



SPP.org

Customer Training - Reliability Training Course Catalog

2019

Introduction

The SPP Customer Training - Reliability 2019 Course Training Catalog provides course descriptions and sessions scheduled for the 2019 calendar year. Registrations for these classes will open at **1400 (CST) on Tuesday, November 13, 2018, in the [SPP Learning Management System \(LMS\)](#)**. 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.

This document contains a complete schedule of the SPP Customer Training Department's Reliability Training offerings for 2019. You can read a description of each course by clicking the links under [Schedule of Classes](#). Registration information through our Learning Management System (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)
 - Training delivered in a real-time environment
- Virtual Instructor-Led Training (VILT)
 - Interactive training delivered via the internet and sometimes referred to as a Net Conference or Webinar.

SPP Learning Management System (LMS) Registration Information

Learners will use the SPP 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 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.)
 - 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 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: Fundamentals](#)

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

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



Self-Studies (without CEHs):

[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, 2019

[23 – 24 Partial Restoration Drill](#)

[29 – 30 REOPS \(VILT\)](#)

February, 2019

[5 - 6 REOPS \(VILT\)](#)

[12 – 13 Blackstart Restoration Drill](#)

[26 – 27 REOPS \(VILT\)](#)

March, 2019

[5 – 6 Blackstart Restoration Drill](#)

[12 – 13 Partial Restoration Drill](#)

[20 VILT - E- Learning PODCAST 101](#)

[25 – 28 System Operations Conference – Little Rock, AR](#)



April, 2019

[9 – 10 REOPS \(On-site\)](#)

[16 -17 REOPS \(VILT\)](#)

[22 – 25 System Operations Conference – Kansas City, MO](#)

[30 –May 1 Blackstart Restoration Drill](#)

May, 2019

[7 – 8 Market and Reliability](#)

[14 – 15 Blackstart Restoration Drill](#)

[20 – 23 System Operations Conference – Denver, CO](#)

June, 2019

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

[11 – 12 Blackstart Restoration Drill](#)

[13 VILT - E-Learning PODCAST 101](#)

[18 VILT - Power System Protection: Protection Schemes \(AM\)](#)

[18 VILT - Power System Protection: Differential and Generator Protection \(PM\)](#)

[19 VILT – New and Emerging Technology \(AM\)](#)

[19 VILT – Unit Commitment Fundamentals \(PM\)](#)

[20 VILT – Operating Personnel Communications Protocol \(AM\)](#)

[20 VILT – Conservative Operations \(PM\)](#)

[25 – 26 REOPS \(VILT\)](#)

July, 2019

[9 VILT – Conservative Operations \(AM\)](#)

[9 VILT – Operating Personnel Communications Protocol \(PM\)](#)

[10 VILT – Unit Commitment Fundamentals \(AM\)](#)

[10 VILT – New and Emerging Technology \(PM\)](#)

[11 VILT – Power System Protection: Protection Schemes \(AM\)](#)

[11 VILT – Power System Protection: Differential and Generator Protections \(PM\)](#)

[23 VILT – New and Emerging Technology \(AM\)](#)

[23 VILT – Unit Commitment Fundamentals \(PM\)](#)

[24 VILT – Operating Personnel Communications Protocol \(AM\)](#)

[24 VILT – Conservative Operations \(PM\)](#)

[25 VILT – Power System Protection: Protection Schemes](#)

[25 VJILT – Power System Protection: Differential and Generator Protection \(PM\)](#)



August, 2019

[6 – 8 Train-the-Trainer Workshop – Little Rock](#)

[13 VILT – Conservative Operations \(AM\)](#)

[13 VILT – Operation Personnel Communication Protocols \(PM\)](#)

[14 VILT – Power System Protection: Protection Schemes \(AM\)](#)

[14 VILT – Power System Protection: Differential and Generator Protection \(PM\)](#)

[15 VILT – New and Emerging Technology \(AM\)](#)

[15 VILT – Unit Commitment Fundamentals \(PM\)](#)

[19 – 22 System Operations Conference – Omaha, NE](#)

[27 – 28 Market and Reliability](#)

September, 2019

[10 – 11 REOPS \(VILT\)](#)

[16 – 19 System Operations Conference – Amarillo, TX](#)

[24 - 25 Blackstart Restoration Drill](#)

October, 2019

[8 VILT – Operating Personnel Communications Protocols \(AM\)](#)

[8 VILT – Conservative Operations \(PM\)](#)

[9 VILT – New and Emerging Technology \(AM\)](#)

[9 VILT – Unit Commitment Fundamentals \(PM\)](#)

[10 VILT – Power System Protection: Protection Schemes \(AM\)](#)

[10 VILT - Power System Protection: Differential and Generator Protection \(PM\)](#)

[14– 17 System Operations Conference – Kansas City, MO](#)

[22 – 23 REOPS \(On-site\)](#)

[29 – 30 Blackstart Restoration Drill](#)

November, 2019

[7 VILT - Train-the-Trainer](#)

[19 - 20 Blackstart Restoration Drill](#)

December, 2019

[9 VILT – Conservative Operations \(AM\)](#)

[9 VILT – Operating Personnel Communication Protocol \(PM\)](#)

[10 VILT – Power System Protection: Protection Schemes \(AM\)](#)

[10 VILT – Power System Protection: Differential and Generator Protection \(PM\)](#)

[11 VILT – Unit Commitment Fundamentals \(AM\)](#)

[11 VILT – New and Emerging Technology \(PM\)](#)



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) - \$1420/per person (\$55/Continuing Education Hour and \$100 for meals)

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: NERC ILA **SPP_025_SOC_2019** 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.*

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

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2019 Dates and Locations:

March 25 - 28 Little Rock, AR

August 19 - 22 Omaha, NE

April 22 - 25 Kansas City, MO

September 16 - 19 Amarillo, TX

May 20 - 23 Denver, CO

October 14 - 17 Kansas City, MO

REOPs Classroom Simulation Training VILT

SPP's REOPs (Regional Emergency Operations) simulation course consists of four four-hour training sessions focusing on Congestion Management, Voltage Control, SPP's Synchronization Process, and Minimum Generation conditions and Load Shed. Each session will be offered virtually and will require the presence of a proctor who possesses VPN access to SPP's Dispatcher Training Simulator (DTS). SPP will provide initial training on its DTS upon request.

- **Voltage Control (Four-Hour Session – 0800 – 1200)**
Participants will review fundamental voltage requirements outlined in NERC Standards and SPP Criteria as well as a variety of voltage control resources. After reviewing fundamental voltage concepts, participants will apply their knowledge to resolving both high and low voltage scenarios using SPP's DTS.
- **Congestion Management Session (Four-Hour Session – 1300 – 1700)**
This session will focus on congestion management fundamentals including flowgate components and definitions and principles of distributive flow. Participants will explore congestion management through both market and non-market solutions.
- **SPP's Synchronization Process (Four-Hour Session – 0800 – 1200)**
Participants will first review the Synchronization Process outlined in SPP's Reliability Coordinator Area Restoration Plan as well as the associated Interconnection Checklist used to facilitate this process. Participants will then evaluate simulated interconnection scenarios to determine their viability and identify any necessary adjustments to system conditions to support interconnection.
- **Minimum Generation and Load Shed (Four-Hour Session – 1300 – 1700)**
Participants 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.

Course Fee for Non-members:

(16 hours) – \$720 /per entity (\$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: NERC ILA **SPP_025_REOPs_VILT_2019** 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 four-hour session increments.*

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

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2019 Dates:	January 29 - 30	February 26 - 27	June 25 - 26
	February 5 - 6	April 16 - 17	September 10 - 11

REOPS On-Site ILT

SPP's On-Site REOPs (Regional Emergency Operations) simulation course is a two-day, simulation-based course focusing on Congestion Management, Voltage Control, SPP's Synchronization Process, Minimum Generation conditions, and Load Shed. Participants will work in small groups to apply the knowledge they gain in this course to address simulated scenarios in each area.

Course Fee for Non-members:

(16 hours) – \$770 /per person (\$45/Continuing Education Hour and \$50 for meals)

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: NERC ILA **SPP_025_REOPs_2019** 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 is not awarded for this course.

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

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2019 Dates: April 9 - 10
 October 22 - 23

Blackstart Restoration Drill

SPP's Blackstart Restoration Drills are designed to provide participating entities an opportunity to practice the implementation of their blackstart restoration plans along with the coordination and communication necessary for system restoration from a blackstart condition. 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, and SPP will offer preliminary training on the use of the simulator upon request. 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:

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

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

Other Details

NERC ILA Number: NERC ILA **SPP_025_BSD_2019** 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. 15 Standards hrs. 16 Simulation hrs.

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

Day 1 – Approx. 8 Op Topics hrs. 7 Standards hrs. 7 Sim hrs.

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

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

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2019 Dates:	February 12 - 13	May 14-15	October 29 - 30
	March 5 - 6	June 11-12	November 19 - 20
	April 30 - May 1	September 24 - 25	

Partial Restoration Drill

SPP's Partial System Restoration drills are designed to simulate partial system collapse conditions that may include such scenarios as multiple islands, loss of Balancing Authority functionality, loss of Integrated Marketplace capability, and loss of interconnection. Participants will be challenged to assess system conditions following an event, identify available resources, and develop and implement a system restoration strategy. Drills will be conducted virtually, allowing entities to avoid travel costs by participating from their own facility. SPP's Dispatcher Training Simulator (DTS) will be available through remote access, and SPP will offer preliminary training on the use of the simulator upon request. 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/Protocols, 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.

Course Fee for Non-members:

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.

Partial Restoration Drill (16 hours) – \$720/entity (\$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 Number: NERC ILA SPP_025_PRD_2019 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 Hours Breakdown:

Totals: 16 Op Topics hrs. 16 Standards hrs. 15 Sim hrs.

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

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

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2019 Dates: January 22 - 23 March 12 - 13

Virtual Instructor-Led Training – Conservative Operations

This two-hour VILT session will review SPP’s Conservative Operations triggers and responses as outlined in the SPP Balancing Authority Emergency Operating Plan. Participants will first explore a variety of system conditions that may trigger SPP’s Conservative Operations. Then, participants will review the actions SPP will likely take in response to each trigger.

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

Other Details

NERC ILA ID: NERC ILA **SPP_025_NC_CO_2019** 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 and/or 1200 – 1400 (CPT).

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

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2019 Dates:	June 20 (PM)	August 13 (AM)
	July 9 (AM)	October 8 (PM)
	July 24 (PM)	December 9 (AM)

Virtual Instructor-Led Training – Power System Protection: Protection Schemes

This two-hour VILT session builds on SPP’s Power System Protection Fundamentals self-study course focuses on Pilot Relay Schemes and Remedial Action Schemes. Applicable NERC Standards and SPP Criteria related to the use and coordination of system protection will also be reviewed.

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: NERC ILA **SPP_025_NC_PSP_PS_2019** 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 and/or 1200 – 1400 (CPT).

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

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2019 Dates: June 18 (AM)
July 11 (AM)
July 25 (AM)

August 14 (AM)
October 10 (AM)
December 10 (AM)

Virtual Instructor-Led Training – Power System Protection: Differential and Generator Protections

This two-hour VILT session builds on SPP’s Power System Protection Fundamentals self-study course focuses on Differential Protection and Generator Protection. Applicable NERC Standards and SPP Criteria related to the use and coordination of system protection will also be reviewed.

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: NERC ILA **SPP_025_NC_PSP_DGP_2019** 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: *Pending approval* 2 Operating Topics hrs. 0 Standards hrs.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0900 – 1100 and/or 1200 - 1400(CPT).

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

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2019 Dates:	June 18 (AM)	August 14 (PM)
	July 11 (PM)	October 10 (PM)
	July 25 (PM)	December 10 (PM)

Virtual Instructor-Led Training – Unit Commitment Fundamentals

This two-hour VILT session will review Day-Ahead and Intra-Day Reliability Unit Commitment (RUC) processes and how RUC may be used to support such real-time operating concerns as Power Flow, Capacity and Energy Emergencies, and Voltage Support.

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: NERC ILA **SPP_025_NC_UCF_2019** 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: *Pending approval* 2 Operating Topics hrs. 2 Standards hrs. 1 Simulation hr.

VILT training material and instructions will be provided to registered participants once registration has closed. Sessions are 0900 – 1100 and/or 1200 - 1400(CPT).

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

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2019 Dates:	June 19 (PM)	August 15 (PM)
	July 10 (AM)	October 9 (PM)
	July 23 (PM)	December 11 (AM)

Virtual Instructor-Led Training – Operating Personnel Communications Protocols

This two-hour VILT session cover NERC Standard COM-002-4 – Operating Personnel Communications Protocols and protocols developed for the SPP footprint in response to the NERC standard.

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: NERC ILA **SPP_025_NC_OPCP_2019** 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: *Pending approval* 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 and/or 1200 - 1400(CPT).

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

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2019 Dates:	June 20 (AM)	August 13 (PM)
	July 9 (PM)	October 8 (AM)
	July 24 (AM)	December 9 (PM)

Virtual Instructor-Led Training – New and 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_NC_NERT_2019** 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 0900 – 1100 and/or 1200 – 1400 (CPT).

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

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2019 Dates:	June 19 (AM)	August 15 (AM)
	July 10 (PM)	October 9 (AM)
	July 23 (AM)	December 11 (AM)

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 2019 Train-the-Trainer curriculum will consist of two Virtual Instructor-led Training (VILT) sessions and one 3-day Instructor-led Training workshop in Little Rock. *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) \$35.00 / participant

Train-the-Trainer ILT Workshop – (24 hours) \$500.00/participant

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 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

VILTs are 0900 – 1100 (CPT).

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2019 Dates: June 6 - 10 - Mistakes to Avoid When Writing an ILA (VILT)
August 6 - 8 – Dear ADDIE..., Please Help! (3-day Workshop in Little Rock)
November 7 – What No One Told You about On-the-job Training (VILT)

Virtual Instructor-led Training - SPP e-Learning PODCAST 101

Southwest Power Pool's 2019 e-Learning sessions will be centered on how to develop a Podcast. The sessions will answer the questions:

- What is a podcast?
- How can a podcast be utilized?
- How can you create a podcast?
- What goes in to scripting a podcast?

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 interested in created e-Learning/self-study modules

Course Fee for Non-members: \$35.00/participant

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 IDs: SPP's Customer Training Department follows NERC's guidelines for awarding Continuing Education hours. This course does not address the approved topics located in Appendix A of NERC's Continuing Education Manual. ***Therefore, no continuing education hours will be awarded for these sessions.***

Event Contact: [Dwayne Dush](#) – 501-688-1627

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2019 Dates: March 20 (100 – 1100)

June 13 1400 - 1500

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

Other Details

NERC ILA ID: NERC ILA **SPP_025_CROW_SS_2014** 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? and 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_CPS_SS_2016** 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_SRP_SS_2015** 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_SS_TLR_2015** 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_VCSS_SS_2017** 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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_OA_SS_2017** 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: Fundamentals Self-Study

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 hour) - \$45/per person or \$45/person per Continuing Education Hour

All payments will be 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: NERC ILA **SPP_025_PSPF_SS_2017** 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. (*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 SPP's Learning Management System (LMS). SPP does not invoice but accepts all major credit cards for payment.

Other Details

NERC ILA ID: NERC ILA **SPP_025_RSS_SS_2016** 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 BA EOP Conservative Operations and Capacity and Energy Emergencies

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**.

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

All payments will be 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: NERC ILA **SPP_025_BAEOP_CO_CEE_SS_2019** 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.

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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.

The 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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