Session 1: Women & Leadership Workshop

Monday, March 18 | 8:00 a.m. – 4:00 p.m.

- Learning Objectives:
  o Adapting to Change
  o Leadership Assessment
  o A day in the life of – Pipeline vs Distribution Operations
  o Open Discussion – Leading with Lean, Controlling Cost, Digital Transformation
  o Innovation – wowing the customer
  o How Women and Men Achieve Success

- Target Audience: Admin to VP level: Any employees interested in leadership or professional development

- Speakers/Instructors: Rusty Harris, Dominion Energy, Felicia Howard, Dominion Energy, James Bray, Southern Company Gas, Ashley Forte, SCE&G, Aleida Socarras, Chesapeake Utilities

Session 2: CPGA Spring Meeting

Monday, March 18 | 8:00 a.m. – 4:00 p.m.

- Description
  - CPGA Spring Meeting:
    - Welcome & Introductions
    - APGA-Regulatory Update
      - Massachusetts Over-pressurization and the Potential Regulatory Impact
    - Regulatory Update-Office of Regulatory Staff-SC, NCUC
    - National Excavator Initiative Presentation
    - Board Meeting
  - Operators Meeting:
    - Welcome & Introductions
    - Adoption of Minutes from December 6, 2018
    - On Going Business
    - Annual Inspections
    - DIMP Inspection
    - Drug & Alcohol Inspection
    - Operator Qualifications Inspection
    - Public Awareness Inspection
    - CP Training on 12/13/18 Update from Rocky Mount
    - Roundtable Topics Discussion on 12/06/2018
    - Pay Study
    - Growing Your UCC Participation
    - Tracking & Traceability
    - Degree Day Calculations
    - CPGA put on an annual rodeo possibly be held in June
    - Erin Scott Requested operators send list of topics they want to discuss
    - New Business
Session 3: Gas 101

Monday, March 18 | 8:00 a.m. – 4:00 p.m.

- **Description**: Students will leave this class with a thorough understanding of a utility’s natural gas distribution system. Initially conceptualized as an explanation of the system for LDC supply chain employees, the course has been expanded to meet the needs of anyone who would benefit from a basic understanding of how the system is constructed, maintained and operated.
- Course content will include an overview of the many physical components and work activities used in construction and operation of a local distribution system:
  - **Section I: How Does the Natural Gas Delivery System Work?**
    - A Brief History of Natural Gas
    - Gathering Systems
    - Transmission Systems
    - Compressor Stations
    - Line-pack
    - Gate Stations
    - The Distribution System
    - Moving Natural Gas Into the Home
  - **Section II: The Components & Systems of a Natural Gas Transmission and Distribution**
    - Components & Systems Overview
    - Steel Pipe
    - Pipe Coating
    - Pipe SMYS and Hydrotesting
    - Polyethylene Pipe
    - Fittings (Steel & Polyethylene)
    - Valves
    - Meters
    - Regulators
    - Meter & Regulator Sets
    - Stations - M&R, Gate, Border
    - Odorizers - Gas Conditioning
    - Launcher/Receiver Facilities
    - Purging & Pigging
    - Horizontal Directional Drilling (HDD)
    - Tapping & Stopping
    - Cathodic Protection
    - AC Mitigation
    - Filters & Strainers
    - Gas Instruments
- **Learning Objective(s)**: Understand a utility's natural gas distribution system.
- **Target Audience(s)**: Employees new to the industry
Session 4: Tapping and Stopping

Monday, March 18 | 8:00 a.m. – 4:00 p.m.

- **Description:** Simulate drilling and stopping using the Mueller D-5 machine on a 2” H-17190 NO-BLO line stopper fitting. Simulate drilling and stopping 4” poly pipe with the new Mueller Shur Stop NO-BLO polyethylene line stopping system.
- **Hot tapping and plugging overview**
  - Low pressure applications < 150 psi
  - Mid pressure applications < 500 psi
  - High pressure applications up to 1480 psi
- **T-101B and T-101XL Drilling Machines**
  - Simulated 2” tap with cut-a-way vessel for viewing purposes.
- **2” Shortstopp II Plugging System (150 class, pressures up to 200 psi)**
- **Simulated 2” line stop with cut-a-way vessel for viewing purposes.**
- **Setting of Completion Plugs in Shortstopp Fittings.**
- **Learning Objective(s):** Understand drilling and stopping procedures
- **Target Audience(s):** Field operations personnel and supervisors
- **Speaker/Instructor(s):** Steve Patterson, TD Williamson & Blake Battleson, Mueller

Session 5: Erosion and Sediment Control

Monday, March 18 | 8:00 a.m. – 11:30 a.m.

- **Description:** Environmental awareness and compliance during construction are paramount to a successful project. The purpose of this workshop is to provide an overview of construction stormwater management directly related to Erosion and Sediment Control. We will cover a broad range of topics with a detailed focus on protecting Environmentally Sensitive Areas (ESAs). The workshop will cover the following:
  - Introduction to Erosion and Sediment Control
  - Non-Structural Best Practices
  - Ensuring Jurisdictional Areas are Highly Visible
  - Erosion and Sediment Control in Environmentally Sensitive Areas
  - Best Management Practices for Adjacent to Surface Waters
  - Best Management Practices for Stream Crossings
  - Best Management Practices for Wetlands
  - Best Management Practices for Work in Riparian Buffer Zones
  - Best Management Practices for HDD Setup and Oversite
  - Field Inspection Techniques, Risk Identification, and Reporting
  - Special Consideration for Construction Sites
- **Learning Objective(s):**
  - Understand the differences between Erosion and Sediment Control
  - Assess potential erosion or sedimentation risks to your projects
  - Identify BMPs to help protect Environmentally Sensitive Areas
  - Provide more thorough environmental reporting
  - Promote environmental compliance and awareness
- **Target Audience(s):** Environmental Inspectors, Engineers, Installation Contractors
- **Speaker/Instructor(s):** Todd Moody & Christopher Friel, Duke Energy
Session 6: Regulator & Relief Selection and Sizing

Monday, March 18 | 8:00 a.m. – 11:30 a.m.

- **Description:**
  - Regulator Fundamentals
  - Regulator Types and Functions
  - Performance Details such as Droop, Turndown, Lockup
  - Station Design Considerations
    - Control Run Design and the effect on Regulator and Relief Selection
    - Effects of Pressure Drop
    - Gas Velocity
    - Noise
    - Maintenance
  - Regulator Sizing Program Live
  - Relief Valve Type and Function
    - Relief Valve Selection
  - Sizing Considerations
  - Relief Valve Sizing Program Live
  - Testing
    - 1st Bubble vs. Main Valve Lift
    - Testing “Best Practices”
    - Maintenance
  - Q&A

- **Learning Objective(s):** The objective of the class is to provide knowledge and insight into Regulator and Relief Selection and Sizing, to include discussion about various types of regulators and how they function, Station Design consideration and sizing, Relief type and function, design consideration and sizing, testing and maintenance.

- **Target Audience(s):** any industry personnel associated with the Regulator and Relief selection, sizing, station design, and maintenance. The material is designed to address knowledge levels from novice to higher levels of expertise.

- **Speaker/Instructor(s):** Mark Holland, Bartlett Controls

Session 7: Cost of Service: Future of the Industry

Monday, March 18 | 8:00 a.m. – 11:30 a.m.

- **Description:** In this four-hour course we will discuss basic concepts of a gas distribution utility cost of service and how revenue requirements are determined. Learn how key financial targets are used to establish customer rates, borrowing needs, and capital improvements. Identify basic data necessary to conduct an accurate analysis and understand how cost of service and rate design principles and processes are used in the gas industry to send proper price signals while recognizing social and environmental objectives. In addition, we will review current rate trends and strategies from utilities across the nation.

- **Learning Objective(s):**
  - Basic cost of service concepts, terminology, and processes
  - Key financial targets related to cost of service
  - How revenue requirements are determined
  - Identify, collect, and organize costs
  - Developing cost allocation factors
  - Determine monthly customer facilities and billing costs
  - Understanding gas cost adjustment mechanisms
  - Utility rate trends and case studies
  - Communicate rate changes to policymakers and customers
- **Target Audience(s):** General managers, finance and accounting personnel, rate analysts, financial planners, as well as policymakers.
- **Speaker/Instructor(s):** Utility Financial Solutions - specializes in gas, electric, water, wastewater and telecommunications cost of service studies, financial projections, rate designs and special financial analysis. UFS is one of the largest providers of financial services to utilities throughout the United States. Our team of professionals includes engineers, accountants and economists that have completed more than 600 cost of service studies, rate studies and financial projections for utilities in 33 states, Alberta Canada, US Territory of Guam and the British Grand Cayman Island. As a result of our experience, we are instructors and frequent speakers for utility agencies, including the American Public Power Association (APPA), American Municipal Power (AMP) and the Institute of Public Utilities (IPU). Our courses include financial planning, cost of service, rate design and development of dynamic pricing methods for customers.

**Session 8: DOT 192 Frontline**

*Monday, March 18 | 12:30 p.m. to 4:00 p.m.*

- **Description:** This course will provide participants with a baseline understanding of federal pipeline safety regulations. We will explore the history behind the original regulations, the events that served as catalysts for new and additional regulations, and where we can expect regulations to expand in the future. Participants will also receive a high level overview of the numerous sections in existing DOT 192 Code and the various programs and plans that are currently required. The content of this course will be primarily focused on regulations applicable to distribution pipelines; however, some discussion of transmission line regulations will be discussed.

- **Learning Objectives:**
  - To better appreciate why pipeline safety regulations exist
  - To build a foundational understanding of existing pipeline safety regulations
  - To gain insight on where new regulations may be possible in the future
- **Target Audience:** Field operations personnel and supervisors, Individuals responsible for pipeline safety compliance.
- **Speakers / Instructors:** Erin Kurilla, APGA

**Session 9 Station Design Best Practices**

*Monday, March 18 | 12:30 p.m. to 4:00 p.m.*

- **Description:** Pipeline metering and regulating stations are typically unmanned sites that are critical to pipeline operations. Good station design can promote safe operations, save maintenance costs, improve reliability, and increase pipeline operational flexibility. Station designs can vary significantly between different operators and areas of the country. In this course, we will discuss many of those design considerations and philosophies.
- **Specific station design best practice topics to be discussed include:**
  - Site Layout
  - Launchers & Receivers
  - Piping Design
  - Filtration
  - Tank Storage
  - Metering design
  - Heaters
  - Pressure Regulation
  - Piping Supports & Equipment Foundations
Session 10: Recognize & React to AOCs

Monday, March 18 | 12:30 p.m. to 4:00 p.m.

- **Description:** This workshop will provide ways to prevent accidental ignition on the job and offers a voluntary testing opportunity for participants. Participants who choose this option will take the test on Wednesday morning. Following the exam, the Proctor will review the questions and corresponding answers with participants. There is an additional fee of $25 for taking this exam.
- **Learning Objective(s):**
  - Identify conditions, causes and possible hazards related to gas leakage.
  - Identify ways to prevent accidental ignition caused by electrical arcing.
  - Identify ways to prevent accidental ignition when welding, cutting and other hot work.
  - Identify ways to prevent accidental ignition when isolating pipeline segments on planned work.
  - Identify safety precautions to prevent accidental ignition when isolating gas handling facilities.
- **Target Audience(s):** Associates at all levels of the Organization will benefit.
- **Speaker/Instructor(s):** Larry Dodson, LG&E KU

Session 11: Tracking and Traceability

Monday, March 18 | 12:30 p.m. to 4:00 p.m.

- **Description:** This class will discuss industry terms “Tracking and Traceability” and what it means for our operators today as well as moving forward. We will discuss information gathering utilizing barcode standard ASTM F2897, along with field workflows and issues that arise while trying to ensure data integrity throughout natural gas systems of all sizes. This class will also include GPS and other technology related components that aide operators in capturing many other pieces of information that relate to “Tracking and Traceability”, including helping the operator to future proof themselves for new rules and regulations such as MAOP validation.
- **Learning Objective(s):**
  - Understand how and why barcodes are used as well as created
  - Understand the parts the make up an F2897 Barcode
  - Understand ways barcodes are implemented in systems throughout operations
  - Identify non F2897 Specification barcodes
  - List methods used to capture and process barcodes
  - Identify areas in which barcodes can aide in future compliance laws
  - Understand the role and relation to MTRs
- **Target Audience(s):**
  - Field Operations
  - Engineers
  - GIS Personnel
- **Speaker/Instructor(s):** Ryan Causey and Sean Zintel, Magnolia River
**Session 12: Hydraulic System Modeling Roundtable**

*Monday, March 18 | 12:30 p.m. to 4:00 p.m.*

- **Description:** This class will be a true roundtable discussion, not taught, but facilitated by an industry peer from SCE&G. Participants will be given the chance to submit suggested topics and will receive an updated topic list prior to attending. Any suggested topics related to system planning will be placed on the agenda. A class contact list will be created to further discuss any topics for which the allotted time does not allow.

- **Learning Objective(s):**
  - Recognize Peak Hour Factor Trends
  - Model Verification Methods
  - Understand Design Day Philosophies
  - Identify Infrastructure Planning Processes
  - Verify Data Gathering Technologies

- **Target Audience(s):**
  - Gas System Planners
  - Engineers

- **Speaker/Instruction(s):** *Amy Cook, SCE&G, A SCANA Company*

---

**Session 13: Creating Natural Gas Champions**

*Monday, March 18 | 12:30 p.m. to 4:00 p.m.*

- **Description:** It’s everywhere. Opposition to the natural gas industry. While a lot of the activity has been on pipeline permitting and construction, it certainly does not end there. Most of the persuasion to align against hydrocarbon energy is based on leveraging emotions rather than facts. So, what is my responsibility to counteract that? How do I ensure that facts can be shared with my neighbors and others I am around every day at the little league soccer or baseball game? This is your chance to better understand some very basics on the natural gas industry, and more importantly, how to engage in those casual yet crucial conversations. Becoming a Natural Gas Champion – it’s in all of us, we just need to better understand how.

- **Learning Objective(s):** Become a Natural Gas Champion – it’s in all of us, we just need to better understand how.

- **Target Audience(s):** Associates at all levels of the Organization will benefit.

- **Speaker/Instruction(s):** *Bill Cantrell, Southern Gas Association*

---

**Session 14: Gas 201: Distribution System Design for System Expansion and Reinforcement**

*Tuesday, March 19, 8:00 a.m. – Wednesday, March 20 11:30 a.m.*

- **Description:** NOTE: For more inexperience attendees, please consider taking Gas 101 as a prerequisite. This 1.5 day workshop takes the student through the system design process and will provide opportunities for hands on application of the concepts being presented. An excellent starting point for the new engineering professional or a refresher for the more seasoned employee. Course content will include the following:
  - System Modeling + Planning
    - Load Requirements for Expansion & System Reinforcement
    - Line + equipment Sizing
    - Project determinations:
      - Facility:
        - Flow requirements

Pressure requirements
- Control requirements
  - Pipeline:
    - Route Determination
    - Constructability review
    - Prelim cost estimate

Project Design
- Environmental Due Diligence
- Permitting & Right-of-Way requirements
- Survey/Data collection
- Facilities Design (M&R Stations)
  - P&ID
  - Long Lead Materials Procurement
  - Civil/Site Design
  - Mechanical Design
  - SCADA/Electrical considerations
- Pipeline Design
  - Construction method
  - Environmental Design
  - Geotechnical evaluations (as appropriate)
  - Prepare construction plans
    - Tie-in Design
    - Appurtenance design (block valves, isolation valves, etc)
    - CP/AC mitigation design
  - Easement, work space documentation, permit preparation
  - Bid documents prepared

Project Execution
- Material procurement
- Permitting
- Land acquisition
- Construction/Inspection
- As-builts
- Project Close-Out

**Learning Objective(s):** At the completion of this class attendees will have a better understanding of what is involved in the design of a natural gas project. We will cover topics including modeling, route selection, design considerations and others. This class is “hands-on” and requires active participation.

**Target Audience(s):** This class is geared toward entry level engineers and designers, but is open to anyone who would like to know more about pipeline design projects.

**Speaker/Instructor(s):** Whit McCormack, Austin Gay, Steve Platia and Amanda Smith, Magnolia River

---

**Session 15: Everything DIM**

*Tuesday, March 19, 8:00 a.m. – Wednesday, March 20 11:30 a.m.*

**Description:** This workshop developed and facilitated by a committee of industry professionals will feature subject matter expert presentations, question and answer, and peer to peer roundtable discussion.
- Agenda topics include:
  - A Regulator Panel Featuring PHMSA and State Regulatory Staff
  - Leak Management
  - Damage Prevention and Public Awareness
  - Measuring Program Effectiveness
  - Data Integrity and GIS
Session 16: Sales & Marketing Seminar

Tuesday, March 19 | 8:00 a.m. – 4:30p.m.

- **Description:**
  - Electrification
  - Social Media, Regulatory Compliance, Pipeline Safety
  - Marketing Trends
  - The Atlantic Blue Coast Pipeline Update
  - Ready, Set, Let’s Speed
    - CNGs: The Current Status, Lee McElrath, Dominion Energy
    - Tankless Water Heaters, Mary Mann, Dominion Energy
    - Safe Digging, Lindsey Sander, Sander Resources
    - Multi-family,
    - Builder Marketing, Kimm O’Quinn, Marketing Mungo Homes
    - Social Media, Carley Welsh, SCE&G
  - End of Day Pump Up Speech!
- **Target Audience(s):** Sales and Marketing Professionals
- **Speaker/Instructor(s):** Jason Ketchum, ONE Gas, Inc., Michelle Coppock, SCE&G, Amy Cassidy, York County Natural Gas Authority, Carley Welsh, SCE&G, John Hunt, MarketNight, Bruce McKay, Dominion Energy, Lee McElrath, Dominion Energy, Mary Mann, Dominion Energy, Lindsey Sander, Sander Resources, Kimm O’Quinn, Marketing Mungo Homes

Session 17: Accounting Roundtable

Tuesday, March 19 | 8:00 a.m. – 4:30p.m.

- **Description:** This roundtable provides an overview of various functions related to gas industry accounting. It covers key elements, explores the relationship between various departments and how interaction and accurate communication between business units is critical for success. This roundtable has no pre-requisites and qualifies for 7 hours of Continuing Professional Education credits
- **Learning Objective(s):**
  - Accounting Update - List key trends you should be aware of to help measure the recovery of the oil and gas market.
  - Industry Update – Illustrate the current economy’s effect on the supply of natural gas.
  - Data Analytics - Explain how large data management systems integrated with advanced metering infrastructure (AMI) are changing the account’s role in the natural gas industry.
  - Cyber Security - Identify new cyber security measures to help your organization prevent customer billing fraud.
  - Fraud – Discussion Customer Fraud/Identification Fraud and what to do to avoid it.
  - Technology - Discuss the financial benefits of converting a smaller vehicle fuel tanks to run on natural gas.
- **Target Audience(s):** Accountants, Controllers, Analysts, Risk and Asset Management Employees
- **Speaker/Instructor(s):** Debbie Edens, John Beier & Makesh Maisuria, SCANA Corporation, Lindsey Poley, Sky Hodges & Michael Gyorkoe, Deloitte & Touche LLP, Jeff Deason, York County Natural Gas
Session 18: Valve Operations & Maintenance

Tuesday, March 19 | 8:00 a.m. – 4:30 p.m.

- **Description:** How important are your valves in an emergency or a planned outage? There’s nothing worse than having to explain why the pipeline can’t get shut down because a valve won’t function properly. The importance of valves to a pipeline or distribution system is often overlooked. The three major valve types in the industry will be reviewed in this course. (Plug, Ball & Gate)
  - Course topics for this all-day session include:
    - Valve Identification & Selection
    - Installation Practices
    - Design & Operating Differences
    - Maintenance Requirements
    - Troubleshooting Techniques
- **Learning Objective(s):**
- **Target Audience(s):** Design Engineers, Field Operations Personnel
  - They will be introduced to a great deal of information that has practical application, not theory. When the course is completed, they will have a better understanding of how these valves are used and maintained.
- **Speaker/Instructor(s):** Wallace (Wally) Todd, The Blythe Company

Session 19: Trench & Excavation Competent Person

Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.

- **Description:** This in-depth course is designed to familiarize the student with OSHA Regulation 1926. Topics include job planning, locating underground utilities, soil classification, testing for hazardous atmosphere, proper sloping, shielding, and equipment inspections and recognizing any potential hazards.
- **Learning Objective(s):**
  - To understand the serious nature of excavation hazards.
  - To provide a review of basic concepts of soil mechanics.
  - To understand OSHA general excavation requirement.
  - To review various means of soil analysis.
  - To review options for sloping or shoring specific soil type.
  - To understand the duties of the excavation competent person.
  - To understand the potential for hazardous atmospheres in excavation.
- **Target Audience(s):** Associates at all levels of the Organization will benefit.
- **Speaker/Instructor(s):** Todd Knootz, Piedmont Natural Gas

Session 20: Emergency Response & Incident Investigation

Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.

- **Description:** This session will cover key concepts related to effective response to pipeline emergencies. Topics will include an overview of the Incident Command System, effective scene size-up, and tactical decision making. The session will also include case studies of actual pipeline incidents as well as recommendations for coordination with public sector responders. Effective liaison with public sector responders is a key element of a sound pipeline public awareness program. This session will include recommendations for proactive programs to enhance coordination with those key individuals that will respond in the event of a pipeline emergency. Included in the program will be an overview of various state initiatives related to enhancing coordination with emergency responders.
There are steps to be taken during the initial phase of a pipeline related incident investigation that are critical in determining the root cause. This portion of the session will cover elements that should be addressed such as effective evidence discovery and protection, leak survey patterns, and investigation coordination with public

- **Learning Objective(s):**
  - Understand the fundamentals of the Incident Command System
  - Understand how to effectively work with the Public Sector Emergency Responders
  - Access Tools to aid in executing a post incident investigation

- **Target Audience(s):**
  - Operations Supervisors
  - Managers and Directors
  - Safety & Risk Management
  - Human Resources
  - Legal Professionals
  - Engineering Professionals
  - Communications Professionals

- **Speaker/Instructor(s):** Glen Boatwright, York County Natural Gas Authority & Bryony Hodges, SCANA

**Session 21: Measurement & Meter Fundamentals**

*Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.*

- **Description:** Proper measurement is the “cash register” for all utilities. It’s where the money’s at. Covering everything from the foundation to the roof, this course will start out with the “Basic Gas Laws” and then proceed to the common methods of measurement used today – diaphragm meters, rotary meters, turbine meters, and ultrasonic meters. Not only theory, but hands-on activities will provide a thorough understanding of how each meter operates along with sizing and selection of the right meter for the application.

- **Learning Objective(s):**
  - Fundamentals of Ultrasonic Meter Measurement
  - Ultrasonic Meter Designs
  - Factors that affect measurement/accuracy
    - Station Design Considerations
  - AGA 9 Standards

- **Target Audience(s):** New utility engineers, measurement techs, or anyone new to the gas industry that wants to understand the “tools of the trade” involved with gas measurement.

- **Speaker/Instructor(s):** Paul Honchar, Sensus, Kasey Howe, Honeywell, Mark Holland, Bartlett Controls, & Robert Bennett, Honeywell

**Session 22: Leading a Multi-Generational Workforce**

*Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.*

- **Description:** A hands-on interactive workshop attended by over 5,000 professionals in 2016. Attendees will learn time-tested, proven tactics and solutions for reducing conflict and engaging employees across Generational Differences and mindsets
  - Receive a patented industry best model which can be applied to participant’s current issues

- **Learning Objective(s):**
  - Learn how to capture and pass tacit knowledge from departing Boomers
  - Apply proven ways to attract and KEEP today’s best young talent
  - Understand how to reach & teach generations who all learn differently

- **Target Audience(s):** Associates at all levels of the Organization will benefit.

- **Speaker/Instructor(s):** Gary Murdock, Leadership Foundry
Session 23: Beginner CP/Corrosion

Tuesday, March 19 | 8:00 a.m. - 11:30 a.m.

- **Description**: This class will discuss common types of external corrosion typically found on buried pipelines, ways to mitigate the corrosion, and methods to monitor the systems to validate whether external corrosion is active or not. The class is intended to build awareness of the corrosion types and common tools used in the industry. It is not a training class for any given tool.
  
  - **Corrosion on pipelines**
    - Four requirements
    - Galvanic corrosion
    - MIC
    - SSC
    - Stray current
    - Pitting/General
    - SCC

- **Two common methods used to control corrosion on pipelines**
  
  - **Coatings**:
    - Coal tar (enamel or epoxy)
    - Asphalt
    - Fusion Bonded Epoxy (FBE)
    - Two-part epoxy
    - Hot tar Tape
    - Wax
    - Polyethylene
    - Cold applied tape
    - Surface preparation
    - Field vs Factor

  - **Cathodic protection**
    - Galvanic anodes
    - Rectifiers

  - **Monitoring Cathodic protection systems**
    - Taking Pipe to Soil Readings
    - Measuring current from anode or rectifier
    - Measuring current on a pipe
    - Close Interval Surveys (CIS)
    - Direct Current Voltage Gradient (DCVG) surveys
    - Pipeline Corrosion Mapping surveys
    - Short locating
    - Alternating Current Voltage Gradient (ACVG) surveys
    - Troubleshooting
      - Transmission systems
      - Distribution systems
    - Excavating anomalies
    - Tools of the trade

- **Learning Objective(s)**: This class is intended to build a general awareness of different types of corrosion, methods to prevent them, and ways to monitor whether it is occurring.

- **Target Audience(s)**: This class is intended for the beginner level CP technician who needs to broaden his awareness of tools available to them, or an individual who is considering a position in this field and would like to know more about it. It is not intended to train an individual to become a certified CP Technician.

- **Speaker/Instructor(s)**: Randy Hodge, Structural Integrity Associates
**Session 24: Purging with Scenarios**  
*Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.*

- **Description:** We will attempt to involve ALL vendors as “Experts” with their respective equipment. The session format should introduce each piece of equipment to the audience (est. 20 min. each) and the open session for discussion. This is informative and NOT a sales pitch. It will give any attending a chance to see and learn of the evolution of gas leakage detection in the 21st century.
  - Isolating, Abandoning and Deactivating Pipeline Facilities
  - Purging with Air or Inert Gas
  - Purging with Gas
- **Learning Objective(s):**
  - Understand vendor equipment currently on the market
  - Learn the Evolution of Gas Leakage Detection
- **Target Audience(s):** Mid-Level Management and Above, Operations and Service
- **Speaker/Instructor(s):** Chris Snoeberger, Miller Pipeline

**Session 25: Training Roundtable**  
*Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.*

- **Description:** This session will include open forum discussions on safety education methods. Our discussions will focus on Subject Matter, Retention, Application, and regulatory requirements. We then will hold a specific training session on hearing protection because it is topical right now for the exposure of Military personnel and failed PPE and failed training. We then will review the training session and critique it talking about application to specific groups/companies and differing needs. Finally, we will hold another training piece that will catch folks off guard and give them the wow factor.
- **Target Audience(s):** Safety Trainers
- **Speaker/Instructor(s):** Ed Randolph and James English, SCANA & Colby Child, R.C. Goodwin & Associates

**Session 26: Where’s my stuff?**  
*Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.*

- **Description:** “I want my stuff next week – why isn’t it available” In today’s current demand/supply situation, both Utilities and Suppliers are often in situations where the product availability expected/required/ desired of the Utility (Customer) does not match the Supplier’s (Product providers) capability/schedule/ readiness/ability. Why are there these supply issues and how can the supplier and the customer either/or independently or collectively partner and develop solutions? A panel of suppliers and utility customers will discuss factors that that affect the lead time required for major equipment purchases.
  - Panelist would represent the below categories A,B,C,D (one, possibly two from each category)
    - Utility Operations or Purchasing/Strategic Sourcing
    - Suppliers to consist of Manufacturers as well as Reps/Distributors to provide a wide variety of input
    - Moderator will do introductions and present a list of questions that can be presented to panelists and offer support/guidance in moderating with panel. Those in attendance will be encouraged to interact with the Panel with questions or by providing input/perspective.
- **Learning Objective(s):**
  - Understand the demand of utilities and suppliers
  - Detail the Scope of the issue of supply and demand
  - Process and Improve Communication to Resolve Issues
- **Target Audience(s):**
  - Natural Gas Suppliers
Session 27: Outside Leak Investigation

Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.

- **Description:** This class will include classroom instruction on the following: Cause of Leaks, Tools for detection, Investigation Techniques, Grading the leak, Documentation of leak, followed by hands on investigation, grading, and documentation.

- **Learning Objective(s):**
  - Understand the Cause of Leaks
  - Evaluate the Tools of detection
  - Understand proper investigation techniques
  - Implementation of tasks through hands on training

- **Target Audience(s):** Associates at all levels of the Organization will benefit.

- **Speaker/Instructor(s):** Jon Beam, Equipment Controls, Mitch Lister, Southern Company Gas, William Anderson, MRC Global, Tony Spivey, Kerotest, Rene’ Van Kersbergen, Honeywell

---

Session 28: Basic Locating

Tuesday, March 19 | 8:00 a.m. – 11:30 a.m.

- **Description:** This Hands-on Field Training course will be taught off site at SCE&G’s Training Facility in Columbia, SC. This course is for technicians looking to gain basic locating knowledge and practices from instructors having 30+ Years of combined locating experience.

- **Learning Objective(s):**
  - Understand the Purpose of Locating
  - Learn the Types of Equipment (Attendees are encouraged to bring their own locating equipment)
    - Equipment Maintenance: Basic Care
  - Understand Basic Locating Principles:
    - Theory
    - Best Practices in Verifying Locates
    - Conductive vs. Inductive
    - Tolerance Zones
    - Ticket Management Systems
    - Damage Reporting/Damage Investigation (Hit Kit)
    - Communicating with Construction Contractors/Excavators
    - Abnormal Operating Conditions
    - Safety Issues
    - Training/Certifications
    - Basic Troubleshooting

- **Target Audience(s):** Technicians

- **Speaker/Instructor(s):** Will Prescott & Cody Adams, Greenville Utilities Commission
Session 29: Inspecting the Installation of Pipelines

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** Proper pipeline inspection begins before the first piece of pipe is installed and isn’t complete when the last meter is turned on. From building relationships, to onsite inspection of pipeline installation, the tasks that are associated with being a Pipeline Inspector are vast and crucial. In this seminar you will learn proper installation procedures, best practices for safety and material handling as well as address environmental concerns, documentation, and priority management skills.

- **Topics covered include:**
  - Safety on the job
  - Priority management and documentation
  - Environmental concerns
  - Pre-project planning
  - Material handling
  - OQ compliance
  - Proper installation procedures
  - Quality control

- **Learning Objective(s):**
- **Target Audience(s):**
- **Speaker/Instructor(s):** Larry Dodson, LG&E-KU

Session 30: Solutions for Cross Bores: Legacy & New Construction, Today’s Effective Methods and Techniques

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** Agenda Topics Include:
  - Examples of Damages resulting from Cross Bore with Sewer Facilities
  - Reason why sewers are difficult to locate
  - Discuss the material, existence of old infra-structure
  - Best practices for the Installation of Gas facilities using Trenchless Excavation in the vicinity of Sewer Laterals
  - CGA Best Practices
  - Look ahead and behind with sewer cameras
  - Sewer Camera Equipment and the benefits of seeing what’s in the ground
  - Live demo of Sewer Camera Equipment

- **Learning Objective(s):**
  - Understand Sewer Locating Practices
  - Evaluate Best Installation Practices
  - Obtain hands on demonstrations of technology

- **Target Audience(s):** Technicians
- **Speaker/Instructor(s):** Keith Plemons & Hans Hoffman, Southeast Connections

Session 31: Meter Instrumentation & New Technologies

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** This course is designed to teach the basics of electronic correctors and pressure recorders for all experience and expertise levels. Best practices for troubleshooting will be combined with learning and understanding new technologies entering this sector of the marketplace. With natural gas systems of all sizes using instrumentation to accurately measure and record data, this course will provide
additional information and useful insight for all attendees. For the more advanced attendees, this presentation will take you through the best practices that should be followed to safely deploy cellular based devices out in the field and through some of the latest trends that mobile technologies enable and how they can be applied to the gas industries.

- **Learning Objective(s):**
  o Troubleshoot a corrector.
  o Understand what the latest cellular technologies bring to the Gas Distribution market and how to take advantage of the latest cellular radio technologies.

- **Target Audience(s):**
  o Field Operations
  o Engineers

- **Speaker/Instructor(s):** Kasey Howe, Honeywell Mercury Instruments

### Session 32: Advanced CP/Corrosion

*Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.*

- **Description:** This course will highlight the innovative ways gas utilities are utilizing GIS to capture data, meet regulatory requirements, analyze and model their systems, and conduct daily operations more efficiently. Member systems will present on how they've implemented GIS into their utilities, ESRI will provide information on upcoming changes and applications to the gas industry, and vendors will present on creative ways to utilize GIS to improve data capture and analysis. This session will end with a roundtable discussion for attendees to share their experiences and ask questions.
  o Tools of the trade
    ▪ CIS/DCVG, the workhorses of the trade
    ▪ Pipeline current mapping
    ▪ ACVG
    ▪ Dataloggers
  o Interpreting the data
  o Data alignment
  o Interference
    ▪ Dynamic
    ▪ Static
      • DC
      • AC
  o AC modeling versus AC screening
  o Cathodic Protection implications of the notification of proposed rule-making (NPRM) that is expected to become law in 2019

- **Learning Objective(s):** This class is intended to share some common lessons learned by individuals or companies who perform indirect surveys, as well as various applications used in the field. It will also cover common patterns in the data and how to interpret them. The class will discuss the distinction between AC modeling and a newly proposed method of AC screening as it relates to identifying areas of AC corrosion. Finally, the class will end with a discussion of the new proposed rules expected to be released in 2019 as they relate to cathodic protection.

- **Target Audience(s):** The target class attendee is one who is a level 1 or 2 NACE CP technician or an engineer or manager responsible for integrity management or cathodic protection systems.

- **Speaker/Instructor(s):** Randy Hodge, Structural Integrity Associates
Session 33: GIS Best Practices

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** This course will highlight the innovative ways gas utilities are utilizing GIS to capture data, meet regulatory requirements, analyze and model their systems, and conduct daily operations more efficiently. Member systems will present on how they’ve implemented GIS into their utilities, ESRI will provide information on upcoming changes and applications to the gas industry, and vendors will present on creative ways to utilize GIS to improve data capture and analysis. This session will end with a roundtable discussion for attendees to share their experiences and ask questions.

- **Learning Objective(s):**
  - Understand GIS systems and how companies adopted the programs
  - Evaluate ways to capture data
  - Review the market of products and GIS systems

- **Target Audience:** Associates at all levels of the Organization will benefit.

- **Speaker/Instructor(s):** Bradley Walters, Gas City of Rocky Mount Energy Resource Department

Session 34: Inline Inspection Overview

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** Agenda topics will include, but are not limited to:
  - Solutions for Unpigable Gas Pipelines
    - Low friction ILI tools for low pressure gas pipelines
    - Multi-diameter ILI tools for low pressure gas pipelines
    - Self-propelled inspection technology for casing and lateral inspections
    - Wireline services for single access inspections
  - The Basics of Dent Strain and Bending Strain
    - IMU Background
    - How Is Bending Strain Calculated
    - How Should you Interpret Bending Strain
    - How Can you Act on Bending Strain
    - Dent Strain Background
    - Regulatory Limits
    - How is Dent Strain Calculated
    - ASME B31.8 Updates

- **Learning Objective(s):**
  - Understand inspection types for difficult to pig pipelines
  - Understanding data that can be collected from inline inspection
  - Evaluating dent and bending strains using ILI technology and what to do with the data

- **Target Audience:**
  - Engineering, Project Management, Transmission Integrity Management

- **Speaker/Instructors:**
  - Rhett Dotson – Rosen USA
  - Stefan Vages – Rosen USA

Session 35: Service Restoration after a Mass Outage

Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.

- **Description:** This session will cover key concepts related to Service Restoration after a Mass Outage and Appliance Basics.

- **Topics include:**
- From a Leadership Perspective: The session will cover key elements in the management of a mass outage: Managing the Repair, the Employees and the Relights. Best practices from Atlanta Gas Light’s Mass Outage Process will be shared, as well as lessons learned from working previous Mass Outages.
- From a Field Service Technician Perspective: The session will walk participants through general processes and procedures from start to finish and provide minor natural gas appliance repair and functionality.

**Learning Objective(s):**
- Understand how to manage a mass outage
- Evaluate processes and procedures to select the best path forward

**Target Audience(s):**
- Managers
- Technicians

**Speaker/Instructor(s):** Ken Born, Atlanta Gas Light, & Milferd Brock Sr., Duke Energy

---

**Session 36: Inside Leak Investigation**

*Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.*

- **Description:** This session will cover key concepts related to Inside Leak Investigation and Appliance Basics from the perspective of the field service technician.
  - **Topics Include:** General leak investigation procedures inside the customer’s home or business to ensure personal and public safety as a priority. Various aspects of locating/pin-pointing gas leaks will be reviewed with an emphasis on inside leaks. The session will walk participants through general processes and procedures from start to finish and provide minor natural gas appliance repair and functionality.

**Learning Objective(s):**
- Understand General Leak Investigation Procedures
- Evaluate processes and procedures for Best Practices
- Determine approach for minor appliance repairs

**Target Audience(s):** Technicians

**Speaker/Instructor(s):** Brian Johnson & Milferd Brock, Sr., Duke Energy

---

**Session 37: Advanced Locating**

*Tuesday, March 19 | 1:00 p.m. – 4:30 p.m.*

- **Description:** This Hands-on Field Training course will be taught off site at SCE&G’s Training Facility in Columbia, SC. This course is for technicians looking to gain advanced hands-on locating knowledge and practices from instructors having 30+ Years of combined locating experience. There is prerequisite experience for the course: Minimum 3 years of experience with Utility Locating. Attendees are required to bring their own Locating Equipment.

**Learning Objective(s):**
- Learn the Types of Equipment (Attendees are required to bring their own locating equipment)
- Review Basic Locating Principles
- Explore Best Practices
- Learn Ground Penetrating Radar (GPR)
  - Hands-On Practice

**Target Audience(s):** Utility Locators

**Speaker/Instructor(s):** Will Prescott & Cody Adams, Greenville Utilities Commission
Session 38: Skill Performance Evaluation Workshop

Wednesday, March 20 | 8:00 a.m. – 2:30 p.m.

- **Description:** The workshop allows participants to discover the principles of effective evaluation through analysis of seven typical case studies. Each case study reviews the evaluator and employee relationship during an evaluation and addresses the assessment of an employee technical skills. The assessment techniques taught helps prepare the evaluator to perform an OSHA Safety, Operator Qualification, or Technical Training Skill evaluation.

- **Learning Objectives:**
  - Prepare for and perform an evaluation
  - Observe the performance of technical tasks consistently and objectively
  - Appropriately use questions to aid in evaluation of competence
  - Recognize and avoid barriers to effective observation and evaluation
  - Evaluate acceptable task competence
  - Document an evaluation

- **Target Audience:**
  - Evaluate and sign off skill performance of others: operator qualification; OSHA Safety evaluators; skill base pay; promotions; skill attainment.
  - Coach and/or mentor of skill performance employees.

- **Speaker/Instructor(s):** Tom Pendleton, PenEdu Learning, LLC

Session 39: Measurement & Instrumentation Advanced

Wednesday, March 20 | 8:00 a.m. – 11:30 a.m.

- **Description:** In Gas industry Supervisory Control and Data Acquisition (SCADA) plays an important role in remote monitoring and control of system. The main role of SCADA system is to provide important measurement/control information timely, accurately and reliable. In this course, we will clarify the definition of “SCADA”, as many interpretations exist today. Discussion will include relationships and differences between PLC, RTU, HMI, and MMI; block diagrams of typical SCADA solutions; typical remote monitoring/control; communication schemes and protocols; standards; supervisory computer platforms and features; enabling technologies; and, the future.

- **Learning Objective(s):**
  - What is SCADA system?
  - Measurement/control signals - analog, discrete, pneumatic.
  - Primary field measurement/control instruments.
  - The function and differences between an RTU, PLC, flow computer, volume corrector, and pressure recorder.
  - Communication Technologized used in the SCADA systems
  - SCADA Software components.
  - Emerging technologies for SCADA system.

- **Target Audience(s):**
  - Filed Operations
  - Engineers

- **Speaker/Instructor(s):** Tushar Shah, Eagle Research Corporation
Session 40: Horizontal Directional Drilling

Wednesday, March 20 | 8:00 a.m. – 11:30 a.m.

- **Description:** Over the past 30 years, Horizontal Directional Drilling (HDD) has become the standard construction method for oil and gas pipelines, water, power and telecommunications installations under roadways, waterways, archaeological sites, and environmentally sensitive areas. In this course, we will discuss the various applications and stages of an HDD crossing, with a specific emphasis on HDD tooling and drilling fluids. We will also highlight the increasingly popular method of intersect drills and present a case study covering the full lifecycle of an HDD project.

- **Learning Objective(s):**
  - Understand the HDD process
  - Identify the challenges associated with HDD installations
  - Have a working knowledge of the different planning methods
  - Determine the appropriate size rig and their respective setup tolerances
  - List the different types of drill bits, reamers, and additional tooling used in HDDs
  - Discuss advances in drilling fluid technology.
  - Understand the accuracy and application of various tracking methods
  - Explain what an intersect drill is and when it is applicable

- **Target Audience(s):** Field Operations personnel, Engineers, Other Industry Professionals seeking a better understanding of the HDD Industry and HDD process

- **Speaker/Instructor(s):** Robert McCravy & Jay Murphey, Delta Directional Drilling

Session 41: Electro-Fusion: Challenges and Best Practices

Wednesday, March 20 | 8:00 a.m. – 11:30 a.m.

- **Description:** This session will offer a discussion and open dialogue about all of the procedures of electro-fusion.

- **Learning Objective(s):**
  - Prepare Pipes and Fittings
  - Understand Electro-fusion Unit Functions and Capabilities
  - Understand Power Requirements and Sources
  - Differentiate Manual and Mechanical Scrapers
  - Learn to Troubleshoot

- **Target Audience(s):** Operators

- **Speaker/Instructor(s):** Greg Putman, Ipex Inc., Tony Spivey, Kerotest Mfg., Charlie Woolley, Kerotest Mfg., Garland Isaacs, GF Central Plastics, & Dan Knight, GF Central Plastics

Session 42: Project Management for Engineers

Wednesday, March 20 | 8:00 a.m. – 11:30 a.m.

- **Description:** Solutions for opportunities or threats eventually produce a unique product or service that can be thought of in the context of a Program or Project. In order to bring the most effective and efficient solution for these, individuals, and companies, apply scaled practices and methodologies for managing the effort. Project practices and methods vary widely in technique, rigor, description and label. But, they all have one thing in common; the desire for successful solution delivery either through a new product or resolution of long-standing issues. This course is designed to provide a tour of three techniques of project management and a review of six central themes that can be applied regardless of methodology or technique chosen to manage the solution

- **Learning Objective(s):**
Session 43: Natural Disasters: Are you prepared?

Wednesday, March 20 | 8:00 a.m. – 11:30 a.m.

- Description: This session will be structured with short presentations on various company approaches to natural disasters with the opportunity for the audience to ask questions of each speaker.
  - Topics include: Is your company prepared when disaster strikes? Hurricanes, Floods and Wildfires are just a few of the natural disasters that have plagued the natural gas industry over the past few years hitting us all close to “home.” This course will review processes, best practices and lessons learned from their response efforts when disaster affected normal operations in their service territories.
    - Sevier County Utility District- Response to November 2016 Wildfires
    - CenterPoint Energy- Response to Flooding from Hurricane Harvey August 2017
    - TECO Energy- Response to Hurricane Michael October 2018

- Learning Objective(s): Determine Best Practices for Natural Disasters
- Target Audience(s): Associates at all levels of the Organization will benefit.
- Speaker/Instruction(s): Michelle Wisz, Southern Company Gas, David Hawkes, Southern Company Gas, Jerry Gann, CenterPoint Energy, Chris Barrington, TECO Peoples Gas, & Matt Ballard, SCUD