to the use of these technologies will also be reviewed.

Members of Southwest Power Pool, Inc. may participate in customer training events at no additional cost. Non-members wishing to participate in SPP training events will be charged according to SPP's Customer Training pricing structure.

This is *Intermediate level* training.

### Course Fee for Non-members:

VILT (2 hours) - \$90/per person or \$45/Continuing Education Hour

All payments are made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

**NERC ILA ID: SPP\_025\_NC\_ET\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 0 Standards hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 1200 – 1400 (CPT).

**Event Contact:** [Greg Reed](#) – 501-482-2463

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### 2021 Delivery Dates:

February 3 (PM)

April 14 (PM)

August 12 (PM)

February 11 (PM)

June 1 (PM)

December 8 (PM)

## Virtual Instructor-Led Training – Event Reporting and Analysis

This two-hour VILT session will review NERC’s and SPP’s Event Analysis Process. Participants will be able to state the benefits and procedures of these two event analysis processes when reporting Bulk Electric System (BES) events. The session will review NERC Standard EOP-004 reporting requirements as well as identify reportable events. Additionally, the participants will identify necessary reporting forms, EOP-004 Attachment 2 Event Reporting Form and the Department of Energy OE-417 form.

This is *Intermediate level* training.

### Course Fee for Non-members:

VILT (2 hours) - \$90/per person or \$45/Continuing Education Hour

All payments are made through SPP’s Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

**NERC ILA ID: SPP\_025\_NC\_ERA\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 1 Standards hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 1200 – 1400 (CPT).

**Event Contact:** [Jennifer Farley](#)– 501-688-8398

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### 2021 Delivery Dates:

February 4 (PM)

April 15 (PM)

August 11 (PM)

February 9 (PM)

June 2 (PM)

December 9 (PM)

## Virtual Instructor-Led Training – Minimum Generation and Load Shed

This two-hour VILT session will first review SPP’s approach to addressing Minimum Generation events. Following an initial review, participants will assess a Minimum Generation scenario and develop a mitigation plan to address the condition. Next, participants will explore load-shed principles for capacity deficiencies and localized voltage conditions, before applying their knowledge to mitigate simulated load shed scenarios.

This is *Intermediate level* training.

### Course Fee for Non-members:

VILT (2 hours) - \$90/per person or \$45/Continuing Education Hour

All payments are made through SPP’s Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

NERC ILA ID: **SPP\_025\_NC\_MGLS\_2021** is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 1 Standards hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0900 – 1100 (CPT).

Event Contact: [John Gunter](#)– 501-688-2526

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### 2021 Delivery Dates:

February 2 (AM)	April 13 (AM)	August 10 (AM)
February 10 (AM)	June 3 (AM)	December 7 (AM)

## Virtual Instructor-Led Training – Natural Gas Fundamentals

This two-hour VILT session will focus on the natural gas industry and its specific relationship (from a reliability perspective) on the Bulk Electric System. Topics and objectives include an introduction and discussion on the physics of natural gas, and on the gas industry infrastructure related to procurement, storage, and delivery. Participants are also asked to consider how situational awareness by BES operators - with regards to awareness of the gas industry and gas disruption - might be used to maintain and possibly improve reliability.

This is Intermediate level training.

### Course Fee for Non-members:

*VILT (2 hours)* - \$90/per person or \$45/Continuing Education Hour

All payments are made through SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

NERC ILA ID: **SPP\_025\_NC\_NGF\_2021** is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 1 Standards hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 1200 – 1400 (CPT).

Event Contact: [John Gunter](#)– 501-688-2526

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### 2021 Delivery Dates:

February 2 (PM)

April 13 (PM)

August 10 (PM)

February 10 (PM)

June 3 (PM)

December 7 (PM)

## Virtual Instructor-Led Training – Outage Coordination Methodology

This two-hour VILT session will review SPP’s Outage Coordination Methodology. Participants will identify the purpose of the methodology as stated in NERC standard IRO-017. They will also identify timelines and submission requirements for transmission and generation outages. Additionally, participants will identify best practices and the importance of adhering to SPP’s Outage Coordination Methodology.

This is *Intermediate level* training.

### Course Fee for Non-members:

VILT (2 hours) - \$90/per person or \$45/Continuing Education Hour

All payments are made through SPP’s Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

**NERC ILA ID: SPP\_025\_NC\_OCM\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 1 Standards hr. 1 Simulation hr.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0900 – 1100 (CPT).

**Event Contact:** [Jennifer Farley](#)– 501-688-8398

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### 2021 Delivery Dates:

February 3 (AM)

April 14 (AM)

August 12 (AM)

February 11 (AM)

June 1 (AM)

December 8 (AM)

## Virtual Instructor-Led Training – Reliability Communication Tool

This two-hour VILT session will review the features and functions of the R-COMM Tool. Participants will be able to identify R-COMM’s primary features and explain its multidirectional role in near real-time notifications. Participants will also review the roll R-COMM plays in NERC Standard EOP-011 related to manual load shed and COM-002-4 related to SPP’s Communications Protocol.

This is *Intermediate level* training.

### Course Fee for Non-members:

VILT (2 hours) - \$90/per person or \$45/Continuing Education Hour

All payments are made through SPP’s Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

NERC ILA ID: **SPP\_025\_NC\_RCT\_2021** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### Estimated NERC CE Hours Breakdown:

Totals: 2 Operating Topics hrs. 1 Standards hr.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0900 – 1100 (CPT).

Event Contact: [Greg Reed](#) – 501-482-2463

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### 2021 Delivery Dates:

February 4 (AM)

April 15 (AM)

August 11 (AM)

February 9 (AM)

June 2 (AM)

December 9 (AM)



# e-LEARNING



## **SPP BA EOP Conservative Operations and Capacity and Energy Emergencies Self-Study**

Being prepared to handle the Bulk Electric System (BES) during emergency operations is a CRITICAL skill for system operators and other key personnel. This self-study course will focus on **Capacity and Energy Emergencies (CEE)** as well as **Conservative Operations**.

This is **Intermediate level** training.

The participants will identify how the SPP Balancing Authority Emergency Operating Plan and NERC's EOP standards identify and describe actions to be taken for mitigating these emergency situations.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1 CE hour)* - \$45/per person or \$45/Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_BAEOP\_CO\_CEE\_SS\_2019** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hours Breakdown:**

Totals: 1 Operating Topics hrs. 1 Standards hrs.

Search the SPP LMS with the term "SPP BA EOP" or "Reliability Self-Study" for more information and for registrations options.

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## **Outage Coordination (CROW) Self-Study**

SPP uses the CROW Outage Scheduler to communicate and track planned and emergency outages of transmission elements and generating units. The Outage-Coordination – CROW Self-Study will describe the importance and timeliness of outage coordination and reporting. An emphasis will be placed on SPP Operating Criteria Appendix OP-2: Outage Coordination Methodology and the CROW outage submission tool.

This is *Intermediate level* training.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1.5 hours)* - \$67.50/per person or \$45/Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_CROW\_SS\_2014** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hours Breakdown:**

Totals: 1.5 Operating Topics hrs. 1.5 Standards hrs.

Search the SPP LMS with the term "CROW" or "Reliability Self-Study" for more information and for registrations options.

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## Control Performance Standards (CPS) Self-Study

This Self-Study is designed to ensure participants develop an understanding of the NERC Real Power Balancing Control Performance Standards, Control Performance Standard 1 (CPS1) and Balancing Authority ACE Limit (BAAL); and the Disturbance Control Performance Standard (DCS). Applicable concepts, such as ACE and frequency will also be discussed, as well as expectations for compliance with each of these standards.

Those taking this Self-Study should have a clear understanding of the ACE calculation. For a refresher, we suggest you take the Learning Bursts;

- [What is ACE?](#)
- [How to Calculate ACE](#)

This is **intermediate level** training.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### Course Fee for Non-members:

*Self-Study (1 hour) - \$45/per person or \$45/person per Continuing Education Hour*

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

**NERC ILA ID: SPP\_025\_CPS\_SS\_2016** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### NERC CE Hour Breakdown:

Totals: 1 Operating Topics hr. 1 Standards hr.

Search the SPP LMS with the term "CPS" or "Reliability Self-Study" for more information and for registration options.

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## **System Restoration Principles (SRP) Self-Study**

This Self-Study is designed to help participants develop an understanding of system restoration principles, as well as NERC Standards and SPP Criteria related to system restoration. Topics covered in this self-study include, but are not limited to, acceptable frequency and voltage limits, load restoration guidelines, and criteria for interconnection.

***We strongly recommend anyone planning to participate in a system restoration drill first complete this self-study.***

This is ***Intermediate*** level training.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1 hour)* - \$45/per person or \$45/person per Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_SRP\_SS\_2015** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hours Breakdown:**

Totals: 1 Operating Topics hr. 1 Standards hr.

Search the SPP LMS with the term "System Restoration" or "Self-Study" for more information and for registration options.

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## **Transmission Loading Relief (TLR) Self-Study**

This Self-Study is designed to ensure participants develop an understanding of flowgates, distribution factors and the TLR process. The various levels of TLR will be described along with considerations when selecting a particular TLR level, curtailment amounts, and Network and Native Load (NNL) relief. Applicable NERC and SPP requirements will also be reviewed.

This is *Intermediate level* training.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1 hour)* - \$45/per person or \$45/person per Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_SS\_TLR\_2015** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hour Breakdown:**

Totals: 1 Operating Topics hr. 1 Standards hr.

Search the SPP LMS with the term "TLR" or "Reliability Self-Study" for more information and for registration options.

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## Voltage Control and System Stability (VCSS) Self-Study

This Self-Study is designed to present an overview on the components of power and how reactive power influences power flow in a transmission system. This CBT will include information on managing system stability during changing conditions, and the equipment on the system that can assist with maintaining adequate voltage during normal and emergency conditions.

This is *Intermediate level* training.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### Course Fee for Non-members:

*Self-Study (1 hour)* - \$45/per person or \$45/person per Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### Other Details

**NERC ILA ID: SPP\_025\_VCSS\_SS\_2017** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### NERC CE Hour Breakdown:

Totals: 1 Operating Topics hr.; 1 Standards hr.

Search the SPP LMS with the term "VCSS" or "Reliability Self-Study" for more information and for registration options.

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## **Operator Awareness (OA) Self-Study**

This Self-Study introduces the components of Operator Situational Awareness and identifies the importance of the use of operator situational awareness in recognizing reliability issues on the system. The self-study will also identify Human Performance Tools that can promote Operator Awareness and can be used to help respond to contingencies.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1 hour)* - \$45/per person or \$45/person per Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_OA\_SS\_2017** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hour Breakdown:**

Totals: 1 Operating Topics hr.

Search the SPP LMS with the term "OA" or "Reliability Self-Study" for more information and for registration options.

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## **Power System Protection Curriculum**

This self-study course will review the fundamental purpose of system protection and the basic components that make up a protection system. Participants will review a variety of relay types, characteristics, and applications such as differential relays, distance relays, instantaneous and time-delay relays, and directionality.

Members of Southwest Power Pool, Inc. may request self-study at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1.5 hour)* - \$67.50/per person or \$45/Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_PSP Curriculum\_2020** (*Pending approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hour Breakdown:**

Totals: To Be Determined (*Pending course pilot*)

Search the SPP LMS with the term "Protection" or "Reliability Self-Study" for more information and for registration options.

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## Reserve Sharing System (RSS) Self-Study

SPP uses the OATI Reserve Sharing System (RSS) tool to notify SPP's Reserve Sharing Group (RSG) when one of its members has suffered a sudden and unexpected loss of capacity. Reserves carried by RSG members will be proportionately distributed by the RSS for recovery of this loss.

This self-study e-Learning will discuss the allocation and distribution of reserves within the SPP RSG as well as other information available in the SPP RSS. By participation in self-check scenarios throughout the session, the participants will learn how to submit pertinent data and the outcome of different reserve sharing situations.

This is *Intermediate level* training.

Members of Southwest Power Pool, Inc. may request self-study e-Learning at no additional cost. Non-members wishing to take SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Course Fee for Non-members:**

*Self-Study (1.5 hours)* - \$67.50/per person or \$45/Continuing Education Hour

All payments will be made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA ID: SPP\_025\_RSS\_SS\_2016** (*Pending renewal approval*) is recognized by the North American Electric Reliability Corporation as an approved learning activity for which NERC CE hours can be awarded, and Southwest Power Pool adheres to NERC Continuing Education Program Criteria.

### **NERC CE Hours Breakdown:**

Totals: 1.5 Operating Topics hrs. 1.5 Standards hrs.

Search the SPP LMS with the term "RSS" or "Reliability Self-Study" for more information and registration.

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## **SPP Train-the-Trainer**

Southwest Power Pool's Train-the-Trainer provides trainers opportunities to enhance their professional skills as they design and develop quality training programs using a Systematic Approach to Training (SAT). Using a SAT is not only a NERC requirement; it is an essential component in developing great training.

The 2021 Train-the-Trainer curriculum will consist of four Virtual Instructor-led Training (VILT) sessions. *Please see the LMS for a complete description of each training event.*

Members of Southwest Power Pool, Inc. may participate in customer training events at no additional cost. Non-members wishing to participate in SPP training events will be charged according to SPP's Customer Training pricing structure.

### **Who should attend these sessions?**

- Individuals responsible for conducting training for their respective entities.
- System Operators and other operations personnel who play a role in training.

### **Course Fee for Non-members:**

**Train-the-Trainer VILT Conferences** – (2 hours each) \$35/participant

All payments are made through the SPP Learning Center (LMS). SPP does not invoice but accepts all major credit cards for payment.

### **Other Details**

**NERC ILA IDs:** SPP's Customer Training Department follows NERC's guidelines for awarding Continuing Education hours. The Train-the-Trainer courses do not address the approved Continuing Education topics found in Appendix A of NERC's Continuing Education Manual. ***Therefore, no continuing education hours will be awarded for the Train-the-Trainer classes.***

**Event Contact:** [Jennifer Farley](#) – 501-688-8398

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**2021 Dates:** VILTs are 0900 – 1100 (CPT)

May 6 (VILT) Nine Elements of Instructional Design

August 3 (VILT) (Part 1) The Art of Assessment Development

August 4 (VILT) (Part 2) Learning the ROPES

October 7 (VILT) Documentation! What is Needed?

**Subject Matter Expert Training Self-Studies**  
**No Continuing Education Hours are available for these courses.**

According to NERC guidelines, a Subject Matter Expert (SME) must receive training before conducting training sessions. SPP's Customer Training Department has developed two self-studies in order to provide SMEs with the necessary training.

If an organization is a member of Southwest Power Pool, Inc., they may request these Subject Matter Expert self-studies at no additional cost. Non-members will not have access to these self-studies.

*We highly recommend you take both self-studies.*

**Adventures in Training - Subject Matter Expert (SME) Training Self-Study**

The Subject Matter Expert (SME) Training Self-Study is intended for individuals who have been identified as SMEs in their fields and subsequently asked to provide training. This thirty-minute self-study guides SMEs through relevant information pertaining to their responsibilities before, during, and after their session. Along the way, they will identify effective planning and presentation techniques and strategies. **No CEH credit is awarded.**

**Learning the R.O.P.E.S.: Subject Matter Expert Training Self-Study**

Learning the R.O.P.E.S - Subject Matter Expert (SME) Training Self-Study is intended for individuals who have been identified as SMEs in their fields and subsequently asked to provide training. This 30-minute scenario-based self-study navigates SMEs through the R.O.P.E.S. Method for delivering training. By learning to implement the five steps in this easy-to-use model, SMEs can ensure an effective delivery of their presentations. **No CEH credit is awarded.**

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## **SPP Learning Bursts**

SPP Learning Bursts are short, targeted segments of training that deliver basic and valuable knowledge in short “bursts” or sessions. This training is intended for beginners. No CEH credit is awarded.

SPP will continue to add courses to the Learning Burst series. Check back often by searching the SPP LMS with the term, “Reliability Learning Burst”.

Members of Southwest Power Pool, Inc., may request Learning Burst courses at no additional cost. Non-members may request access to the Learning Burst Series.

## **What is ACE? Learning Burst**

Those taking this reliability Learning Burst virtual training should have a basic understanding of frequency and interchange. This Learning Burst is designed to provide the learner with a brief definition of Area Control Error (ACE) and why it is important.

Search the SPP LMS with the term “ACE” for more information and for registration options.

## **How to Calculate ACE? Learning Burst**

This Learning Burst virtual training is designed to provide the learner with four different methods for calculating ACE. The learner can review any of the four methods for understanding and then apply the knowledge learned to several example calculations. Each example calculation will also provide a guided review using each of the four methods. It is suggested that those taking this Learning Burst have already completed the What is ACE? Learning Burst.

Search the SPP LMS with the terms “ACE” or “How to” for more information and for registration options.

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