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

April 24-25, 2018
Hyatt Place Durham Southpoint
Raleigh, NC
OVERVIEW

With a wave of solid dielectric underground distribution cable (URD) systems reaching their assumed 30-40 year 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 the science and practical steps to at least double the assumed life expectancy of their underground (UG) cable systems.

LEARNING OUTCOMES

• Examine previous cable asset life cycle approaches and discuss the new approaches being used
• 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

“Very eye-opening course on the source of faults, life-span of underground cables and how to get the longest life from your underground cables.”

Distribution Engineer, Barbados Light & Power
AGENDA

TUESDAY APRIL 24, 2018

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

12:00 - 1:00 pm  Group Luncheon

8:30 am - 4:30 pm  Course Timing

How Long Can Cable Systems Last?
Hint: Way longer than 40 years. True that some cable systems will fail within 40 years, but why? Industry
data shows that cables loose most of their dielectric strength in the first ten years of operation but then
it flat lines.
• What can we do to maintain reliability with these cable systems?
• What are the root causes of failure and how can they be avoided?

Cable Accessory Technology
• What is the latest in accessory innovations?
• What are the most critical parts of an accessory and how do quality accessories compensate the
  challenges?
• How are accessories quality control (QC) tested in the factory?
• How do factory and field partial discharge (PD) tests compare?

Specifying Quality Cable Systems
• What is the latest in cable technology?
• How likely is a factory defect in cable or accessories?
• What can we do to strengthen specifications and avoid future problems?
• What can we learn from installation errors?

Quality Control - Duke Energy Case Study
Utilities are using field assessment technology to provide feedback to identify QC issues.
• What are they learning?
• How do they use the condition information to improve product specification, installation instruc-
  tions, and training?
• When a systemic issue is identified, how do you get the message to the field?

Contractor Quality Management and Training Program
• How to implement effective installation training and certification for installers
• How to confirm the reliability of critical assets through standardized assessments
• How to ensure your installation teams, direct and contractor stay current and perform reliable work

How to Develop a Cable Assessment Management Program
• Collecting performance data and dealing with the gaps
• Selecting a target population
• Developing an initial business case and comparing options
• Review case studies
Thursday, April 25, 2019
8:00 - 8:30 am  Continental Breakfast
8:30 am - 12:00 pm  Course Timing

Cable Life Extension Programs
For over two decades, utilities all over North America have been using assessment technology to develop precise condition information about their aging cable systems. Currently, utilities are assessing tens of thousands of cable systems per year and utilizing the precise information to optimize the life of the cable life cycle. This session will take a deep dive into utility experience with targeting, assessing, and rehabilitating their URD system on a large scale. Learn about performance experience, challenges and best practices to ensure a successful program.

Identifying and Minimizing the Impact of Operational Risk Factors
• Learn some of the most common operational risk factors
• Developing a plan to identify operational risk factors, and implement corrective actions
• Review case studies

Utility Panel Session with Q&A

COURSE INSTRUCTORS

Michael Wallace
Manager Engineering & Technical Customer Relations, Duke Energy Corporation
Michael Wallace is the Manager of Engineering and Customer Planning for Duke Energy covering the Goldsboro area of the East Zone, which includes, Cape Fear, Clinton, Goldsboro, Kinston and the New Bern areas. In this role, Michael works with customers, developers and municipalities collecting information to design work orders. He is also responsible for reliability, including pole replacement and fusing changes. Previously, Michael has held several positions with Duke Energy, such as Project Manager, Senior Engineer and Senior Component Engineer, where he was responsible for, maintenance and replacement programs for all underground components and underground cable for the legacy Progress service area. He is the Vice Chair on the Medium Voltage Cable Reliability for the IEEE/PES/ICC committee, IEEE, Power Engineering Society, Engineering Management Society and the Chairman of IMCORP Users Group. He is also involved in numerous youth and community volunteer projects. He holds an MBA from Francis Marion University, a BS in Electrical Engineering from Louisiana Tech University and has his PMP certification.

Ashley Eanes
Lead Engineer, Duke Energy
Ashley Eanes is a Lead Engineer for Duke Energy in Burlington, NC and serves as a subject matter expert for underground cable and cable accessories. Eanes represents Duke at NESC committee meetings, is a current member of the NESC underground committee for IEEE and is a current member of the Cable Engineering Committee. He is also a member of the distribution standards group, which sets policy and specifies equipment and material for the entire Duke Energy distribution footprint. Eanes holds a BS in Electrical Engineering from Virginia Tech and an MBA from Elon University.

REGISTER TODAY! CALL 303-770-8800 OR VISIT WWW.EUCI.COM
Brian Ayres  
Manager of R&D for Cold Applied Cable Accessories, TE Connectivity

Brian Ayres is the Manager of R&D for Cold Applied Cable Accessories in North and South America for TE Connectivity. Previously, he has held many roles within TE such as Sr. Product Development Engineer and Product Manager for Heat Shrink. Prior to TE Ayres worked for the NYISO managing the Bulk Power Grid for New York, and Hipotronics testing and calibrating PD detectors and test sets. He sits on a number of IEEE committees, primarily dealing with cable accessory qualification and testing and in his spare time, volunteers with the Cortechs FIRST Robotics team, based in Raleigh North Carolina. Ayres holds a BSEE from Clarkson University.

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 Director 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.

Darren Byrne  
Business Development Manager, IMCORP

Darren Byrne is the Business Development Manager for IMCORP in Manchester, CT. His focus is developing market strategy, penetration and positioning of IMCORP’s services within renewable energy and utility markets. Darren holds a Master of Business Administration degree from the University of New Haven and a Higher National Certificate in Electronic Engineering from Matthew Boulton College. Mr. Byrne has spent most of his career in various business development, marketing and engineering positions at Black & Decker and AT&T corporations. Darren holds 4 patents.

Matthew Spalding  
President, 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. He 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.

Matthew joined IMCORP in 2015 as Vice President of Business Development before receiving a promotion to Vice President of Sales and Marketing at the beginning of 2017. Matthew was promoted to President of IMCORP January 1, 2018.
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 Hyatt Place Durham Southpoint, 7840 NC Highway 751, Durham, NC 27713, for the nights of April 23-24, 2018. Room rates are $131 plus applicable tax. Call 1-919-688-7800 for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is April 13, 2018 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 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 1.1 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 INFORMATION

Mail Directly To:
EUCI
4601 DTC Blvd., Ste. 800
Denver, CO 80237
OR, scan and email to: conferences@euci.com

Please make all checks payable to: EUCI

WWW.EUCI.COM  p: 303-770-8800  f: 303-741-0849

PLEASE REGISTER

UNDERGROUND DISTRIBUTION CABLE SYSTEMS: MANAGING THE LIFE CYCLE OF CABLE ASSETS COURSE
April 24-25, 2018: US $1395,
Early bird on or before APRIL 6, 2018: US $1195

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ENERGIZE WEEKLY

EUCI’s Energize Weekly e-mail newsletter compiles and reports on the latest news and trends in the energy industry. Newsletter recipients also receive a different, complimentary course presentation every week on a relevant industry topic. The presentations are selected from a massive library of more than 1,000 current presentations that EUCI has gathered during its 30 years organizing courses.

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

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CREDIT CARD INFORMATION

Name on Card  Billing Address

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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 March 23, 2018 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.