



N.D. REC ENGINEERING & OPERATIONS CONFERENCE EXHIBITOR SHOWCASE

DEC. 4-6, 2024

Hilton Garden Inn, 4351 17th Ave. S, Fargo, N.D.

The N.D. REC Engineering & Operations Association will hold its annual conference Dec. 4-6 at the Hilton Garden Inn, 4351 17th Ave. S, Fargo. The Exhibitor Showcase will be held in conjunction with the conference. Associate Members of the North Dakota Association of Rural Electric Cooperatives (NDAREC) and other interested companies are invited to participate in this event.

When: 5 to 7 p.m. on Thursday, Dec. 5

Where: Hilton Garden Inn, 4351 17th Ave. S, Fargo

Setup time: 11 a.m. to 4:30 p.m. on Dec. 5

*Registration fee: \$650 for NDAREC associate members

\$950 for companies that are not paid 2024 NDAREC associate members

**Registration fee includes booth space, contribution for the hosted social and up to 5 company representatives invited to attend.*

The registration deadline is **Nov. 19**. NDAREC associate members are also invited to attend the Engineering and Operations Conference. A separate registration fee applies for the conference sessions set for Dec. 4-6.

MORE VALUE FOR YOUR SUPPORT AND PARTICIPATION IN THE EXHIBITOR SHOWCASE!

If your company registers for the Exhibitor Showcase, you and your company are also eligible to participate in the "What's New, What's Next" session scheduled prior to the Exhibitor Showcase. This session gives NDAREC associate members and vendors an opportunity to provide a five-minute preview of their products and services during the session, from 4:15-5 p.m. Dec. 5. There are limited time slots for this session so registrations for "What's New, What's Next" will be honored on a first come, first served basis for NDAREC associate members and vendors who register for the Exhibitor Showcase. There is no charge for this when an NDAREC associate member or company registers and participates in the Exhibitor Showcase.

Please complete the registration information below and return to: Pamela Clark-Stein, pstein@ndarec.com. Registration deadline is Nov. 19.

YES! My company would like to participate in the Exhibitor Showcase and Social.

YES! My company would like to participate in the "What's New, What's Next" in Products and Services presentations. Registrations will be honored on a first come, first served basis for companies also registered for the Exhibitor Showcase. Your company representative, requested below, will receive a confirmation notification if your company gets one of the reserved time slots.

Payment for the registration fee must be submitted with your company registration. If you choose to pay by credit card, please call NDAREC Accountant Chantel Shorey at (701) 667-6416.

Company name: _____

Company: _____

Primary contact person and job title: _____

Work phone: _____ Cell phone: _____ E-mail address: _____

Names of company representatives attending (for name badges): _____

2024 N.D. REC ENGINEERING AND OPERATIONS CONFERENCE & EXHIBITOR SHOWCASE

DEC. 4-6, 2024 | Hilton Garden Inn, 4351 17th Ave. S, Fargo, N.D.

Co-sponsored by: The North Dakota REC Engineering and Operations Association
and The North Dakota Association of Rural Electric Cooperatives (NDAREC)

JOIN US FOR THE ANNUAL CONFERENCE AND EXHIBITOR SHOWCASE!

You and your colleagues are invited to attend the annual conference, sponsored by the North Dakota REC Engineering and Operations Association and the North Dakota Association of Rural Electric Cooperatives (NDAREC).

The conference is intended for engineers, line superintendents, operations and construction personnel. Consulting engineers and NDAREC associate members are also invited to attend.

“WHAT’S NEW, WHAT’S NEXT” SESSION ON DEC. 5.

NDAREC associate members and other vendors will have the opportunity to provide a five-minute update on their products and services, just prior to the Exhibitor Showcase scheduled for 5-7 p.m. on Dec. 5. There are limited time slots for this session so registrations will be honored on a first come, first served basis for those companies who are registered for the Exhibitor Showcase. **Registration is required for “What’s New, What’s Next.”**

EXHIBITOR SHOWCASE AND SOCIAL ON DEC. 5.

NDAREC associate members and vendors will be joining conference attendees from 5 to 7 p.m. on Thursday, Dec. 5, for the Exhibitor Showcase and hosted social. Our thanks to these companies for their generosity in hosting the social.

CONFERENCE AGENDA

All conference sessions will be held in the Lilac Room.

WEDNESDAY, DEC. 4

11:30 a.m. to 1 p.m. Conference Registration

1-1:15 p.m. Welcome and Opening Announcements

1:15-2:15 p.m. Protection of Distribution Lines

Drew Volk, P.E., system protection & studies business class leader, HDR Engineering Inc.

This opening session will provide a practical review of protective relay setting development and coordination for distribution lines. The primary focus will be phase and ground overcurrent elements and time-current curves (TCCs).

2:15-3:15 p.m.

Proactive System Maintenance with the National Information Solution Cooperative’s Operations Analytics and Distributed Engineering Workstation

Sara Tetrick, senior professional services consultant, National Information Solutions Cooperative (NISC), and **John Mittleider,** system engineer, Capital Electric Cooperative

Capital Electric Cooperative went live with NISC’s Operations Analytics and Distributed Engineering Workstation (DEW) in 2022. Sara will provide an overview of the software, what it takes to implement it, and offer suggestions for how your organization can be more proactive with system maintenance and operations.

John will share how the Operations Analytics software helped Capital Electric to be proactive in replacing undersized transformers, finding system voltage issues, and avoiding unnecessary outages by preventing protective devices from tripping on load.

3:15-3:30 p.m.

Refreshment break

3:30-4:30 p.m.

Critical Infrastructure and Wildfire Risk

Ryan Melin, fire management officer, North Dakota State University – North Dakota Forest Service

Ryan will lead an interactive discussion on how the electrical grid and wildfires have become a national conversation. In this presentation, key topics will include actual wildfire and power grid events, how our climate is affecting the path forward, and wildfire mitigation strategies to prevent future events.

5-6:30 p.m.

Bull N’ Beer Welcome Reception
– Orchid Room

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THURSDAY, DEC. 5

- 7:30-8:15 a.m. Engineering Managers Breakfast and Roundtable Discussion**
– Tulip Room
- 7:30-8:15 a.m. Hot breakfast buffet**
- 8:15-10:15 a.m. Applying Protection at the Point of Common Coupling**
Josh LaBlanc, P.E., application engineer-protection, Schweitzer Engineering Laboratories
Increasing distributed energy resource (DER) interconnection on the distribution electric power system (EPS) requires more industry knowledge of how to properly protect these applications and meet requirements laid out in industry standards. In this session, participants will learn how to apply protection at the point of common coupling (PCC). Participants will review different interconnection topologies, review IEEE 1547 protection requirements, and learn how to apply open-phase protection at the point of interconnection (POI).
- 10:15-10:30 a.m. Refreshment break**
- 10:30 a.m. to 12:15 p.m. Characteristics of Underground Cable**
Jason Settle, P.E., Hi-Line Engineering
Underground power is common in new subdivisions, as well as in conversions from overhead distribution to underground distribution. Key topics include characteristics of underground cable and installation challenges such as handling issues, bending radius, use of rollers and cable accessories.
- 12:15-1 p.m. Group luncheon**
- 1-3 p.m. Three-Phase Motor Starting**
Jason Settle, P.E., Hi-Line Engineering
Mitigation of power quality issues, due to motor starting on the power system, can be one of the most difficult challenges faced by electric utility personnel. This presentation will address how to prepare a motor starting analysis for various types of motor starters, the impact of various motor starters on the starting current, starting torque and mitigation techniques.
- 3-3:15 p.m. Refreshment break**
- 3:15-4:15 p.m. Mitigation of Animal-Caused Outages**
Jason Settle, P.E., Hi-Line Engineering
Reliability is becoming more important in today's electronic-dependent environment. Animal-caused outages are areas where the utility can improve

4:15-5 p.m.

5 p.m.

5-7 p.m.

FRIDAY, DEC. 6

7:30-8:15 a.m.

8:15-8:45 a.m.

8:45-9:30 a.m.

9:30-10:15 a.m.

10:15-10:30 a.m.

10:30-11:30 a.m.

11:30 a.m.

distribution reliability. This session will address mitigation for outages caused by animals such as squirrels and birds. Substation protection will also be included in the discussion.

"What's New, What's Next" in Products and Services

Time is reserved for NDAREC associate members and vendors to give 5-minute updates. Companies must be registered for the Exhibitor Showcase to participate in this session.

Adjournment

Exhibitor Showcase and Social

– Orchid, Rose and Lily Rooms

Conference attendees are invited to join NDAREC associate members and other vendors for this networking event.

Hot breakfast buffet

Business Meeting for the N.D. Engineering and Operations Association

Rural Utilities Service Update

Cory Herman, general field representative, U.S. Department of Agriculture - Rural Utilities Service

This update will include the RUS environmental review process, how it works and best practices. Cory will also highlight other changes and field questions you have.

Electric Vehicles: Efficiency, Charging and Incentives

Josh Schaffner, energy services manager, Capital Electric Cooperative

Josh will address the topics of varying efficiency, charging changes and incentives available to electric cooperatives.

Refreshment break

The Survivor Way

Holly Hoffman

With life's challenges, we come face-to-face with fear and uncertainty. It's how we choose to overcome challenges that make us who we are and shores up our character and self-worth. Holly will share her experience of being on a reality show, and inspire you to reflect on how you decide to take on any challenge.

Conference Evaluations and Adjournment

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MEET THE TRAINERS



Jason Settle has a Bachelor of Science degree in Electrical Engineering Technology from Southern Polytechnic State University and is a registered professional engineer in Alabama. He has more than 20 years of experience in engineering, operations and safety management of electrical utility systems. He is skilled in the preparation of construction work plans, substation justifications, and hands-on system operations.

Jason also conducts engineering and operations training for Hi-Line Engineering. Additional work experience includes developing long range plans, developing substation and distribution line switching procedures, performing coordination studies on distribution lines, performing voltage drop calculations, and staking distribution lines.



Holly Hoffman was the last remaining member of the Espada Tribe and the last woman standing on Season 21 of the CBS hit reality show, "Survivor Nicaragua." Through that experience, Holly was inspired to share her message of survival.

A native of South Dakota, Holly's keynote speaking not only offers encouragement and optimism but a roadmap for self-discovery and enlightenment.

Holly has earned the nationally recognized Certified Speaking Professional credential, and travels across the country and internationally, speaking to a wide variety of corporations, associations, universities, schools and women's organizations.

REGISTRATION INFORMATION

Please register for the conference by **Nov.19**. Online registration is available at <https://www.ndarec.com/ndarec-education-programs>. The training offered via the conference sessions is part of the 2024 NDAREC Menu of Education Programs and is open to other cooperative employees and NDAREC associate members.

REGISTRATION FEE

The registration fee is \$495/person. This covers the cost of course materials for the Hi-Line Engineering sessions, meals and refreshment breaks. If you need to cancel, please let Pamela Clark-Stein know at least 48 hours in advance of the conference. Without advance notice of cancellation, your cooperative will be billed for the full registration fee.

Special dietary needs and other accommodations

Please notify Pamela via email at pstein@ndarec.com of any dietary restrictions such as food allergies, gluten-free options and other special accommodations needed. A minimum of 48 hours advance notice is requested.

HOTEL ACCOMMODATIONS — HILTON GARDEN INN, FARGO

For your convenience, a block of sleeping rooms is reserved for Dec. 4 and 5 at the Hilton Garden Inn, 4351 17th Ave. South, Fargo, N.D. The block is reserved under "REC Engineering and Operations Conference," and will be held until Nov. 13. After Nov. 13, the reserved block will be released for booking by the general public. The room rate is \$139/night.

Conference attendees are responsible for making their own room reservations. Please call the Hilton Garden Inn at (701) 499-6000 to make your reservation. The hotel requires 24 hours prior to the scheduled arrival date if a room reservation must be canceled.

PLANNING COMMITTEE

John Mittleider, Capital Electric Cooperative

Lucas Schaaf, McLean Electric Cooperative

Jason Helgeson, Mor-Gran-Sou Electric Cooperative

Tyler Hill, HDR Inc.

Pamela Clark-Stein, NDAREC