



Municipal Electric Utilities of Wisconsin  
presents

# LINEMAN UNIVERSITY ONLINE

February 2, 2021

“Lineman U” is valuable for electric lineworkers of all experience levels. The day-long online session offers informative presentations on a wide array of technical and safety topics to stay on top of current trends in the utility industry

### Who Should Attend?

Topics covered in this training are useful for anyone who works in the field of electric power systems, construction, and maintenance. All apprentice and journeymen lineworkers, crew leaders, foremen, groundmen, operations personnel, and related occupations with all levels of experience are encouraged to attend.

## LINEMAN UNIVERSITY 2021 — AGENDA

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|---------------------|---|
| 8:00 to 8:55 a.m.   | How Will the Electric Vehicle Industry Affect the Power Grid?<br><i>Heather Allen Executive Director, RENEW Wisconsin</i>                   |
| 9:00 to 9:55 a.m.   | Connectors Review: Compression, Mechanical, Wedge, Shear Bolt Torques<br><i>Bill Amelse, Primus Marketing</i>                               |
| 10:00 to 10:55 a.m. | Penta Update<br><i>Jim Davis, North Central Sales Representative; Bell Pole</i>   |
| 11:00 to 11:55 a.m. | Legal Responsibilities and Liabilities for Supervisors<br><i>Steven C. Zach, Attorney, Boardman &amp; Clark, LLP</i>                        |
| 12:00 to 12:30 p.m. | — Lunch Break —   |
| 12:30 to 1:25 p.m.  | 5G Information and Your Safety Concerns<br><i>Joe Moore, Safety Trainer, MJ Electric</i>  |
| 1:30 to 2:25 p.m.   | Effects of Residential Solar Production on Neighbors<br><i>Jarod Boerst, Power Distribution Engineer, Polk-Burnett Electric Cooperative</i> |
| 2:30 to 3:25 p.m.   | Fires and Invoices,<br><i>Eric Martin, Forest Fire Suppression Specialist, Bureau of Forest Protection, Wisconsin DNR</i>                   |
| 3:30 p.m.           | — Wrap-Up —   |



This year’s program is entirely online; participants will attend via Zoom

Registration fee covers one person for all sessions (each individual receives unique login credentials that cannot be shared). Login instructions and access to handouts will be sent by email on Monday, Feb. 1.

### Register online at [meuw.org](http://meuw.org)

Deadline: January 29

**MEUW Member Rate:** \$95 per person

**Non-MEUW Member Rate:** \$120 per person

Cancellations are subject to [MEUW Policy](#)



**How will the Electric Vehicle Industry Affect the Power Grid?**

Electric Vehicle (EV's) battery charges using different types of EV battery chargers. EV's are comparatively large loads that connect to the power grid when charging. Besides the loads these charging systems consume, other issues are how does peak demand affect the power utility grid? Should a power company consider on-peak and an off-peak rate? How does a power company respond to meet the demands of a housing development which have EV battery chargers installed in the new homes? These questions are examples of concerns a utility can be facing soon and will be discussed in the presentation.

**Connectors Review: Compression, Mechanical, Wedge, Shear Bolt Torques**

Past sessions such as this one have surprised many attendees about the basics of connectors and has proven differences between what we have been told and what the manufactures want us to understand. This session will also discuss bolted connectors and required torques including shear bolted connectors. Included in this presentation will be covering those mechanical connectors such as split bolts, set screws, the advantages and disadvantages of the wedge connectors.

**Penta Update**

Pentachlorophenol, often referred to as penta, is an industrial strength preservative used in wood pole treating since the 1930s. Penta is on its way out as a utility pole preservative after December 2021. Bell Pole's presentation will update us with the pole preserving industry's reaction to a "new" pole preservative process and what Bell Pole has done to determine what preservative they have decided to incorporate in the process of pole preservation.

**Legal Responsibilities and Liabilities for Supervisors**

This presentation will provide attendees with an oversight into the practical duties and responsibilities of being a supervisor. This will include a review of the primary laws which supervisors are expected to know and enforce communicated through a series of stories of common examples. The focus will be on providing supervisors, or those who aspire to be a supervisor, with best practices that good supervisors employ on a regular basis

**5G Information and Your Safety Concerns**

5G, the next generation of cellular technology for smartphones, is imminent. And with it, there's concern about the health risk of this new, more powerful network. What safety precautions does a lineworker need to be aware of while working near a broadcasting antenna? What new protocols are needed to be followed while working at a 5G operating near a 5G network? This presentation will enlighten anyone who works near a 5G system.

**Effects of Residential Solar Production on Neighbors**

Power quality problems on a distribution system are most commonly the result of poor connections or excessive loading, causing voltages to drop and lights to dim. If the transformer or secondary conductor is shared by more than one location, several meters may experience the low voltage and dimming lights. If the power flow is reversed (as is the case with solar generation), the power quality problem also becomes reversed. Low voltage and dimming lights can become high voltage and failed light bulbs (or appliances). This session explores how residential generation can impact power quality and how it relates to secondary conductor size and length, transformer characteristics, and primary line voltage.

**Fires and Invoices**

The raging forest fires in the Western U.S. have brought attention to the risks of not properly maintaining power lines to avoid natural hazards. The Wisconsin Administrative Code (PSC 113) notes, "Upon identifying a potential power line natural hazard, the utility shall take action to eliminate the hazard to the power line ... to reduce the likelihood of outages and forest fires, thereby reducing the likelihood that anyone is responsible for forest fire suppression costs." This session will explore who's responsible to pay for suppression costs. Further, what liability lies with power company when landowner won't allow tree trimming? Would the power company have to pay for suppression as it is their equipment which caused the wildfire?

**Questions?**

Call the MEUW Office at (608) 837-2263  
or contact Randy Larson directly at  
(715) 559-7542