



HUMAN PERFORMANCE CONFERENCE – 3/27/18

Augmented Reality

A decorative graphic at the bottom of the slide consisting of three overlapping, upward-pointing triangular shapes in blue, yellow, and red, all tapering to a point on the right side.

Taking **technology** to heart.

Taking energy to heart

- Serving 700,000 customers in Eastern Kansas
- More than 6,000 megawatts of generating capacity
- 35,000 miles of transmission and distribution lines

Westar Energy - Renewables

In 2017, more than half of the power to the homes and businesses we serve came from emission-free sources —renewables and nuclear power



Voltage Regulator Maintenance

Current process

- First responder – troubleshooter or agent
 - Controller – call out relay tech
 - Regulator – bypass for line crew
- Incorrect initial assessment = additional truck roll
- Most repairs are minor issues
- Extremely inefficient!




Panasonic FZ-G1

Main Menu

TOUGHPAD

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COOPER Power Systems SEL SCHWEITZER ENGINEERING LABORATORIES SIEMENS




LINE MAINTENANCE APPLICATION

MAIN MENU

Troubleshooting	>	In-Servicing	>
Megger Test	>	Regulator Removal	>
Regulator Installation	>	Empty	>
Videos	>	Tutorial	>

Icons: Lock, Menu, Hard Hat



A1 A2 [Speaker] [Speaker] [Windows] [App] [Battery] [Signal] [Power]

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Safety Reminders

TOUGHPAD

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Remember to check ground wires before proceeding.

CONTINUE



Controller Identification

Line-Assist troubleshooting

- Identifies model of controller
- Queues specific troubleshooting steps
- AR enhanced view
- Extremely easy to use



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Embedded Reference Materials

TOUGHPAD

The screenshot shows a tablet interface with a document viewer. The document is titled "Voltage Regulators MNZ25016EN" and "COOPER POWER SERIES". It includes the text "CL-6 series control installation, operation, and maintenance instructions". A photograph of a voltage regulator unit is displayed in the center. The document is part of a collection of 128 pages, currently showing page 1. The interface includes a top status bar with the date "07/25/2017" and time "1:00 PM", and a bottom navigation bar with icons for home, menu, back, and search. The Westar Energy logo is visible in the bottom right corner of the document viewer.



Line-Assist Benefits

- **Change the medium** to reach a new generation
- **Direct the right information** to the people who need it, when they need it
- **On-site refresher** for infrequently performed tasks
- **Leads to improved safety and productivity**



Core Project Team

Kyle Robertson	Engineer, Substation Maintenance	Westar (Project Manager)
John Wistuba	EDS, Central Region	Westar (Project Manager)
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