

SUBSTATION AND DISTRIBUTION AUTOMATION

January 25-26, 2021
Online | Central Time

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“EUCI does a great job of finding strong presenters and relevant topics for industry. The strong attendance at this event speaks to that success.”

Engineer, Leidos

EUCI ONLINE COURSE

EUCI is pleased to offer this virtual course on its online interactive platform. Enjoy a valuable learning experience with a smaller impact on your time and budget. You will gain new knowledge, skills, and hands-on experience from the convenience of your remote location.



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EUCI is authorized
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OVERVIEW

Two aspects make the automation of the power delivery system worth the investment. First, they are geographically extensive in nature. In some cases the point of interest is 100 or more miles away from the utility operations center. Second, and even more important, is the complexity. Even when remote control of these devices and systems are achieved, system operators require time to evaluate, digest and act upon a given situation. Automation “scripts” can be created to take action for routine events that disrupt the power delivery process and reduce outage duration.

This course begins with definitions and objectives for automation and moves quickly into SCADA and intelligent devices. Automated decisions are based on binary and analog inputs and processed via Boolean logic. The course is intended to provide an overview of power delivery system automation and review of common utility best practices, standards and operating processes associated with system automation.

LEARNING OUTCOMES

- Define automation
- Identify characteristics and best practices of automation in substation and distribution applications
- Review automation goals
- Explore the vast array of devices and software available for the automation of substations and distribution circuits

WHO SHOULD ATTEND

Utility personnel responsible for the design, operation or specification for intelligent devices and automated systems will benefit from this course. Veterans and newcomers to this fast-growing sector of the electric utility business will benefit from the presentations and discussions. It is recommended that those attending have a working knowledge of conventional substation and distribution equipment. This course is ideal for newly appointed managers/directors of departments and groups responsible for automation projects.

REGISTER TODAY! CALL **303-770-8800** OR VISIT **WWW.EUCI.COM**

AGENDA

MONDAY, JANUARY 25, 2021 – CENTRAL TIME

8:45 – 9:00 am

Log In

9:00 am – 1:00 pm

Session 1

Automation Definition & Characteristics

- Definitions:
 - o Automation – what is it?
 - o Intelligent Devices
 - o Task
- Best Practices for Automation
 - o Applicable Industry Standards
- Automation Progression
- Automation Goals
 - o Reduce time and expense
 - o Reduce Outage Time
 - o Improve Safety
 - o More and Faster System Data
 - o Outage Management

Substation Automation

- High Voltage Bus
 - o HV Bus Schemes
 - o HV Bus Differential Protection
- Substation Power Transformer
 - o Transformer Differential Scheme
 - o Transformer Monitoring
- Low Voltage Bus
 - o Phase Current Monitoring
 - o LV Bus Differential
 - o Auto Closing of LV Bus Tie

1:00 – 1:30 pm

Break for Lunch

1:30 – 5:30 pm

Session 2

- Distribution Circuits and Feeders
 - o Phase Current Monitoring
 - o Ground Current Monitoring (phase balancing)
 - o Breaker Status
- Remote Terminal Units
- Substation (gateway) Computer
- Communication
 - Within the Substation
 - Substation to Control Center

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AGENDA

TUESDAY, JANUARY 26, 2021

8:45 – 9:00 am

Log In

9:00 am – 1:00 pm

Session 3

Distribution Automation

- Switches & Fault Interrupting Devices
 - o Automatic Reclosers
 - Gang Operated
 - Independent Pole Operating Reclosers
 - o Motor Operated Air Break Switches
- Intelligent Electronic Devices (IEDs)
- Protective Relays
- Distribution Equipment Controls
- Communication with IEDs
- Auto Restoration

INSTRUCTORS



David Farmer, PE

Director of System Planning & Grid Technologies, Pike Engineering

David Farmer, PE, is the Director of System Planning & Grid Technologies for Pike Engineering. He holds a BS in Electrical Engineering from West Virginia University Institute of Technology and is a registered professional engineer in multiple states. Since 1983, Mr. Farmer has worked with electric utilities in power delivery planning, load forecasting, reliability analysis, engineering and operations, construction and design, training, and project management. David has worked for both investor owned utilities and electric cooperatives.



Jerry Josken

Senior Consultant, Pike Engineering

Jerry holds a BS in Electrical Engineering Technology from the Milwaukee School of Engineering and an MBA from North Central College. During his 30+ year career with Eaton's Cooper Power Systems, Jerry served in a variety of engineering capacities. Past leadership positions include Chair of IEEE Rural Electric Power Conference (2012) and GLEMS Distribution Equipment/Controls (2013-2014). Presently, Jerry coordinates Pike Engineering Professional Development Program.

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INSTRUCTIONAL METHODS

This course will use case studies and PowerPoint presentations.

IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 1.2 CEUs course

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must login for the entirety of conference to be eligible for continuing education credit.

ONLINE COURSE DELIVERY & PARTICIPATION DETAILS

EUCI is pleased to offer this virtual course on its online interactive platform. Enjoy a valuable learning experience with a smaller impact on your time and budget. You will gain new knowledge, skills, and hands-on experience from the convenience of your remote location.

We will be using Microsoft Teams to facilitate your participation in the upcoming event. You do not need to have an existing Teams account in order to participate in the broadcast – the course will play in your browser and you will have the option of using a microphone to speak with the room and ask questions, or type any questions in via the chat window and our on-line administrator will relay your question to the instructor.

You will receive a meeting invitation that will include a link to join the meeting.

Separate meeting invitations will be sent for the morning and afternoon sessions of the course. You will need to join the appropriate meeting at the appropriate time.

If you are using a microphone, please ensure that it is muted until such time as you need to ask a question.

The remote meeting connection will be open approximately 30 minutes before the start of the course. We encourage you to connect as early as possible in case you experience any unforeseen problems.

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REGISTRATION INFORMATION

Mail Directly To:

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Greenwood Village, CO 80111
OR, scan and email to: conferences@euci.com

WWW.EUCI.COM

p: 303-770-8800

f: 303-741-0849

ONLINE DELIVERY & PARTICIPATION DETAILS

EUCI will use Microsoft Teams to facilitate participation in the upcoming event. Attendees do not need to have an existing Teams account to participate in the broadcast. The course will play in attendee's browser. When attendees sign on, their microphones are typically muted. Attendees should keep their mic muted until such time as it's needed to ask a question. During the event, participants will have the option of using a microphone to speak with the room and ask questions, or type in any questions via the chat window and our online administrator will relay your question to the instructor.

- Each attendee will receive an event invitation by e-mail, which will include one link to sign on for each half-day of the event (i.e., three links for a 1 1/2 day event). The appropriate link must be used to join each half-day event segment at the appropriate time.
- The remote meeting connection will open approximately 30 minutes before the start of the course. We encourage attendees to connect as early as possible in case of unforeseen problems.

PLEASE SELECT

SUBSTATION AND DISTRIBUTION AUTOMATION ONLINE COURSE

JANUARY 25-26, 2021: US \$1,195 (Single Connection)

PACK OF 5 CONNECTIONS: US \$4,780 (20% Discount)

PACK OF 10 CONNECTIONS: US \$8,365 (30% Discount)

PACK OF 20 CONNECTIONS: US \$14,340 (40% Discount)

Please call us at 303-770-8800 if you have any specific questions on the volume discounts.

** all other discounts do not apply to license packs*

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name

Job Title

Company

Address

City

State/Province

Zip/Postal Code

Country

Phone

Email

CREDIT CARD INFORMATION

Name on Card

Billing Address

Account Number

Billing City

Billing State

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

Billing Zip Code/Postal Code

OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before December 18, 2020 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at 303-770-8800. EUCI reserves the right to alter this program without prior notice.

