91st Annual NC Electric Meter School and Grid Technology Conference

Embassy Suites
Kingston Plantation
Myrtle Beach, South Carolina
June 11-15, 2023

Offered by the Office of Professional Development
North Carolina State University, Raleigh, North Carolina
Electricity metering has been in existence for over 100 years. Metering has continued to evolve in functionality and complexity over this period. The NC Meter School has long served the purpose of providing a place where the metering discipline, skills, changes, products, and practices are learned and discussed. The industry has progressed with today’s technology, and metering interfaces have become varied and often directly related to other grid technologies. The NC Electric Meter School and Grid Technology Conference will continue to be current and proactive.
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General Information

Purpose and Mission
The North Carolina Electric Meter School and Grid Technology Conference provides you with an excellent opportunity to learn all aspects of metering in a school environment. The basic principles are provided for metering personnel with interest in single phase or polyphase equipment.

You will gain valuable exposure to metering applications and the processing of information gathered from metering, presented in advanced and management levels of instruction. Advanced and management level attendees will take away knowledge of problems, resources, and solutions helping to meet the changing environment of the electric industry.

Metering and utility personnel can increase their knowledge of substations and distribution equipment through two tracks. Information will be presented from utility experience as well as vendor perspectives.

Annually, the North Carolina Electric Meter School and Grid Technology Conference brings together meter personnel from the electric utility industry to present important information on common problems, standard practices, procedures, and new technologies. The school is open to any and all persons interested in this opportunity.

Attention: Professional Engineers
The North Carolina Electric Meter School and Grid Technology Conference is an approved sponsor of continuing professional competency activities for qualifying North Carolina Professional Engineers and Registered Land Surveyors. Upon course completion, each participant may receive 18 Professional Development Hours (PDHs).

Note: These PDHs are only for participants with a North Carolina Professional Engineering license. Other states may approve these courses. It is the responsibility of the attendees to check with their respective certifying agencies to see if they will accept this training.
General Information

The North Carolina Electric Meter School and Grid Technology Conference includes topics and products related to electric metering and the electrical grid as follows:

**Electricity Metering**
All aspects of metering to include installation, removal, testing, maintenance, and management practices. Examples may include any metering quantity measurement for revenue or other operational purposes.

**Revenue**
Tariffs, rate practices, and other aspects associated with the accurate measurement of electricity. Examples may include any method or equipment to read, record, and/or verify accurate metering.

**Communications**
Remote communications, including many forms and technology options, related to metering and/or other electrical equipment operations. Examples may include metering and other electrical grid hardware that requires communications between devices or from field to host. May also include modems, fiber, cellular, local, or other means of communications media or methods; tools or equipment.

**IT/Computer/Programmable Devices**
Metering and other grid operational/support systems or equipment. Examples may include metering devices and associated equipment to upload/download programs/configurations; diagnostic equipment; and associated tools and methods.

**Security**
Physical, cyber, and data protection options to safeguard the revenue and operational integrity of the electrical system. Examples may include pre- and post-energy tampering security methods and systems.

**Renewable/Alternative Energy**
Metering interfaces to measure power at these different types of facilities. Examples may include solar, wind or other alternative means of generation.

**Generation, Transmission, and Distribution**
Equipment and practices associated with any aspect of the electric grid, including but not limited to AMI (advanced metering infrastructure). Examples may include relay; substation; metered data from generation, transmission, and other distribution/grid management systems.

**Customer Service**
Services or equipment to provide enhanced customer service options for the customer that may be from within the meter or associated metering data, or other services past the meter. Examples may include metering data or pre-pay.
General Information

Conference Tracks

SINGLE PHASE
The single phase track is designed for the entry-level person. Classes are designed to provide a basis for understanding metering principles, power and to complement the participant’s metering skills gained on the job. Sessions offered cover overviews of a power system, basic math, AC and DC theory, meter testing safety and all areas related to single phase meters. The classes are designed to prepare participants for the next level of classes relating to polyphase meters.

POLYPHASE
The polyphase track is designed for the purpose of providing participants with an overview of the basic information needed to understand polyphase metering. This session covers selection, installation, and maintaining polyphase meters. The session provides training on programming polyphase meters. Participants also will receive training in the selection, use, and maintenance of current and voltage transformers.

ADVANCED
The advanced track includes topics on complex metering theory and concepts, high-end metering applications, power quality, remote metering communication methods and other advanced metering applications, tools and equipment. Individuals that have previous metering experience or education should attend this session.

MANAGEMENT
The management track provides information about the newest technologies, current industry trends, day to day operational issues, as well as updates on new technology implementation projects. This track is ideal for professionals and managers who want to learn more about the metering industry, where it is headed and current challenges.

BASIC SUBSTATION & DISTRIBUTION PRINCIPLES
This track is designed to provide entry-level knowledge of substations and distribution systems. It is ideal for substation personnel with less than two years’ experience or meter technicians who work occasionally in substations. Classes cover the fundamentals of substation construction, proper grounding, electrical layout, and the purpose for typical equipment in a substation. Examples include safety, station power transformers, batteries, circuit breakers, capacitors, switches, voltage regulators, basic communications, metering, and other miscellaneous components found in most substations. Classes are also offered to cover distribution system operation and the various types of equipment used.
ADVANCED SUBSTATION & DISTRIBUTION CONCEPTS

This track is geared towards experienced substation and meter technicians as well as supervisors and managers who maintain, repair, and/or oversee the daily operation of substations. Classes cover advanced calibration, maintenance and repair of station equipment as well as troubleshooting techniques of station components. Included are classes on remote communication controls. SCADA, grounding, oil testing, welding, relays, voltage reduction, security protocols, lightning protection, IEEE and OSHA requirements, AMI equipment, infrared, and high frequency testing. Classes are also offered to cover various distribution system operation methods and techniques, and various types of equipment used.

EMERGING TECHNOLOGIES

The Emerging Technologies Track provides an opportunity to explore how electric metering and the overall electric grid are working together in a variety of ways. New technologies, methods, tools, equipment, and challenges will be discussed. In addition to revenue metering as part of the overall electric grid this session will include a forum for Security, Renewables/Alternative Energy, Communications, IT/Computer/Programmable Devices, and Customer Service issues.
Steering Committee Mission Statement
To represent the planning committee as a working group with a mission to guide the School, its programs, and its activities in a way deemed appropriate by the planning committee and in the best interest of the North Carolina Electric Meter School and Grid Technology Conference.

Steering Committee
Chairperson: Chad Cooper
Vice Chairperson: Greg Johnson
Secretary/Treasurer: Connie McElroy-Bacon

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Conference Information

Reference Standard Calibration Check
An added benefit is being offered to you during the conference at no additional charge. After registering, and while attending the conference, please stop by the Harrow room reserved by Radian Research/WECO to have your reference standard(s) tested against a Radian NIST traceable 0.01% reference standard. You will receive a printed and/or electronic “Report of Calibration” which provides the accuracy of your standard at all common loading conditions.

If you think you are up to the challenge, test your meter calibration knowledge by taking a fun quiz. In addition, receive a packet explaining the importance of regular calibration of your equipment.

Banquet
A special 91st anniversary banquet for conference participants and their guests will be held on Wednesday evening, June 14, at the Embassy Suites. Entertainment will be sponsored by Radian/Weco and provided by The IT Band! The banquet is included in the registration fee. Guest tickets are available at $65 each. Youth tickets for those ages 15-18 are available for $37.50 each. Tickets for children up to age 14 are available at no fee. Dress is casual. A social will begin at 6 p.m., followed by the banquet at 7 p.m. in Kensington. Purchase tickets by 5 p.m on Monday.

Room Assignments
General Session (Monday) .......................................................................................................................... Kensington ABC
General Session (Thursday 11:15 a.m. - noon) .............................................................................................. Kensington ABC
Single Phase .............................................................................................................................................. Kensington C
Polyphase .................................................................................................................................................. Kensington A
Advanced ............................................................................................................................................... Kensington B (Monday-Wednesday)
Management .............................................................................................................................................. Windsor C
Basic Substation & Distribution ..................................................................................................................... Windsor B
Advanced Substation & Distribution ............................................................................................................ Windsor A
Advanced/Management/Emerging Technologies Combined (Thursday, 8-11 a.m.) .............................................................. Kensington B
Emerging Technologies ................................................................................................................................. Somerset
Exhibitors ................................................................................................................................................. Kensington DEFG/Hall
Lunches ................................................................................................................................................. Palladium (Brighton), Monday-Wednesday
Calibration (Monday-Wednesday) ................................................................................................................... Radian / WESO Harrow
Manufacturer Programming Sessions & Hands-on Testing (Tuesday & Wednesday) ......................................................... Oxford, Pembroke, Eton, Winchester, Harrow

Thanks to the Sponsors of our Networking Socials:
• Aclara  • G & W Electric  • NTS  • SAMSCO  • TESCO  • Vision Metering

Special Thanks to:
• TESCO for providing lanyards
• Powermetrix for providing notepads
• Radian / WECO for sponsoring the banquet entertainment
Floor Plans

Embassy Suites Meeting Room Floor Plan
Floor Plans

Embassy Suites Exhibit Booth Floor Plan
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### Sunday, June 11, 2023

- **2 p.m.** Begin Vendor Set-up – Embassy Suites, Kensington Ballroom
- **5–7 p.m.** Registration – Embassy Suites Lobby
- **6–7 p.m.** Welcome Reception – Kensington Ballroom

### Monday, June 12, 2023

**General Session - Kensington ABC**

**Presiding:** Chad Cooper, Dominion Energy, SC

- **9 a.m.** Welcome to the School  
  Chad Cooper, Dominion Energy, SC

- **Presentation of Colors**

- **Opening Comments**  
  Connie McElroy-Bacon, Conference Manager, NC State University

- **9:30 a.m.** Welcome from NC State University Continuing Education  
  Mark Bernhard, Vice Provost, Continuing Education, NC State University

- **9:45 a.m.** Safety  
  SC Hwy Patrol

- **10:45 a.m.** Break

- **11 a.m.** Utilities Perspective on Preparing for EV and other Grid Connected Technologies  
  Jay Oliver, Duke Energy

- **Noon** Lunch in Palladium (Brighton)

**Presiding:** Chad Cooper, Dominion Energy, SC

- **1 p.m.** Revenue Assurance/Internal Meter Tampering  
  Jason Parker, Duke Energy

- **2:30 p.m.** Break

- **2:45 p.m.** Single Phase, Polyphase, Advanced, Basic Substation & Distribution, Advanced Substation & Distribution and Emerging Technologies Sessions Begin

- **2:45 p.m.** Visit Vendors, Management Track Participants

- **4:15 p.m.** Adjourn / Networking Social in the Exhibit Area
Track Sessions Begin

**SINGLE PHASE - KENSINGTON C**
Presiding: Clare Bargerstock, Northern Virginia Electric Cooperative
2:45 p.m. **Overview of a Utility System from Generator to Customer**
Clare Bargerstock, Northern Virginia Electric Cooperative
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**POLYPHASE - KENSINGTON A**
Presiding: Chad Cooper, Dominion Energy
2:45 p.m. **History of Electric Metering**
Tom Lawton, TESCO – The Eastern Specialty Company
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**ADVANCED - KENSINGTON B**
Presiding: Rusty Mutschink, Central Electric Power Cooperative
2:45 p.m. **Meter Communication**
Augustin Herrera, SATEC Meters
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**MANAGEMENT**
2:45 p.m. **Visit Vendors**
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**SUBSTATION & DISTRIBUTION BASIC - WINDSOR B**
Presiding: Curtis Craig, Shenandoah Valley Electric Cooperative (Retired)
2:45 p.m. **Introduction to Substations I: Equipment**
Court H. Weathers, PE, Booth & Associates LLC
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**SUBSTATION & DISTRIBUTION ADVANCED - WINDSOR A**
Presiding: John Maclaga, City of Wilson
2:45 p.m. **Lightning Round**
John Maclaga, City of Wilson
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**

**EMERGING TECHNOLOGIES - SOMERSET**
Presiding: Tony Horton, Duke Energy (Retired)
2:45 p.m. **Metering — Not Just for Sockets Anymore**
Chris Prince, Aclara
4:15 p.m. **Adjourn / Networking Social in the Exhibit Area**
Tuesday, June 13, 2023

**SINGLE PHASE - KENSINGTON C**

Presiding: Rodney Brown, Dominion Energy

- 8 a.m. **Basic Electricity**
  Will Elliott, Aclara

- 9 a.m. **Math for Metering**
  Michael Corbin, Honeywell

- 10 a.m. **Break**

- 10:15 a.m. **Single Phase Meter Theory: Energy/Power, Power Triangle, Single Phase Self Contained Meter Forms**
  Bryan Seal, Itron

- 11:00 a.m. **Instrument Transformers**
  Nick Candler, Durham

- Noon **Lunch**

Presiding: Scott Mossbrooks, WESCO

- 1 p.m. **Introduction to Watthour Meter Testing**
  Steve Hudson, TEC Powermetrix

- 2 p.m. **Visit Vendors**

- 3 p.m. **Break**

- 3:15 p.m. **Watthour Meter Principles and Components**
  Tom VanValkenburg, Radian Research

- 4:15 p.m. **Adjourn/Networking Social in the Exhibit Area**

**POLYPHASE - KENSINGTON A**

Presiding: Chad Cooper, Dominion Energy SC

- 8 a.m. **Polyphase Metering 101**
  Perry Lawton, TESCO

**AC Theory**
Phil Fischbach, TEC Powermetrix

- 9 a.m.

- 10 a.m. **Break**

- 10:15 a.m. **3-Phase Theory**
  Phil Fischbach, TEC Powermetrix

- 11 a.m. **ANSI Meter Forms**
  TBA, TESCO

- Noon **Lunch**

Presiding: Jimmy Grubbs, SCE&G (Retired)

- 1 p.m. **Visit Vendors**

- 2:15 p.m. **Polyphase Meters Applications**
  Michael Corbin, Honeywell

- 3:30 p.m. **Break**

- 3:45 p.m. **Testing CT’s and Meter in a 3-Phase Installation**
  Ryan Moffitt, Radian Research

- 4:15 p.m. **Adjourn/Networking Social in the Exhibit Area**

**ADVANCED - KENSINGTON B**

Presiding: Raeann Miller, Radian Research

- 8 a.m. **The Impact of Grid Modernization on the Performance of Metering Current Transformers**
  Jon Rennie, Peak Demand, Inc.

- 8:45 a.m. **New Power Definitions ANSI C12.31**
  TBA, TESCO
Tuesday (continued)

9:30 a.m.  What’s All This KYZ Stuff Anyway? Pulse Metering Simplified
Bill Brayden, Brayden Automation Corp.

10:15 a.m.  Break
10:30 a.m.  Visit Vendors

11:15 a.m.  The Benefit of High Accuracy, Extended Range Current Transformers
Jon Rennie, Peak Demand, Inc.

Noon  Lunch
Presiding:  Preston Fry, RW Chapman

1 p.m.  Accurate Energy Measurement in the Presence of Real World Distorted Waveforms
Marcus Zickefoose, Radian Research

1:45 p.m.  PQ Issues and PQ Monitoring
Nathaniel Dunn, Schneider Electric

2:30 p.m.  Break
2:45 p.m.  Programming Meters
Ametek - Kensington B; Electro Industries - Eton; Satec - Oxford; Transdata - Pembroke; Schneider - Winchester; SEL - Hampton

4:15 p.m.  Adjourn/Networking Social in the Exhibit Area

Management - Windsor C

Presiding: Kenneth McCraw, Duke Energy

8 a.m.  AMI Selection and Deployment Case Study for an Electrical COOP: Deployment of a Cellular Backbone with RF Nodes and How the Lack of Additional Infrastructure Made the Business Case and Simplified Deployment
Jon Scott, Tesco-NightHawk

8:45 a.m.  Advancements in Cellular for AMI 2.0
Elias Behar, Honeywell

9:30 a.m.  LoRaWAN and Cat M1 Modem Meters used in AMI
Alex Skidmore, Vision Metering, LLC

10:15 a.m.  Break
10:30 a.m.  Meter Communication Comparison - Mesh, Cell, Fiber and LoRA
Jeff Barlow, Honeywell

11:15 a.m.  Benefits of Adding ATI to Distribution Transformers-SAMSCO and Nighthawk
John Kretzschmar, SAMSCO

Noon  Lunch
Presiding:  Tim Overbee, Duke Energy

1 p.m.  Data Analytics Techniques to Find Lost Revenue and Achieve Operational Efficiency
Jeff Dargan, Duke Energy
Tuesday (continued)

1:45 p.m.  Leveraging Your AMI Network for Operational Efficiencies and Cost Savings
Darin Moore, Sensus

2:30 p.m.  Break

2:45 p.m.  Life on the Edge - Using Distributed Intelligence in the Electric Meter to Proactively Solve Service Issues
Tina Pampaneili, Itron

3:30 p.m.  Data Analytics in Member Services
Melissa Rodriguez, Central EMC

4:15 p.m.  Adjourn/Networking Social in the Exhibit Area

SUBSTATION & DISTRIBUTION BASIC - WINDSOR B

Presiding:  Curtis Craig, Shenandoah Valley Electric (Retired)

8 a.m.  Introduction to Substation II: Protection
Court Weathers, Booth & Associates, LLC

8:45 a.m.  Substation Print Reading
Luke Booth, SEL

9:30 a.m  Station Service Power – How Are SSVT’s Used?
Lee Bigham, ITEC - Instrument Transformer Equipment Corp.

10:15 a.m.  Break

10:30 a.m.  Bushing Current Transformers – What I Should Know?
Ryan Alkire, GE Instrument Transformers

11:15 a.m.  Overcurrent Protection Principles
Luke Booth, Schweitzer Engineering Laboratories

Noon  Lunch
Presiding:  Paul Keadle, NTS

1 p.m.  Voltage Regulator - Basic Theory and Operating
Joe Robb, TMS

1:45 p.m.  Voltage Regulator - Basic Troubleshooting and Switching
Joe Robb, TMS

2:30 p.m.  Break

2:45 p.m.  Reclosers & Controls
Roger Munay, Eaton

3:30 p.m.  IEEE 80 Guide for Safety in AC Substation Grounding, Rods, Mat, Mesh, Ground Enhancement Materials
Dan Holm, nVent

4:15 p.m  Adjourn/Networking Social in the Exhibit Area

SUBSTATION & DISTRIBUTION ADVANCED - WINDSOR A

Presiding:  Bill Jordan, Booth & Associates, LLC

8 a.m.  Protecting the Most Critical Assets for the Utility Using Online Monitoring for Power Transformers
Joel Valley, Fayetteville PWC
### Conference Schedule (continued)

**Tuesday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
<tbody>
<tr>
<td>8:45 a.m.</td>
<td><strong>Leveraging Data to Find Transformers</strong>&lt;br&gt;Daniel Gillen, Wilson Energy</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Remote Communication Devices</strong>&lt;br&gt;Josh McDonald, Rappahannock Electric Coop</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td><strong>Digitalization of a Distribution Network</strong>&lt;br&gt;Yacine Mallem, ABB Inc.</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>Voltage Regulator and Control with DER Application</strong>&lt;br&gt;Roger Munay, Eaton</td>
</tr>
<tr>
<td>Noon</td>
<td>Lunch</td>
</tr>
<tr>
<td>Presiding:</td>
<td>Rick Anderson, Fayetteville PWC (Retired)</td>
</tr>
<tr>
<td>1 p.m.</td>
<td><strong>Capacitor Installation &amp; Operations</strong>&lt;br&gt;Roger Munay, Eaton</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td><strong>High-Speed Falling Conductor Protection in Distribution Systems</strong>&lt;br&gt;Craig Wester, GE Grid Solutions</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td><strong>Distribution Substation Optimized Protection &amp; Control Architectures</strong>&lt;br&gt;Craig Wester, GE Grid Solutions</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td><strong>Twenty Instrument Transformer Questions That You Were Afraid to Ask</strong>&lt;br&gt;David Ward, ITEC</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>Adjourn/Networking&lt;br&gt;Social in the Exhibit Area</td>
</tr>
</tbody>
</table>

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**EMERGING TECHNOLOGIES - SOMERSET**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
<tbody>
<tr>
<td>8 a.m.</td>
<td><strong>Zero Trust, Architecture for Cybersecurity in a Substation</strong>&lt;br&gt;Steve Lindsay, XTEC</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td><strong>Smart Meter Data Analytics for Transformer Loading Assessment</strong>&lt;br&gt;Mesut Baran, North Carolina State University</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Cybersecurity: Best Practices Beyond the 4 Walls of the Office</strong>&lt;br&gt;Eric Braxton, Central EMC</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td><strong>Overview Electric Vehicle Infrastructure</strong>&lt;br&gt;Peter King, ABB E-mobility Inc.</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>Opening Up the AMI Can-of-Worms</strong>&lt;br&gt;Daniel Mendoza and Shawn Young, Wilson Energy</td>
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<tr>
<td>Noon</td>
<td>Lunch</td>
</tr>
<tr>
<td>Presiding:</td>
<td>Garey Edwards, City of High Point (Retired)</td>
</tr>
<tr>
<td>1 p.m.</td>
<td><strong>Street Light Paves the way for Smart Cities</strong>&lt;br&gt;Teri Nolan, Itron</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td><strong>EV Charging: Programs and approaches for utilities...where are we now and what’s ahead?</strong>&lt;br&gt;Jimmy Woods, Border States Electric Supply</td>
</tr>
</tbody>
</table>
Tuesday (continued)

2:30 p.m.  Break

2:45 p.m.  Next Generation Residential Metering
          Diego Barquero, Landis + Gyr

3:30 p.m.  Certifying DC Electric Vehicle Fast Chargers and AC level Two Chargers
          Perry Lawton, TESCO

4:15 p.m.  Adjourn/Networking Social in the Exhibit Area

Wednesday, June 14, 2023

SINGLE PHASE - KENSINGTON C

Vendor Room Assignment Below

8 a.m.      Programming Meters Session 1
            Aclara - Kensington C; Itron - Eton; L&G - Oxford; Honeywell - Kensington A

9:45 a.m.  Break

10 a.m.    Programming Meters Session 2
            Aclara - Kensington C; Itron - Eton; L&G - Oxford; Honeywell - Kensington A

Noon       Lunch

Presiding: Tina Pampanelli, Itron

1 p.m.     Instrument Transformers - Understanding Nameplate Basics
            Ryan Alkire, General Electric

2 p.m.     Break

2:15 p.m.  Introduction to Instrument Transformer Design and Application
            Chris Zaphiris, RITZ Instrument Transformers

3:15 p.m.  Practical Use of Vectors in Metering
            Will Elliott, Aclara

4:15 p.m.  Adjourn

6 p.m.     Networking Social in Palladium (Brighton)

7 p.m.     Banquet - Kensington

POLYPHASE - KENSINGTON A

Vendor Room Assignment Below

8 a.m.      Programming Meters Session 1
            Aclara - Kensington C; Itron - Eton; L&G - Oxford; Honeywell - Kensington A

9:45 a.m.  Break

10 a.m.    Programming Meters Session 2
            Aclara - Kensington C; Itron - Eton; L&G - Oxford; Honeywell - Kensington A

Noon       Lunch

Presiding: Curtis Craig, Shenandoah Valley Electric (Retired)

1 p.m.     Wiring Presentation
            Curtis Craig, Shenandoah Valley Electric (Retired)

2 p.m.     Break

Note: For Programming other Vendor Meters see Single Phase Session, Eton, Oxford
Conference Schedule

Wednesday (continued)

2:15 p.m.  Hands on Testing - Powermetrix  
TEC Powermetrix - Kensington A; Radian - Harrow; TESCO - Eton; Probewell - Oxford

1 p.m.  Applications of Multifunction Metering  
Agustin Herrera, SATEC Meters

1:45 p.m.  Harmonics in Metering  
Steve Hudson, TEC Powermetrix

4:15 p.m.  Adjourn

6 p.m.  Networking Social in Palladium (Brighton)

2:30 p.m.  Break

2:45 p.m.  Impact of Magnetic Interference on Metering  
Joel Canine, Radian Research

7 p.m.  Banquet - Kensington DEFG

ADVANCED - KENSINGTON B

Presiding:  Jeanne Kretzschmar, SAMSCO

8 a.m.  Four Quadrant Metering  
Steve Hudson, TEC Powermetrix

8:45 a.m.  High End and Inter-Tie Metering  
Sal Cardella, AMETEK Power Instruments

9:30 a.m.  Loss Compensation Application and Verification  
Nathaniel Dunn, Schneider Electric

10:15 a.m.  Break

3:30 p.m.  Cellular Based AMI: Pros and Cons  
Jon Scott, Tesco-NightHawk

4:15 p.m.  Adjourn

6 p.m.  Networking Social in Palladium (Brighton)

7 p.m.  Banquet - Kensington

MANAGEMENT - WINDSOR C

Presiding:  Bruce Magruder, Electrical Consultants, Inc.

8 a.m.  Metering Operations and Utilities: 2023 and Beyond  
Tom Lawton, TESCO

8:45 a.m.  Improving Meter Shop Efficiency  
Marcus Zickefoose, Radian Research

9:30 a.m.  Optimizing Your Meter Site Performance  
Steve Hudson, TEC Powermetrix

10:15 a.m.  Break
## Conference Schedule

### Wednesday (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 a.m.</td>
<td><strong>Finding Golden Needles in a Haystack (Leveraging Data Analytics)</strong></td>
<td>Jeff Dargan, Duke Energy Progress</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>New Challenges in Pulse Metering and AMI Meters</strong></td>
<td>Bill Brayden, Brayden Automation Corp.</td>
</tr>
<tr>
<td>Noon</td>
<td><strong>Lunch</strong></td>
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<tr>
<td>Presiding:</td>
<td>John Kretzschmar, SAMSCO</td>
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</tr>
<tr>
<td>1 p.m.</td>
<td><strong>Shedding a Light on Streetlight Meter Testing</strong></td>
<td>Perry Lawton, TESCO</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td><strong>ANSI Update</strong></td>
<td>Joel Canine, Radian Research</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>2:45 p.m.</td>
<td><strong>Utility Supply Chain Panel</strong></td>
<td>Sean Dempsey, Honeywell; Kenneth McCraw, Duke Energy; Jeff Lewis, PowerTech; Clare Bargerstock, NOVEC</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td><strong>Adjourn</strong></td>
<td></td>
</tr>
<tr>
<td>6 p.m.</td>
<td><strong>Networking Social in Palladium (Brighton)</strong></td>
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<tr>
<td>7 p.m.</td>
<td><strong>Banquet - Kensington</strong></td>
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<tr>
<td></td>
<td><strong>IEEE 80 Guide for Safety in AC Substation Grounding with Focus on Fence Grounding</strong></td>
<td>Dan Holm, nVent</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td><strong>CCVT Design and Application for Use in Relaying and Revenue Metering</strong></td>
<td>Chris Zaphiris, RITZ, Instrument Transformers</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>10:15 a.m.</td>
<td><strong>Introduction to Distribution Reclosing</strong></td>
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<tr>
<td>10:30 a.m.</td>
<td><strong>Substation Mathematics</strong></td>
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<tr>
<td>Noon</td>
<td><strong>Lunch</strong></td>
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<tr>
<td>Presiding:</td>
<td>Justin Partin, NTS</td>
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<tr>
<td>1 p.m.</td>
<td><strong>Voltage Regulation Basics</strong></td>
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<tr>
<td>1:45 p.m.</td>
<td><strong>Guide to Understanding Lead Acid Batteries, Manufacturing-Components-Warranty</strong></td>
<td>Bob Santoro, BAE Batteries USA</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>2:45 p.m.</td>
<td><strong>Introduction to Differential Protection</strong></td>
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<tr>
<td></td>
<td><strong>Key Elements of Design (NESC)</strong></td>
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<tr>
<td>8 a.m.</td>
<td><strong>SUBSTATION &amp; DISTRIBUTION BASIC - WINDSOR B</strong></td>
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<td></td>
<td><strong>Presiding: Ron Culp, RW Chapman</strong></td>
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<tr>
<td></td>
<td><strong>IEEE 80 Guide for Safety in AC Substation Grounding with Focus on Fence Grounding</strong></td>
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<td><strong>CCVT Design and Application for Use in Relaying and Revenue Metering</strong></td>
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<td></td>
<td><strong>Break</strong></td>
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<td><strong>Introduction to Differential Protection</strong></td>
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<tr>
<td></td>
<td><strong>Key Elements of Design (NESC)</strong></td>
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</tbody>
</table>
Wednesday (continued)

3:30 p.m.  **IEEE 80 Guide for Safety in AC Substation Grounding with Focus on Reducing Step & Touch Potential Hazards**
Dan Holm, nVent

4:15 p.m.  **Adjourn**

6 p.m.  **Networking Social in Palladium (Brighton)**

7 p.m.  **Banquet - Kensington**

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**SUBSTATION & DISTRIBUTION ADVANCED - WINDSOR A**

Presiding: Court Weathers, Booth & Associates, LLC

8 a.m.  **Asset Management**
Nand Singh, MinMax Technologies

8:45 a.m.  **Oil Containment Pro’s and Con’s of Different Methodologies**
Bill Gannon, Solidification Products Int’l

9:30 a.m.  **Properly Sizing Distribution Transformers**
Bill Jordan, Booth & Associates, LLC

10:15 a.m.  **Break**

10:30 a.m.  **Distribution Class STATCOM Power Quality Applications**
Viet Minh Tong, AMSC

11:15 a.m.  **IEEE 80 & IEEE 837 Applicability of Use for Theft Deterrent Conductors**
Dan Holm, nVent

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**EMERGING TECHNOLOGIES - SOMERSET**

Presiding: Ryan Alkire, General Electric

8 a.m.  **DC Metering**
Derl Rhoades, Sensus

8:45 a.m.  **Lighting Up Your AMI Data - Merging Fiber to the Home with AMI**
Brad Kusant, NRTC; Bryan Seal, Itron
### Conference Schedule

#### Wednesday (continued)

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:30 a.m.</td>
<td>Avoiding Failures in New Technology Deployments</td>
<td>Sean Dempsey, Honeywell</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Power Quality and Energy Efficiency in the Renewable World</td>
<td>Edward Kobeszka, Expert Power</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>Benefits of Demand Response</td>
<td>Ryan Braeger, Eaton</td>
</tr>
<tr>
<td>Noon</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>1 p.m.</td>
<td>Applications for the World’s First High-Voltage Pole Top Recloser</td>
<td>Erik Brandstaedter, G&amp;W Electric</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>EVSE Developments, Standards and Testing</td>
<td>TBA, TESCO</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>Digital vs. Conventional Switchgear: Pros and Cons</td>
<td>Harsh Karandikar, ABB Inc.</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Grid Assurance - An Industry Response for Grid Resilience</td>
<td>Jim Zumstein, American Electric Power Co.</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>Adjourn</td>
<td></td>
</tr>
<tr>
<td>6 p.m.</td>
<td>Networking Social in Palladium (Brighton)</td>
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</tr>
<tr>
<td>7 p.m.</td>
<td>Banquet - Kensington</td>
<td>DEFG</td>
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## Thursday, June 15, 2023

### SINGLE PHASE - KENSINGTON C

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<tr>
<th>Time</th>
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<th>Presenter(s)</th>
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<tbody>
<tr>
<td>8 a.m.</td>
<td><strong>Meter Sockets</strong></td>
<td>Nick Candler, The Durham Company</td>
</tr>
<tr>
<td>9 a.m.</td>
<td><strong>It's a Demanding World! What is Demand and Why Is It Important?</strong></td>
<td>Tina Pampanelli, Itron</td>
</tr>
<tr>
<td>10 a.m.</td>
<td><strong>Meter Safety</strong></td>
<td>John Kretzschmar, SAMSCO</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>All Sessions Combine into General Session</strong></td>
<td></td>
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### POLYPHASE - KENSINGTON A

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
</tr>
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<tbody>
<tr>
<td>8 a.m.</td>
<td><strong>Instrument Transformers - Sizing for Most Accurate Metering Performance</strong></td>
<td>Ryan Alkire, General Electric</td>
</tr>
<tr>
<td>9 a.m.</td>
<td><strong>Site Inspections-Looking for Dangerous Installations and Incorrect Billing</strong></td>
<td>Tom Lawton, TESCO</td>
</tr>
<tr>
<td>10 a.m.</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td><strong>Instrument Transformer Basics</strong></td>
<td>Jon Rennie, Peak Demand Inc.</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>All Sessions Combine into General Session</strong></td>
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### ADVANCED/MANAGEMENT/EMERGING TECHNOLOGIES COMBINED SESSION - KENSINGTON B

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<tr>
<td>8 a.m.</td>
<td><strong>21st Century Power Measurements</strong></td>
<td>Tom Lawton and Bill Hardy, TESCO</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td><strong>Basics of NERC CIP</strong></td>
<td>Andy Gould, Schweitzer Engineering Laboratories</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Workforce Training Panel Discussion</strong></td>
<td>Tim Stankiewicz, Fayetteville Public Works Commission; Todd Butcher, VMDAEC</td>
</tr>
<tr>
<td>11 a.m.</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>All Sessions Combine into General Session</strong></td>
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### Thursday (continued)

#### SUBSTATION & DISTRIBUTION BASIC - WINDSOR B

<table>
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<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 a.m.</td>
<td><strong>The Keys to Selecting and Implementing Effective Wildlife Mitigation Solutions to Improve Reliability</strong></td>
<td>Darren Barnett, Hubbell Utility Solutions</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td><strong>Advances in Circuit Breaker Lubrication</strong></td>
<td>Raphael Urteaga, FirstPower Group, LLC</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Event Analysis Basics</strong></td>
<td>Shiena Kundu, Schweitzer Engineering Laboratories</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td><strong>IEEE 80 Guide for Safety in AC Substation Grounding: Ground Rods</strong></td>
<td>Dan Holm, nVent</td>
</tr>
<tr>
<td>11 a.m.</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td><strong>All Sessions Combine into General Session</strong></td>
<td></td>
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</table>

#### SUBSTATION & DISTRIBUTION ADVANCED - WINDSOR A

<table>
<thead>
<tr>
<th>Time</th>
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<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 a.m.</td>
<td><strong>Introduction to IPSEC Encryption</strong></td>
<td>Andy Gould, Schweitzer Engineering Laboratories</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td><strong>Voltage Transformer Discussions and Designs for VFTO</strong></td>
<td>Chris Zaphiris, Ritz Instrument Transformers</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td><strong>Relaying &amp; Metering Class CT’s – How Do They Compare?</strong></td>
<td>David W. Ward, ITEC - Instrument Transformer Equipment Corp.</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td><strong>Understanding the Revisions to PC57.104, the Guide for Gas Generation in Mineral Oil-Immersed Transformers</strong></td>
<td>Scott Reed, MVA Diagnostics, Inc</td>
</tr>
<tr>
<td>11 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>11:15 a.m.</td>
<td><strong>All Sessions Combine into General Session</strong></td>
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#### EMERGING TECHNOLOGIES - KENSINGTON B

Combined Session

(See Advanced/Management/Emerging Technologies Sessions Agenda on page 24.)

#### General Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15 a.m.</td>
<td><strong>NERC/CIP Overview</strong></td>
<td>Travis Moran, SERC Reliability Corporation</td>
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<tr>
<td>Noon</td>
<td><strong>Participant Feedback</strong></td>
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<td><strong>Closing Comments</strong></td>
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<td></td>
<td><strong>Adjourn</strong></td>
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</tbody>
</table>
Manufacturer Programming Sessions & Hands-on Testing Sessions

TUESDAY, JUNE 13

8:00 a.m.  
TEC Powermetrix  
Radian Calibration Check  

10:00 a.m.  
TEC Powermetrix  
Radian Calibration Check  

12:00 p.m.  Lunch  
1:00 p.m.  

2:45 p.m.  
Programming Session-Electro Industries  
Programming Session-Satek  
Programming Session-Transdata  
Programming Session-Schneider  
Programming Session-SEL  
Radian Calibration Check  

5:00 p.m.  Adjourn  

WEDNESDAY, JUNE 14

8:00 a.m.  
Itron - Meter Programming  
L&G - Meter Programming  
Radian Calibration Check  

10:00 a.m.  
Itron - Meter Programming  
L&G - Meter Programming  
Radian Calibration Check  

12:00 p.m.  Lunch  
1:00 p.m.  

2:15 p.m.  
Hands-on Testing-TESCO  
Hands-on Testing-Radian  
Hands On Testing-Probewell  
Hands On Testing-TEC Powermetrix  

5:00 p.m.  Adjourn
2023 Program Committee

Alkire, Ryan .......... GE Vernova, Tampa, FL
Anderson, Rick .......... Fayetteville PWC (Retired), Wake Forest, NC
Bargerstock, Clare .......... Northern Virginia Electric Cooperative, Manassas, VA
Bahan, Elias .......... Honeywell, Raleigh, NC
Booth, Luke .......... Schweitzer Engineering Laboratories, Charlotte, NC
Brown, Rodney .......... Dominion Energy, Richmond, VA
Brutus, Max .......... GE Vernova, Clearwater, FL
Byrd, Dee .......... WR Daniel & Associates, Mooresville, NC
Candler, Nick .......... The Durham Company, Lebanon, MO
Cardella, Craig .......... Honeywell, Raleigh, NC
Cooper, Chad .......... Dominion Energy, West Columbia, SC
Corbin, Michael .......... Honeywell, Raleigh, NC
Craig, Curtis .......... Shenandoah Valley Electric Cooperative (Retired), Verona, VA
Culp, Ron .......... Chapman Co., Charlotte, NC
Dempsey, Sean .......... Honeywell, Raleigh, NC
Dudley, Phil .......... Texas Meter+Device, Waco, TX
Edwards, Garey .......... City of High Point (Retired), Albermarle, NC
Finley, Scott .......... NTS, Raleigh, NC
Fischbach, Phil .......... Powermetrix, Knoxville, TN
Fry, Preston .......... Chapman Co., Charlotte, NC
Green, Jimmy .......... Brunswick Electric, Shallotte, NC
Grubbs, Jimmy .......... SCE&G (Retired), Gilbert, SC
Hardy, Bill .......... Power Measurements, LLC, Bristol, PA
Horton, Tony .......... Duke Energy (Retired), Wendell, NC
Johnson, Greg .......... Alabama Power Co., Montgomery, AL
Jordan, Bill .......... Booth & Associates, LLC, Raleigh, NC
Kesler, Tim .......... Preferred Sales Agency, Lexington, NC
Kretzschmar, Jeane .......... SAMSCO, Boiling Springs, SC
Kretzschmar, John .......... SAMSCO, Boiling Springs, SC
Lawton, Tom .......... TESCO, Bristol, PA
Lewis, Bo .......... TEMA, Waxhaw, NC
Lewis, Jeff .......... PowerTech LLC, Lexington, NC
Lopez, Frank .......... GE Instrumental Transformers, Odessa, FL
Maclaga, John .......... City of Wilson, Wilson, NC
Magruder, Bruce .......... Electraca Consultants Inc., Garner, NC
McCraw, Kenneth .......... Duke Energy, Charlotte, NC
McCroy-Bacon, Connie .......... NC State University, Raleigh, NC
Miller, Raeann .......... Radian Research, Lafayette, IN
Mossbrooks, Scott .......... WESCO, Flowery Branch, GA
Mutschink, Rusty .......... Central Electric Power Cooperative, Columbia, SC
O’Dell, Robby .......... McCall-Thomas Engineering Company, Orangeburg, SC
Overbee, Tim .......... Duke Energy, Pine Level, NC
Pampanelli, Tina .......... Itron, Liberty Lake, WA
Parker, Jason .......... Duke Energy, Garner, NC
Pest, Mark .......... nVent, Solon, OH
Prashad, Dale .......... Aclara, St. Louis, MO
Shoaf, Craig .......... NTS, Raleigh, NC
Steinberger, John .......... Itron, Fort Mill, SC
Stroud, Steve .......... PowerTech LLC, Charlotte, NC
Tippette, William .......... Utility Sales Associates, Midlothian, VA
Valley, Joel .......... Fayetteville PWC, Fayetteville, NC
White, Vernon .......... TESCO, Bristol, PA
Whitmore, Bob .......... Radian Research, Newland, NC
Wilcox, Robert .......... Rappahannock Electric Cooperative (Retired), Fredericksburg, VA
Williams, Dean .......... Duke Energy (Retired), Myrtle Beach, SC
<table>
<thead>
<tr>
<th>Year</th>
<th>Inductees</th>
</tr>
</thead>
</table>
| 1981 | Ed Ruggles, NC State University (Deceased)  
Bert W. Blake, CP&L (Deceased)  
Edwin W. Winkler, NC State University, (Deceased)  
William A. Keller, Duncan Electric (Deceased)  
George B. Hoadley, NC State University (Deceased) |
| 1982 | William J. Perry, CP&L (Deceased)  
Donald Eggleston, Duke Power (Retired) |
| 1983 | Herbert B. Adams, VEPCO (Deceased)  
Walter Hodde, Sangamo Weston (Retired)  
Norman R. Bell, NC State University (Deceased) |
| 1984 | Brian C. Fetner, SCE&G (Deceased)  
D.K. Woodard, General Electric (Deceased) |
| 1985 | Vernon E. Bobo, Duke Power (Retired)  
Edward Kennedy, Santee Cooper (Retired)  
C.L. McKenzie, CP&L (Retired) |
| 1986 | No Inductees |
| 1987 | Rick Anderson, P.E., Fayetteville Public Works  
David B. Stansel, NC State University (Deceased) |
| 1988 | Richard P. Dorton, VEPCO (Retired)  
Lee Monroe, Duke Power (Retired) |
| 1989 | Robert W. Cox, General Electric (Deceased)  
Lloyd Jordan, General Electric (Deceased) |
| 1990 | Bob Kelly, R.W. Chapman (Retired)  
Ed Manning, NC State University (Deceased) |
| 1991 | Earl Garthright, VA/NC Power (Deceased)  
J.J. Perry, Jr., J.J. Perry Company (Deceased)  
Connie McElroy-Bacon, NC State University |
| 1992 | No Inductees |
| 1993 | John Sutton, P.E., NC State University (Retired)  
Ralph West, Duke Power (Retired) |
| 1994 | Jack Tanner, Tanner & Tanner, Inc. (Deceased) |
| 1995 | No Inductees |
| 1996 | Luther Herman, NC State University (Deceased)  
Donald Stanley, City of Wilson (Deceased) |
| 1997 | David A. Springs, P.E., Central Electric Power Cooperative (Retired)  
Joyce Tanner, Tanner & Tanner, Inc. (Retired) |
| 1998 | No Inductees |
| 1999 | Jimmy Grubbs, SCE&G (Retired)  
Gene Schickedanz, Durham Co. (Retired) |
| 2000 | Randy Riley, Landis+Gyr  
Larry Waters, General Electric (Retired) |
| 2001 | John Carr, UTEC (Retired)  
Dean Williams, Duke Energy (Retired) |
| 2002 | Clare Bargerstock, Northern Virginia Electric Cooperative  
Del Weers, ITEC (Retired) |
| 2003 | Tony Horton, Duke Energy (Retired)  
Brooks Kirby, City of Morganton |
| 2004 | Cindy S. Allen, NC State University (Retired) |
| 2005 | Tom Van Valkenburgh, Watthour Engineering |
| 2006 | Jeff Lewis, PowerTech LLC  
Bob Wilcox, Rappahannock Electric Cooperative (Retired) |
| 2007 | Craig Shoaf, National Transformer Sales |
| 2008 | Greg Tyre, The Durham Company (Retired)  
Scott Mossbrooks, N-Dimension Solutions |
| 2009 | Brian Giusani, Audio Visual Services Coastal  
Kenneth McCraw, Duke Energy |
| 2010 | John Cochran, ITEC (Retired)  
James Green, Brunswick EMC |
| 2011 | No Inductees |
| 2012 | No Inductees |
| 2013 | No Inductees |
| 2014 | Mike Byrd, ElectriCities of NC (Retired)  
Bill Hardy, TESCO – The Eastern Specialty Company  
Chuck Robertson, SCE&G (Retired) |
| 2015 | Curtis Craig, Shenandoah Valley Electric Cooperative  
Rusty Mutschink, Central Electric Power Cooperative  
Tim Overbee, Duke Energy |
| 2016 | Vernon White, TESCO – The Eastern Specialty Company  
Sean Dempsey, WESCO Distribution |
| 2017 | Canceled due to COVID-19 |
| 2018 | Chad Cooper, Dominion Energy  
Tom Lawton, TESCO |
Evaluation

NC Electric Meter School & Grid Technology Conference
June 11-15, 2023

Tell us what you think!

Strong Points of the Program:
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Suggestions for Improvement:
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Evaluation of Classroom & Physical Facilities:
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Comments (or suggestions for future topics and/or speakers for next year):
_________________________________________________________
_________________________________________________________
_________________________________________________________
_________________________________________________________

Name (optional) _____________________________________________
Company/Organization _______________________________________
Job Title ___________________________________________________
Years in Metering ____________________________
Are you a vendor? Yes □ No □

Please give this evaluation to a presider or return it to the conference registration desk.
Thank you!
Save the date!

92\textsuperscript{nd} Annual
NC Electric Meter School and
Grid Technology Conference

June 9-13, 2024

Embassy Suites Kingston Plantation
Myrtle Beach, SC