

**DEPARTMENT OF ENERGY (DOE)/ENERGY &
FACILITY CONTRACTORS GROUP (EFCOG)
ELECTRICAL SAFETY COMMUNITY OF
PRACTICE (ESCoP)**



2023 ELECTRICAL SAFETY WORKSHOP



YOU ARE INVITED

You are invited to the 2023 Annual DOE/EFCOG Electrical Safety Workshop to be held July 17-21 2023, in Albuquerque, New Mexico. Sandia National Laboratories is hosting the workshop for the Electrical Safety Community of Practice from the Energy Facility Contractors Group.

The workshop will provide a forum for identifying best practices and procedures to improve electrical safety practices within the DOE complex. We encourage safety professionals, electrical engineers, electricians, technicians, electrical inspectors, electrical trainers, and other personnel involved in electrical safety to join us for this exciting workshop.

JOIN US: JULY 17-21, 2023
SANDIA NATIONAL LABORATORIES

MEETING AND WORKSHOP CONTACTS:

Eugene Santiago Sandia National Laboratories - ESCoP Workshop Officer at Large
505-850-2561 ([Eugene Santiago Email](#))

Mark Mcnellis, Sandia National Laboratories- ESCoP Workshop Officer at Large Alternate

General information for visiting SNL can be found at the following link. This information includes local hotel and travel information to assist in planning your trip.

<https://efcog.org/event/electrical-safety-workshop/>

Visiting SNL Details

Agenda

2023 Electrical Safety Workshop

Monday, July 17

6:45 – 8:00 AM	Registration / Check-In
8:00 – 8:30 AM	Welcome – David Stuhan SNL Director and Chief of Safety; DOE rep; Eugene Santiago, Workshop Officer at Large; & Scot Winningham, ESCoP Chair
9:00 – 9:45 AM	Reducing Risk When Working on Energized Batteries – SNL David Rosewater
9:45 – 10:15 AM	Harmonizing Electrical Safety across multiple sites for Scorpius project – Jon Custer, SNL; Lloyd Gordon
10:15 – 10:30 AM	<i>Morning Break</i>
10:30 – 11:15 AM	Non-NRTL – TUV Bruce Burgess
11:15 – 12:00 PM	National Electrical Code Correlating Committee Updates- Larry Ayer CC Chair
12:00 – 1:00 PM	<i>Lunch</i>
1:00 – 1:30 PM	Impact of NPFA 70E 2021: Article 360 on R&D capacitor work - a user's perspective – SNL, Derek Lamppa
1:30 – 2:15 PM	Equipment Maintenance and NFPA 70B- Rod West 70B Chair
2:15 – 2:45 PM	Lightning protection in Fireset hazards- Zach Ross SNL
2:45 – 3:25 PM	NFPA 70E Panel discussion- Gray, Ayer, West, Garrison, Hilbert
3:25 – 3:40 PM	Afternoon Break
3:40 – 4:15 PM	Thunder Range Fireset capacitive shock- Mike Kaneshige SNL
4:15 – UNTIL...	Topic: - Tim Whitting, Schneider Electric

Tuesday, July 18

6:45 – 8:00 AM	Check-In / Enter SNL Site
8:00 – 8:45 AM	Best Practice presentations
8:45 – 9:35 AM	Working group Introductions- WG leads (10 mins each) <ol style="list-style-type: none">1. DC Energy2. Non-NRTL Utilization Equipment Design & Inspection Process (NNUEIP)3. Hazardous Energy Control4. Utility Standards Interface5. Electric Vehicles Safety
9:35 – 12:00 PM	Working Groups convene
12:00 – 1:00 PM	<i>Lunch</i>
1:00 – 5:00 PM	Working Groups continue

Wednesday, July 19

7:30 – 8:00 AM	Check-In / Enter SNL Site
8:00 AM – 12:00 PM	Working Groups continue
12:00 – 1:00 PM	<i>Lunch</i>
1:00 – 5:00 PM	Working Groups continue

Thursday, July 20

7:30 – 8:00 AM	Check-In / Enter SNL Site
8:00 AM – 12:00 PM	Working Groups continue Working Groups conclude
12:00 – 1:00 PM	<i>Lunch</i>
1:00 – 4:30 PM	Working Groups Leads Present Progress and Future Plans
4:30 – 5:00 PM	Closing Remarks, Scot Winningham, ESCoP Chair

Friday, July 21

	Sandia Site Tours
9:00 AM – 2:00 PM	Z machine, Cable Site, and Burn Center

WORKING GROUP DESCRIPTIONS:

1. Utility Standards Interface -

- 1) Develop Best Practice to prevent PT failures addressing:
 - i. Access of personnel
 - ii. Acceptance testing
 - iii. Maintenance procedures
- 2) Develop a Best Practice discussing Equipotential and Personnel safety grounding.
- 3) Develop a Best Practice for Step and Touch Potential and ensure utility workers get this training into their training matrix.

- 4) Continue to gather safety alerts and recent events from the complex and industry. Prepare quarterly discussion materials (presentations, tailgate info, Q&A, lessons learned, etc.)
 - i. Digger derricks (step/touch potential)
 - ii. Storm/weather events and impact (wind, snow/ice, tornadoes, lightning, etc.)
 - iii. ORPS Reports/Industry Alerts
 - iv. PT failures

Note: ideally would like participation from each location/site

2. **Hazardous Energy Control** – Work towards consistent and effective hazardous energy control (LOTO) programs across the DOE Complex which are in compliance with consensus standards such as NFPA 70E and regulations such as 29CFR 1910.47.

Developing Best Practices, Guides and Position Papers.

Determines the Electrical Safety Month topic and develops training and presentation materials in support of the Vice Chair.

Provides input to standards-making bodies when justified.

Responds to Electrical Safe Work Practice concerns as the need arises.

- 1) Develop LOTO Severity Index Tool.
- 2) Improve use and consistent application of Electrical Severity Index (from DOE Electrical Safety Handbook).
- 3) Updating/revising the ESMT to improve the consistency of application with scenarios/examples of event scoring and ESI tracking.
 - i. Develop a checklist of questions that can be used to ensure accurate scoring of electrical events.
- 4) Update/revise the associated ESMT training power point and post it as an online training module or reference for using the tool.
- 5) Develop guidance on how to report event electrical severity and manhours for your site into a database to aid in calculating the ESI for the complex.
 - i. Develop guidance/criteria that specifies what events will be discussed and who is responsible for discussing events on the monthly call.

Recurring Task support:

Determine 2023 Electrical Safety Month Topic and develop materials.

3. **Non-NRTL Utilization Equipment Design & Inspection Process (NNUEIP)** – Work towards consistent and effective Non-NRTL Utilization Equipment Design & Inspection Processes across the DOE Complex which are in compliance with OSHA and DOE regulations and consensus standards such as: NEC, NFPA 70E, NFPA 790/791.

Provide input to standards-making bodies when justified

- 1) Review and compare NNUEIP documentation across DOE Complex
- 2) Develop NNUEIP Best Practices
- 3) Create NNUEIP outline for 2023 IEEE IAS ESW paper

4. **DC Energy** – WS&H-ES-21-03 Grounding sticks have been used for decades at DOE laboratories and sites to remove stored hazardous energy from capacitors. Most labs and sites have developed this technology and procedures for using these sticks in-house. Capturing the most effective designs and procedures Complex-wide will reduce risks at all DOE laboratories and sites.

- 1) Distribute best practice for Capacitive System Grounding Sticks.

5. Electric Vehicles Safety