SERC Reliability Corporation

2022 System Operator Conference #4

Delivering Reliability Throughout The Seasons

November 8-10, 2022

NERC-approved Continuing Education Hours (CEHs) will be awarded for successful completion of this learning activity. No partial credit.

Hotel Information
Useful Links
Questions for SERC
Speaker Bios

Purpose:

- Provide SERC System Operators with a forum for networking with operators from across the SERC Region and sharing best practices
- Develop SERC System Operators knowledge and skills using relevant scenarios modeled on an operator training simulator
- Provide SERC System Operators with effective training in normal and emergency operations, operator communication and collaboration and situational awareness
- Assist SERC System Operators in maintaining their NERC Certification through the awar of approved continuing education hours

Target Audience:

- System Operators with responsibility for performing real-time, reliability-related tasks on the interconnected power system (Reliability Coordinator, Balancing Authority, Transmission Operator, and Generator Operator functions)
- System control center managers, supervisors, and staff
- Engineers, planners, managers, marketers, technicians, or support staff who may benefit from power system operation training

COVID Protocol:

To ensure the safety of our attendees, we are asking everyone to observe the Local and CDC Guidelines that are in effect during the System Operator Conference (SOC). Please note that masks are not required at the SOC's; however, we are recommending attendees to wear masks during the General Session and in the Breakout rooms.

SERC and the SOWG will provide pads and pens for attendees located at the water stations for both the General session and the Breakout rooms. In addition, we will make masks and hand sanitizer available throughout the meeting rooms (Please see Matt Bigg at the registration desk should you need assistance with these items).

Learning Objectives

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1. State the primary responsibilities of System Operator to ensure reliability.
2. Relate the impacts to power system operations to recent changes in the Industry.
3. Explain how the new Southeast Energy Exchange Market (SEEM) platform will facilitate sub-hourly bilateral trading.
4. Identify how the SEEM platform utilizes available unreserved transmission.
5. Identify how the SEEM platform will affect the Bulk Electric System and the System Operator.
6. Identify the most significant challenges faced by California operators during each season.
7. Identify the primary tools used to monitor and mitigate operational challenges.
8. Identify the strategies used to overcome operational challenges.
9. Identify the association of NERC Reliability Standards BAL-001-2, BAL-002-3, BAL-003-2, BAL-005-1, COM-001-3, and COM-002-4 to the operations of the Bulk Electric System.
10. Identify the association of NERC Reliability Standards EOP-004-4, EOP-005-3, EOP-006-3, EOP-008-2, EOP-010-1, and EOP-011-1 to the operations of the Bulk Electric System.
11. Identify the association of NERC Reliability Standards TOP-001-5, TOP-002-4, TOP-003-4, and VAR-001-5 to the operations of the Bulk Electric System.
12. Explain the role outage planning plays in ensuring the reliability of the Bulk Electric System.
13. Describe the tools used to determine the validity of an outage schedule.
14. Describe the actions required to coordinate outages with other entities and industrial customers.
15. Describe and compare the differences of outage planning methodologies during winter, summer, and outage seasons.
16. Describe the impact of severe weather events on outage planning and discuss actions that are taken to recover.
17. Assess and analyze simulated emergency scenarios.
18. Implement operator control actions to mitigate undesirable conditions on the simulated power system and return the power system to a reliable state.
19. Apply NERC Reliability Standards to RC/TOP/BA responsibilities for each scenario.
20. Identify how the operator during the Oldsmar Water Treatment incident identified the threat to their facility and respond to mitigate the attack.
21. Identify the security risks to control centers posed by extreme physical events - bomb threats and IEDs.
22. Identify prominent physical and cyber security risks to the ERO as reported to the E-ISAC.
23. Describe the impacts to the MISO South Region caused by Hurricane Ida.
24. Identify how EOP-011 applies to events like Hurricane impacts to the Bulk Electric System.
25. Identify the importance of RC to RC coordination during Hurricane events per NERC Standard IRO-014-3.
26. Explain what the IDC is and what it does.
27. Describe the need for the IDC in operating the power system.
28. Identify who uses the IDC.
29. Describe Parallel Flow Visualization and how it changes the IDC.

Agenda

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Tuesday, November 8, 2022

All Times are Eastern

8:00 a.m. – 9:00 a.m.	Welcome, Safety, Confidentiality and Antitrust	***Pat Everly**, Conference Facilitator* ***Scotty Campbell,** Chair, System Operator Working Group*
	Opening Remarks	***Keith Steinmetz**, Director Transmission Operations and Compliance, LGE&KU*
9:00 a.m. – 11:00 a.m.	Southeast Energy Exchange Market	***Corey Sellers**, General Mgr Transmission Policy & Services / Energy Policy, Southern Company*
11:00 a.m. – 12:00 p.m.	CAISO Renewables	***Drew Thompson**, Generation Dispatcher, CAISO*
12:00 p.m. – 1:00 p.m.	Lunch	

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Tuesday, November 8, 2022

All Times are Eastern

1:00 p.m. – 2:00 p.m.	NERC Standards	***Sharon Darwin**, Bulk Power Operations Training, Southern Company*
2:00 p.m. – 3:00 p.m.	Outage Planning	***Jeremey Roberts**, Senior Engineer (Transmission), Entergy*
3:00 p.m. – 5:00 p.m.	Breakout Rooms - Simulation	*All Attendees in Break-Out Groups SERC/SOS Facilitator Teams*

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Wednesday, November 9, 2022

All Times are Eastern

8:00 a.m. – 12:00 p.m.	Scenarios OTS Finist AM Session	*All Attendees in Break-Out Groups* *SERC/SOS Facilitator Teams*
12:00 p.m. – 1:00 p.m.	Lunch	
1:00 p.m. – 5:00 p.m.	Scenarios OTS Finist PM Session	*All Attendees in Break-Out Groups SERC/SOS Facilitator Teams*

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Thursday, November 10, 2022

All Times are Eastern

8:00 a.m. – 10:00 a.m.	CIP/EISAC	***Patrick Stier**, Senior Reliability & Security Advisor, SERC* ***Kristen Bove** , Physical Security Manager, E-ISAC* ***Zach Fields**, Senior Physical Security Analyst, E-ISAC*
10:00 a.m. – 10:30 a.m.	Hurricane Ida Report	***Trevor Hines**, Manager, South Region Reliability Coordination, MISO*
10:30 a.m. – 11:30 a.m.	IDC Modeling	***Jack Armstrong**, Lead Engineer, System Operations Engineering, ECC, Duke Energy Progress.*
11:30 a.m. – 12:00 p.m.	Summary/Assessment, Closing	***Pat Everly**, Conference Facilitator* ***Scotty Campbell**, Chair, System Operator Working Group*

Please remember to complete your Learning Assessment

Thank you for your participation!

SERC

Hotel Information

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Embassy Suites by Hilton Nashville South Cool Springs
820 Crescent Centre Dr,
Franklin, TN 37067
(615) 515-5151

A reduced rate of $169 per night is offered to attendees. Included is a complimentary breakfast and Manager's Reception. Call 1-800-218-8712 or click this ***LINK*** to make online reservations. **The SERC room block will be open until Monday, October 17, 2022** *or until the block is sold out, whichever comes first.*

GROUND TRANSPORTATION / PARKING

The Embassy Suites by Hilton Nashville South Cool Springs does not offer complimentary transportation to and from the Nashville International Airport.
Please click the ***LINK*** that will direct you to different options for Ground Transportation from the Nashville International Airport.

Self-parking at Embassy Suites by Hilton Nashville South Cool Springs is complimentary. Valet parking is not available.

ADDITIONAL INFORMATION

Questions concerning hotel accommodations and registration - **Matt Bigg**

Useful Links

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Topic	Purpose
Registered Entity Forum CIP REF Steering Committee Members O&P REF Steering Committee Members	If you would like to submit a question anonymously, you may do so by contacting one of the Registered Entity Forum Steering Committee members.
Resource Library Newsroom	eLearning Modules, COVID-19, Hurricane and Cold Weather Preparedness, Supply Chain Resources. Past and present newsletters.
Events Calendar	Register for SERC's upcoming outreach events
Acronym List	Industry Acronym Reference Index

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- Q&A Process
- Entity Assistance

Topic	Email
• General inquiries / FAQ • Seminar & Webinar Topic Suggestions • Media inquiries • SERC Membership • SERC Committees • SERC Compliance & Committee Portal/Committee related issues	[redacted]

• Registration and Certification Issues
• Compliance monitoring methods:
  ○ Self-Certification
  ○ Self-Report submittals
  ○ Compliance data submittals
• Enforcement and Mitigation
  ○ Mitigation Plan submittals
• SERC Compliance & Committee Portal-Compliance related issues
	[redacted]

• Reliability Assessment data reporting • Reliability Assessment forms • Annual Voting Rights • Reliability Data Reporting Portal	[redacted]
• Industry Subject Matter Expert (ISME) Program • Submitting an ISME application	[redacted]
• Situational Awareness • Events Analysis	[redacted]

Speaker Biographies

Corey Sellers - Southern Company

Corey Sellers is the General Manager of Transmission Policy and Services / Energy Policy with Southern Company based in Birmingham, AL. In this role Corey is responsible for strategic policy activities related to the Federal Energy Regulatory Commission (FERC) and wholesale transmission customer service through the administration of Southern Companies' Open Access Transmission Tariff.
Corey began his career with Southern Company as a cooperative education student in 1993. He has held various positions during his career including roles in Energy Management System Services, Generation IT, Energy Trading, Transmission, and as the Assistant to the Chief Operating Officer. Corey attended the University of Alabama where he received his Bachelor of Science degree in Computer Science with a minor in Mathematics. Originally from Dora, AL, Corey and his wife Leigh Ann live in their hometown and enjoy spending time with their two daughters, Brooke and Braden.

Drew Thompson - CAISO

Drew is a NERC Certified RC and has worked at the CAISO since 2015 as an Operations Specialist, Lead Interchange Scheduler, Transmission Dispatcher and currently holds the title of Generation Dispatcher. Prior to the CAISO, Drew managed interconnecting solar projects to various utilities and also worked in the financial industry. He is currently pursuing a MBA in Energy Management at Norwich University and completed his B.S. in Accountancy at California State University: Sacramento.

Speaker Biographies

Jack Armstrong, P.E. - Duke Energy Progress

Jack Armstrong has worked for Duke Energy for 18 years directly out of college, beginning as a System Operator for then-Progress Energy and eventually supporting System Operations as an Operations Planning engineer until 2021. Recently, Jack has worked for Duke's Transmission Planning and Operations Strategy group; developing and implementing strategic plans which allow Duke to meet its carbon reduction goals. Jack has a wealth of experience in System Operations supporting activities such as NERC compliance, ATC calculation, tariff administration and all manner of powerflow studies.

Jack has participated on many electric industry groups including being a member of the NAESB Business Practices Subcommittee, the Eastern Interconnection Data Sharing Network (EIDSN) IDC Working Group as well as the SERC Near-Term and Operations Planning Working Groups. Jack acted as Chair of the SERC NTWG from 2017-2019, leading study improvement changes such as the adoption of the Power-GEM TARA study software to support SERC reliability assessments. As a member of the IDCWG, Jack has worked to ensure the congestion management procedure, or TLR, is implemented with the new Parallel Flow Visualization functionality – ensuring reliable and equitable TLR issuance by the IDC.

Jack lives in Raleigh, NC with his wife Danielle, two kids, two dogs and two guinea pigs. He enjoys spending time at the beach with family and the occasional deep-sea fishing trip. He enjoys exercise and can talk at length about CrossFit to whomever will listen. Jack graduated from North Carolina State University in Raleigh with degrees in Electrical and Computer Engineering, is a NERC Certified System Operator at the RC level and is a licensed Professional Engineer in the state of North Carolina.

Jeremey Roberts - Entergy

Jeremy is a Senior Engineer for Outage Coordination at Entergy Operational Readiness. He has worked at Entergy for the last 18 years. Jeremy started in Real-Time Operations as a System Operator for 8 years, in addition to 3 years as a Lead Operator. For the last 7 years, he has been in the Entergy Operational Readiness group as the Entergy Arkansas Outage Planner. Jeremy has a Bachelor of Science degree in Electrical Engineering and a Master of Science degree in Engineering and Technology Management both from Louisiana Tech University.

Speaker Biographies

Keith Steinmetz - LGE&KU

Keith Steinmetz was named to his current position, Director Transmission Operations and Compliance, at LG&E and KU Energy in May 2011. He has more than 30 years of experience in the electric power industry.

Keith began his affiliation with LG&E in 1985 as a co-op student from the University of Louisville Speed Scientific School and has held various engineering and management positions with LG&E and KU Energy since that time. In 2007, Keith was named Manager System Control Center and successfully oversaw the challenging relocation and integration of the LG&E and KU control centers to a new state of the art facility as well as working through the transitional start-up of the electric reliability organization compliance program. In his current role, Keith is responsible for transmission operations including the safe, reliable, and efficient operation of LG&E and KU's electric transmission control center, energy management system, operational planning and engineering support, and the evolving operational reliability compliance.

Keith holds a Bachelor of Science degree, Master of Engineering in electrical engineering, and a Master of Business Administration all from the University of Louisville. He completed various management and executive training courses through MIT Sloan Executive Education. Keith participates in various professional and industry groups including the SERC Reliability Corporation Operating Committee, North American Electric Reliability Corporation Reliability and Security Technical Committee observer, Edison Electric Institute Reliability Committee and EEI Reliability Executive Advisory Committee, and the North American Transmission Forum members.

Kristen Bove - E-ISAC

Kristen Bove Physical Security Manager, E-ISAC Kristen is the Manager of the E-ISAC Physical Security Analysis Team. In this capacity, she directly engages with asset owners and operators on a daily basis to provide high[1]quality, timely, reliable analysis and context regarding physical security and industry trends, emerging tactics, techniques, procedures, and relevant threat actor behaviors. Prior to becoming manager, she served as Principal Analyst for the E-ISAC physical security team. Before her role at the E-ISAC, Kristen's prior experience involved working with a variety of public and private sector organizations to provide strategic analysis and risk management solutions for critical infrastructure. This included working as an analyst for the U.S. Department of Homeland Security, Office of Infrastructure Protection (now known as Cybersecurity and Infrastructure Security Agency (CISA), where she was responsible for the development and implementation of national risk mitigation programs primarily focused on the Dams and Energy Sector.

Kristen has a Master's Degree in Politics, Security and Integration from University College London, a Bachelor's Degree in History from Arizona State University, and is also certified as an Insider Threat Program Manager (ITPM) from Carnegie Mellon University.

Speaker Biographies

Pat Everly - OES - NA, LLC

Pat Everly is the president of OES-NA, LLC, which is a training-consultant company. He has over 40 years serving many roles in the electric industry. Pat started his career with Philadelphia Electric Company and spent 11 years in nuclear and fossil generation. Upon leaving PECO, Pat moved on to the PJM Interconnection as a System Operator and eventually the Operations Training Supervisor. Pat left PJM in 2001 to fill the newly created NERC Certification Manager position. In this role, he was responsible for the administrative duties for the NERC, WECC, and PJM certification programs. In 2003, he resigned his position at NERC to start OES-NA.

Pat has previously served system operators as: Vice Chair - NERC Examination Working Group, Vice-president and Treasurer for APDA – Northeast Area, and is currently the Chair for the IEEE Working Group for System Operator Training. Pat has been a guest speaker at previous Short Courses, American Power Dispatcher Association Meetings, the IEEE and various Regional seminars aroun.und North America

Patrick Stier - SERC

Patrick Stier is a Senior Reliability and Security Advisor at SERC Reliability Corporation. Mr. Stier has 34 years in the security industry as a National Security leader, specializing in high-profile technical security, risk management, financial leadership, operational efficiency, and crisis management.

Prior to joining SERC, Mr. Stier served in the U.S. Navy and the U.S. Secret Service, providing physical and technical security for numerous U.S. Presidents and Foreign Heads of State to include over 1200 different protected venues and National Special Security Events.

Mr. Stier has a Bachelor of Arts in Criminal Justice/Law Enforcement Administration. He also holds Board Certifications in Certified Information Security Manager (CISM), Certified Protection Professional (CPP), Physical Security Professional (PSP), Professional Certified Investigator (PCI), Enterprise Security Risk Management (ESRM), Certified Technical Investigator (CTI), Network Intrusion Investigator (NITRO) and Enterprise and Broadband Network Administration.

Speaker Biographies

Sharon Darwin - Southern Company

Sharon began her career with Southern Company in 2011 as co-op student in Distribution. She earned a Bachelor's Degree in Electrical Engineering from The University of Alabama in 2013. Upon graduation, Sharon became a Field Test Engineer in Protection & Controls. In 2017, she moved to Bulk Power Operations and earned her RC certification. As part of BPO, she has supported the RC desk, set TTCs, and served as the Southern Company Transmission Outage Coordinator prior to moving to the Training organization earlier this year.

Scotty Campbell - Entergy

Scotty has been in the electrical industry for over two decades. After spending 2 years with supply chain, He moved into real time operations working in distribution and transmission control centers in the Entergy footprint for twelve years. Recently, Scotty has been passing on his knowledge and lessons learned to new operators in the Entergy Transmission Control Centers in a training role.

Speaker Biographies

Trevor Hines - MISO

Trevor Hines, manager of South Region Reliability Coordination at MISO based in Little Rock, Arkansas, is a dedicated professional with 16 years of experience in the energy industry. He joined MISO as an intern in 2007 and has worked in various roles throughout his career, including control room operator, technical trainer, MISO South integration team, GridEx coordinator and outage coordination.

Trevor, a native of Carmel, Indiana, earned a bachelor's degree from Indiana University Bloomington. He holds a North American Electric Reliability Corporation (NERC) Reliability Coordination certification and is a trained Development Dimensions International facilitator.

Zach Fields - E-ISAC

Zach Fields is a Senior Cyber Analyst at the Electricity Information Sharing and Analysis Center (E-ISAC). After graduating from the University of Maryland with a Bachelor's in Cyber Security, he joined the E-ISAC's Watch Operations in 2015. From there, he pivoted to the Cyber Threat Intelligence team where he has authored numerous critical bulletins and led multiple threat hunts through CRISP data. When he is not keeping busy tracking bad actors that threaten the North American electricity industry, Zach has a passion for various strategy and role-playing video games.

Thank You

ADDITIONAL INFORMATION

Questions concerning registration and meeting content - Marty Sas

Questions concerning hotel accommodations - Matt Bigg

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