

UNDERGROUND DISTRIBUTION CABLE SYSTEMS: MANAGING THE LIFE CYCLE OF CABLE ASSETS

February 22-23, 2017
Royal Sonesta Houston
Houston, TX



EUCI is authorized
by IACET to offer
1.0 CEUs for the
course

OVERVIEW

With a wave of solid dielectric underground distribution cable (URD) systems reaching their assumed end of life, utility asset managers are facing significant challenges balancing reliable power delivery with budget priorities. Using age as the determining factor for when to replace URD systems is not financially viable and a run to failure strategy is not publicly acceptable.

To provide the expected level of reliability within an acceptable budget, asset managers must find a more effective way of making repair and replacement decisions and, in general, develop a sustainable, life cycle approach. This course will provide a comprehensive look at emerging trends in the design and maintenance of URD systems. Attendees will gain valuable insights into extending the life of their underground cable systems for decades.

LEARNING OUTCOMES

- Review best practices for cable asset protection systems
- Evaluate cable installation best practices
- Identify cable failure causes and misconceptions
- Discuss cable system best practices for managing outages and repairs
- Evaluate fault locating techniques and other operational risk factors
- Formulate asset retirement plans
- Review UG cable system operating best practices
- Compare cable system rehabilitation to alternative asset management strategies
- Identify the recommended steps to implement an effective cable rehabilitation program
- Discuss strategies to overcome rehabilitation program management challenges
- Identify cable condition assessment technical procedures

WHO SHOULD ATTEND

- Directors and vice presidents of utility distribution operations
- Asset management directors and vice presidents
- Managers, engineers, planners and professionals involved in underground (UG) capital and strategic planning for electric utilities
- Reliability engineers and managers
- Standards engineers and managers
- Risk managers



“Learn from the experiences of colleagues.”

Estimator, IID



“EUCI knowledge and experience working for you.”

Distribution Estimator I, IID

AGENDA

WEDNESDAY, FEBRUARY 22, 2017

8:00 - 8:30 am **Registration and Breakfast**

12:00 - 1:00 pm **Group Luncheon**

8:30 am - 4:30 pm **Course Timing**

Failure Myths

- Brief history of cable systems
- Debunk significant industry wide myths
- How myths have guided the industry to inefficient approaches in the past

Fundamentals

- How do cable systems fail?
- Understanding the relationship between cable failure mechanisms, failure causing defects and life cycle management
- How long should cable systems last?
- What are the standards for cable system performance?

Accessories and Cable

- What is the latest cable and accessory technology?
- What are the standards that govern product quality?
- What are highly reliable product's key features?
- What are the typical issues with cable and accessories and how can they be avoided?
- How to detect and locate manufacturing, handling, and installation failure causing defects

Quality Control, Critical Infrastructure Reliability, Contractor Value Management and Crew Certification Training

- How to implement effective installation training and certification for installers
- How to confirm the reliability of critical assets through standardized assessment
- How to ensure your installation teams, direct and contractor stay current and perform reliable work

Development of a Cable Asset Management Business Case

- Collecting performance data and dealing with the gaps
- Selecting a target population
- Developing an initial business and comparing options
- Review case studies

Asset Management Case Studies

- Unsuccessful large investor owned utility program
- Successful large investor owned utility program
- Municipal utility's challenge
- Co-op application

AGENDA

THURSDAY, FEBRUARY 23, 2017

8:00 - 8:30 am

Continental Breakfast

8:30 am - 12:00 pm

Course Timing

Overcoming Asset Management Program Challenges

- Examine obstacles, pitfalls and best practices
- Understand program operation productivity and efficiency
- Keep multiple stakeholders engaged and productively supportive
- Learn how to succeed with assessment data without being overwhelmed

Identifying and Minimizing the Impact of Operational Risk Factors

- Common operational risk factors
- Developing a plan to identify operational risk factors, and implement corrective actions
- Case studies

CenterPoint Case Study - Making the Case for a URD Assessment Program

Discussion on how CenterPoint evaluated the number of outages prevented through their program and how they quantified the O&M dollars that were saved. This study will also explain the way cost and benefits can be modeled over the life of the program. This case study will emphasize the importance of constant communication with company executives and how to communicate to them the continual benefits of URD asset management programs.

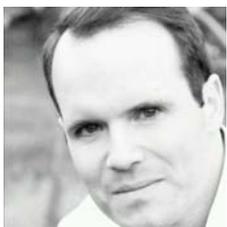
INSTRUCTORS



Julienne Sugarek

Distribution Services Director - Distribution Power Delivery, CenterPoint Energy

Julienne Sugarek serves as CenterPoint Energy's director of distribution services. Her responsibilities include overseeing the pole inspection and replacement program, cable life extension program, technology implementation and emergency operations planning. She has served in numerous roles in electric and finance during her nine years with CNP. She has an MBA degree from The University of Texas at Austin and is a licensed certified public accountant.



Ben Lanz

Director, Applications Engineering, IMCORP

Benjamin Lanz received a BSEE degree from the University of Connecticut in 1999. Since 1997, his technical career focus has been power cable system reliability and his experience includes field testing, test technology R&D, reliability consulting, and the development of industry guides and standards. He currently holds the position of Applications Engineering Manager at IMCORP. He is a voting member of the IEEE Power & Energy and Standards Societies and he has served as Chairman of the Insulated Conductors Committee (ICC) workgroups responsible for cable testing and cable reliability. He has published over a dozen papers on power system reliability, asset management, and diagnostics and regularly presents on the topics.



Aaron Hills

Manager, Client Business Services, IMCORP

Aaron Hills has been working in the utility and renewable energy industry for over seven years and currently holds the position of Manager, Client Business Services at IMCORP in Manchester, CT. Aaron's current areas of focus include asset management program design, strategy development, economic modeling, big data analysis, visualization and forecasting related to the health of transmission and distribution systems. Prior to joining IMCORP, MrAaron worked for several divisions of United Technologies Corporation, including UTC Power, a leader in the stationary fuel cell market. Aaron is a Certified Energy Manager (CEM), earned his B.S. in Electrical Engineering from the University of Connecticut and completed his MBA at Carnegie Mellon University's Tepper School of Business with concentrations in strategy, finance and marketing.



Matthew Spalding

VP, Business Development , IMCORP

Matthew Spalding joined El Paso Electric in 1987. He started his career working as a Distribution Standards Engineer. In 1990, Matthew moved to Raychem Corporation where his primary responsibilities included: design, development, failure analysis and testing of cable accessories and insulation systems. He has served as an expert witness related to cable accessories and electrical device analysis. Matthew has developed power system products such as: medium & high voltage insulators, substation animal mitigation devices, power connectors, HV cable designs and cable accessories. He holds 9 patents related to these devices and has 3 additional new filings in process.

In 2012, Matthew accepted the High Voltage Cable Systems Business Development Manager at the ABB Huntersville site. Matthew successfully negotiated the first HV project for the Huntersville plant and developed two new conductor designs improving the electrical performance and economics of EHV cables (6000 kcmil aluminum & hybrid copper/aluminum conductors). Notable additional projects included: the highest voltage (345kV), renewables (138kV & 300kV), turnkey and industrial facilities.

Matthjew joined IMCORP in 2015 as Vice President of Business Development where he supports IMCORP in continuing their successful growth, providing clients with the most reliable and cost effective underground cable systems.



"Experienced professionals sharing information and inovation results in a positive experience!"

Design/Project Manager, Allteck



"Really valuable information, very experienced speakers, I will be glad to come again, thanks."

Distribution Estimator, IID

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day, be in attendance for the entirety of the course

INSTRUCTIONAL METHODS

Case studies, PowerPoint presentations and classroom exercises will be used.

PROCEEDINGS

The proceedings of the course will be published, and one copy will be distributed to each registrant at the course.

EVENT LOCATION

A room block has been reserved at the Royal Sonesta Houston, 2222 West Loop S, Houston, TX 77027, for the nights of February 21-23, 2017. Room rates are \$199 plus applicable tax. Call **1-800-766-3782** for reservations and mention the EUCL event to get the group rate. The cutoff date to receive the group rate is January 31, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

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 AN-SI/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 AN-SI/IACET Standard.

EUCI is authorized by IACET to offer 1.0 CEUs for this course.

REGISTER 3, SEND THE 4TH FREE

Any organization wishing to send multiple attendees to these courses may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.



REGISTRATION
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PLEASE REGISTER

UNDERGROUND DISTRIBUTION CABLE SYSTEMS: MANAGING THE LIFE CYCLE OF CABLE ASSETS COURSE
 FEBRUARY 22-23, 2017: US \$1395,
 Early bird on or before February 3, 2017: US \$1195

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

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What name do you prefer on your name badge?

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List any dietary or accessibility needs here

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Name on Card Account Number

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Billing Zip Code/Postal Code Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

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 January 20, 2017 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 (201) 871-0474.