

# IN-HOUSE TRAINING CATALOG

Convenient  
Cost-Effective  
Customized

AMERICAN  
**PUBLIC  
POWER**  
ASSOCIATION™  
ACADEMY

# In-House Training

If it's difficult for your staff and governing board to attend education courses outside of the office, let us come to you! The Association's Academy can deliver the training you need, when and where you need it—an ideal option for groups of eight or more. We can bring any existing course to your facility or customize an agenda based on your needs.

## Fees

**Base fee + Instructor travel expenses  
= Total cost of in-house training**

### Base fee

Starts at \$4,500 per teaching day (covers course development, instruction, materials and shipping expenses)

### Travel expenses

Costs include: coach airfare, lodging, meals, incidentals, ground transportation

### Onsite Expenses

The host organization is also responsible for securing a training room and covering all on-site expenses (e.g., AV equipment, refreshments, etc.).

Most classes have a base fee of \$4,500 per teaching day, though that fee may fluctuate based on the instructor's fee structure and in cases where there's a significant level of customization.

## Benefits of In-house Training

There are many advantages to holding an Academy in-house training program, including:

### Cost and time savings

Minimize employee out-of-office time and travel expenses.

### Customized training

Choose from our catalog of courses, mix and match agenda items, or tailor course content to meet your specific goals.

### Expert instructors

Learn from seasoned trainers who have decades of experience with public power utilities.

### Continuing education credits

Meet staff's yearly training goals and certification requirements by earning continuing education units (CEUs), professional development hours (PDHs), continuing professional education credits (CPEs), and earn points towards the Reliable Public Power Provider (RP3) designation.

### Foster teamwork

Encourage a collegial work environment through a team approach to learning that reaches for common goals and sets organizational direction.

### Staff development and retention

Providing practical, targeted training shows staff that you care about their development and helps employees realize their importance within the organization.

## Current Course List

Course descriptions, sample agendas, learning outcomes, and speaker bios are available upon request. Content can be modified to fit your needs and schedule.

### Course Topics

Offering training for all skill levels—basic, intermediate and advanced—in key utility operational areas including:

- Accounting
- Cost of Service and Rate Design
- Customer Service
- Distributed Energy Resources
- Electric Utility 101
- Energy Efficiency
- Governance and Strategic Planning
- Financial Planning
- Key Accounts
- Leadership
- Safety and Disaster Planning
- Technical Training
- Certification Programs
- Custom topics available on request

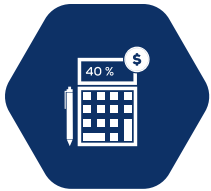
## More Information

Contact [EducationInfo@PublicPower.org](mailto:EducationInfo@PublicPower.org) or 202/467-2921.

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# Accounting

## Public Utility Accounting

### Work Order and Asset Management Accounting

### Advanced Public Utility Accounting

## Public Utility Accounting

### Length

2 days

### Accreditation

Recommended CEUs 1.3/PDHs 13/CPEs 15

Field of Study: Accounting

### Course Overview

This course highlights the development of a utility accounting system that is compatible with Federal Energy Regulatory Commission (FERC) guidelines. It examines accounting theory, the role of accounting in public utilities, FERC accounting procedures, the uniform systems of accounts, and utility accounting subsystems.

### Course Topics

- Accounting for operating revenues and expenses
- Introduction to utility property and plant accounting
- Introduction to FERC uniform system of accounts
- Applicability of generally accepted accounting principles to public utilities
- Financial statement structure and presentation
- Capital vs. expense determination
- Allocation of indirect or common costs
- Accounting for unbundled services

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for those who are new to public utility accounting practices or unfamiliar with the FERC accounting structure.

### Instructor

**Jerry McKenzie**, Senior Associate, MGT of America, Inc.,  
Maize, Kansas

## Work Order and Asset Management Accounting

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Accounting

### Course Overview

Utility construction is one of the major activities at your utility and has a significant impact on developing equitable rates for your customers. This interactive course covers basic and intermediate utility work asset management accounting concepts and applications. Work through the necessary steps to report utility construction costs and differentiate between capital construction and maintenance costs. Learn about practical industry processes, through real-world utility examples of accounting for utility construction costs.

### Course Topics

- Work order and asset management processes and the importance of accurate plant accounting and reporting
- Accounting for utility construction and impacts on customer rates
- Accounting standards that apply to work order accounting
- Using construction standards and compatible units
- Evaluating construction accounting business processes
- Methods of allocating overhead costs
- Unitizing construction costs and closing work orders
- Developing capital budgets and capital retirement accounting
- Software selection and implementation considerations
- Process improvement and personnel training
- Developing informative reporting to help implement strategy
- Overcoming organizational barriers

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for utility accounting, finance and operations personnel who are part of the work order process.

### Instructor

**Russ Hissom, CPA, CIA, CISA,** Partner, Energy and Utilities Group, Baker Tilly Virchow Krause, Madison, Wisconsin

## Advanced Public Utility Accounting

### Length

2 days

### Accreditation

Recommended CEUs 1.3/PDHs 13/CPEs 15

Field of Study: Accounting

### Course Overview

Most of the crucial decisions that electric utilities make require financial information. Utility accounting staff must understand how accounting principles and practices impact financial reporting to internal and external stakeholders. This course examines complicated aspects of accounting theory and practice to inform planning and decision-making by management.

### Course Topics

- Using regulatory accounting to mitigate ratepayer and financial reporting impacts
- Presentation of financial statements
- Using benchmarking and key performance indicators
- Strategies to maintain or improve your utility's bond rating
- Capital structure and its importance in utility strategic planning
- Utility debt options
- Establishing strong internal controls to efficiently allocate resources and deter fraud
- Governmental accounting pronouncements update
- Accounting for contingencies, capitalized interest, asset impairments and asset retirement obligations
- Update on implementing the new GASB Pension Standard

### Course Level

**Intermediate/Advanced.** Recommended as a follow up to the Public Utility Accounting course.

### Who Should Attend

Designed for accounting and finance personnel with a basic knowledge of utility accounting theory and practice.

### Instructors

**Russ Hissom, CPA, CIA, CISA,** Partner or **Bethany Ryers, CPA,** Senior Manager

Both with the Energy and Utilities Group at Baker Tilly Virchow Krause, Madison, Wisconsin



# Cost of Service & Rate Design

## Basic Cost of Service: Concepts and Rate Planning

## Intermediate Cost of Service: Implementation and Best Practices

## Advanced Cost of Service: Rate Trends and Distributed Generation Impacts

## Basic Cost of Service: Concepts and Rate Planning

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Explore the ins and outs of cost of service—from basic concepts to leveraging data for decision making. Learn how to determine revenue requirements and key financial targets and relate them to cost of service. Find out how to develop a long-term rate plan and use financial targets to determine customer rates, borrowing needs, and capital improvements.

### Course Topics

- Basic cost of service concepts, terminology, and processes
- Collect and use of cost of service data
- Determine revenue requirements using cash and utility-based approaches
- Set key financial targets related to cost of service
- Develop a cash reserve policy
- Determine rate policies and long-term rate plans
- Communicate rate changes to policymakers and customers
- Use customer rates to fund infrastructure replacements

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

General managers, finance and accounting personnel, rate analysts, financial planners, as well as policymakers.

### What to Bring

Participants are encouraged to bring a laptop to work through in-class exercises.

### Instructor

**Dawn Lund**, Vice President, Utility Financial Solutions, Leland, Michigan

## Intermediate Cost of Service: Implementation and Best Practices

### Length

2 days

### Accreditation

Recommended CEUs 1.3/PDHs 13/CPEs 15

Field of Study: Specialized Knowledge

### Course Overview

Understand how to apply cost of service and rate design principles and processes to electric, water, sewer, gas, and other municipal services. Develop a fully functional and unbundled cost of service study. Do a cost analysis deep dive and learn from real-world examples and best practices.

### Course Topics

- Identify, collect, and organize costs
- Allocate municipal facilities and expenses
- Classify generation, transmission, and distribution expenses
- Categorize generation types and primary cost components
- Collect and apply load research data
- Develop cost allocation factors
- Gauge customer voltage levels and cost allocation
- Apply cost allocation factors in a cost of service model
- Determine monthly customer facilities and billing costs
- Identify bundled and unbundled primary cost components
- Apply cost of service components to rate designs
- Understand the limitations of a traditional cost-of-service model

### Course Level

**Basic/Intermediate.** Recommended as a follow-up to APPA's Basic Cost of Service course and as a prerequisite to the Advanced Cost of Service class.

### Who Should Attend

General managers, finance and accounting personnel, rate analysts, financial planners, policymakers, and others who want to learn how the cost of service process is completed and applied.

### What to Bring

Participants are required to bring a laptop with Excel and PowerPoint, to work through in-class exercises.

### Instructors

**Mark Beauchamp, CPA, CMA, MBA,** President, Utility Financial Solutions, Holland, Michigan

**Dan Kasbohm,** Rates Manager, Utility Financial Solutions, Grand Rapids, Michigan

## Advanced Cost of Service: Rate Trends and Distributed Generation Impacts

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Review the latest industry rate trends, evaluate new rate structures, and learn how to recover fixed costs and fund infrastructure investments. Hear how other utilities are integrating distributed energy resources and restructuring rates. Gain hands-on experience by designing rates for a sample utility.

### Course Topics

- Analyze industry rate trends and future rate structures
- Determine the role of a monthly customer charge in rate design
- Develop rates that reflect utility costs, maintain financial stability, and promote energy conservation
- Develop time-of-use rate structures and real-time pricing rates
- Develop marginal cost-based price signals
- Design economic development rates
- Understand power cost adjustment mechanisms
- Determine the value of renewable generation
- Design rates that recover utility costs for rooftop solar installations
- Develop standby rates for customers installing combined heat and power generators
- Get buy-in from governing bodies and the public on rate designs

### Course Level

**Intermediate/Advanced.** Recommended as a follow-up to APPA's Basic and Intermediate Cost of Service courses.

### Who Should Attend

General managers, finance and accounting personnel, rate analysts, financial planners, policymakers, and others looking for advanced knowledge of cost of service and ratemaking processes.

### Instructor

**Mark Beauchamp, CPA, CMA, MBA,** President, Utility Financial Solutions, Holland, Michigan



# Customer Service

## Strategies for Successful Customer Service Operations

### Utility Collections: The Complete Process

### Modeling Customer Service in Your Leadership Style

### Utilizing Technology to Enhance Customer Service

### Certificate Program: Electric Utility Industry Overview + 4 classes above

### Conduct a Customer Service Check Up

## Strategies for Successful Customer Service Operations

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

In a time of unprecedented industry changes and evolving consumer expectations, a utility's most important strategic asset is its relationship with its customers. This course defines good customer service, how to identify and meet the needs of different types of customers, and how to create a culture of commitment to excellence in customer service across all areas of utility management, operations and customer interactions.

### Course Topics

- Defining good customer service
- Segmenting customers into categories and identifying their specific requirements: residential, business, commercial and industrial key accounts
- Identifying the utility's internal customers and other stakeholders and why they're important
- Managing your physical facilities to create a safe and welcoming environment
- Operating with the customers' needs in mind when determining service hours, locations, payment policies/options, web-based access to account info, etc.
- The role of utility governing officials, policymakers, and senior managers in creating a culture of customer service excellence

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Customer Service Management Certificate Program.

### Who Should Attend

This course focuses on developing a culture of excellence in customer service among all public power utility employees and governing officials. Therefore, while the course content is designed for customer service managers, supervisors, and representatives, the course will also benefit utility management, staff, and governing board representatives.

### Instructor

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado



## Utility Collections: The Complete Process

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Based on the best practices of public power utilities across the United States, this course reviews the policies and procedures that foster an efficient and effective collections process. The instructor will cover a variety of examples from across the industry and use recent Association survey information to examine industry norms and best practices.

### Course Topics

- The basics of customer service/call center operations
- What makes a good customer service operation, including fair and consistent collections policies and procedures
- Policies and procedures for setting up new accounts and security deposit requirements
- Meter reading, billing, and payment schedules
- Understanding the basics of utility service costs and ratemaking, for effective response to customer queries
- How to handle overdue accounts, including skip tracking, liens, and credit agencies
- Handling collections in-house vs. outsourcing
- Open discussion on specific issues/challenges and strategies for resolving them

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Customer Service Management Certificate Program.

### Who Should Attend

This course focuses on developing a culture of excellence in customer service among all public power utility employees and governing officials. Therefore, while the course content is designed for customer service managers, supervisors, and representatives, the course will also benefit utility management, staff, and governing board representatives.

### Instructor

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado

## Modeling Customer Service in Your Leadership Style

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Ensuring that all utility employees and governing officials subscribe to a culture of excellence in customer service requires very specific leadership skills and strategies. Identify the qualities of a good leader and learn the steps to transforming your utility culture to improve performance.

### Course Topics

- Differences between good and bad leaders, and between leaders and managers
- Leading during times of change
- Identify the leader's customers
- Fostering a culture of leadership throughout the organization
- Key activities of a customer service leader, including employee recruitment and selection, new employee orientation, ongoing training and education, performance monitoring, setting compensation and rewards, empowering employees, and gathering feedback from customers

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Customer Service Management Certificate Program.

### Who Should Attend

This course focuses on developing a culture of excellence in customer service among all public power utility employees and governing officials. Therefore, while the course content is designed for customer service managers, supervisors, and representatives, the course will also benefit utility management, staff, and governing board representatives.

### Instructors

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado or **Patricia Cruz**, Vice President of Consulting & Training, Hometown Connections, Austin, Texas

## Utilizing Technology to Enhance Customer Service

### Length

Half day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

As our industry continues to change, so does the need for new technology solutions to meet evolving customer needs. New technological advancements are providing opportunities for utilities to enhance their operations and services, including customer information systems, smart meters, integrated voice response, outage management systems, hosted and cloud-based services, and more. Customer service managers are often tasked with evaluating, purchasing and deploying these new tools and information systems to support the functions of their departments. Learn about the latest technology options (including bitcoin and blockchain), what other public power utilities around the country are using, and how to develop a technology roadmap for the future.

### Course Topics

- Assess the current technology level for customer service at your utility
- Learn about information and operational technologies impacting how the utility does business today and provides service to customers
- Review the need for an information technology roadmap
- Discuss today's workforce challenges including recruitment and retention
- Explore technology platforms for future service offerings

### Who Should Attend

This course focuses on developing a culture of excellence in customer service among all public power utility employees and governing officials. Therefore, while the course content is designed for customer service managers, supervisors, and representatives, the course will also benefit utility management, staff, and governing board representatives.

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Customer Service Management Certificate Program.

### Instructor

**Patricia Cruz**, Vice President of Consulting & Training, Hometown Connections, Austin, Texas

## Conduct a Customer Service Check Up

### Length

Half day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

Competitive rates and high reliability are not the only drivers of customer satisfaction. Well-run customer service and billing operations are critical in building strong relations with customers. This course explores the many different customer interfaces and how to identify the organization's strengths and weaknesses in customer service management, operations, and communications.

### Course Topics

Attendees receive detailed guidance on conducting internal assessments in key operational areas:

- Customer Service: business processes, staffing, technology, metrics, satisfaction
- Community Outreach: how effectively the utility communicates with its customers and community
- Governance and Strategic Planning: organizational direction of the board and implications for customer service
- Rates: options, policies, performance, clarity
- Internal Services in support of Customer Service: budgeting, human resources and payroll, IT support, purchasing

### Who Should Attend

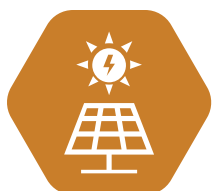
Customer service managers and supervisors, as well as other utility management and staff.

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Instructor

**Patricia Cruz**, Vice President of Consulting & Training, Hometown Connections, Austin, Texas



# Distributed Energy Resources

## Distributed Energy Resources: Strategic Rate Design and Transition Planning

Custom topics available on request

## Distributed Energy Resources: Strategic Rate Design and Transition Planning

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

The future financial health of utilities requires a balance between fairness in customer rates, integration of energy efficiency and distributed generation programs, and room for expansion of carbon-free resources. These objectives are dependent on the price signals and policies established by the utility including: 1) utility financial policies that ensure financial stability, 2) rate strategies that offer customers appropriate pricing and incentives, 3) technology to achieve these rate strategies, and 4) rate transition plans to accommodate these changes. These programs and strategies are critical to achieving community objectives, reliability of the electric infrastructure, and ultimately customer satisfaction. Review the latest industry rate trends, develop a strategic rate strategy and technology plan, and learn how to educate and communicate with the public and governing bodies on these issues.

### Course Topics

- Industry rate trends and future rate structures
- Identifying gaps between current and future rate structures
- Determining proper pricing
- Developing strategic rate strategies consistent with customer, utility, and community objectives
- Assessing technology needs to achieve new goals
- Evaluating existing billing software capabilities
- Educating utility staff, policymakers, and customers
- Developing and implementing transition strategies for new rate structures

### Who Should Attend

General managers, finance, and accounting personnel, rate analysts, financial planners, as well as policymakers.

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Instructor

**Mark Beauchamp, CPA, CMA, MBA,** President, Utility Financial Solutions, Holland, Michigan



# Electric Utility 101

## Electric Utility Industry Overview: Strategic Challenges and Trends

## Electric Utility Industry Overview: Strategic Challenges and Trends

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

This course provides a largely non-technical overview of the public power system in its broader operating and business management context. Learn about the electric utility system infrastructure from power grid to meter, its operation, performance, and development. Strategic issues and industry trends that are impacting utilities and challenging the traditional public power business model will also be discussed. Each attendee will receive a copy of APPA's Electric Utility Basics handbook.

### Course Topics

- Electric utility industry regulation and market restructuring
- Understanding the generation and regional transmission grid
- Developments in local transmission and distribution infrastructure
- Strategic issues and challenges for electric utilities
- The public power business model
- Keeping pace with utility trends and technologies

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's four certification programs (customer service, key accounts, energy efficiency and public power leadership).

### Who Should Attend

Designed for utility staff and policymakers looking for a comprehensive overview of the electric utility industry.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas



# Energy Efficiency

## Energy Efficiency: Concepts and Strategies

### Designing Efficiency Programs to Serve Your Customers

### Energy Efficiency Program Implementation, Reporting and Evaluation

### Emerging Trends and Opportunities in Energy Efficiency and Distributed Energy Resources

### Certificate Program: Electric Utility Industry Overview + 4 classes above

## Energy Efficiency: Concepts and Strategies

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Receive a comprehensive introduction to energy efficiency, load management, and energy conservation concepts, from lighting and weatherization to heating and cooling options. Learn about federal, state and municipal utility energy efficiency policies and programs. Hear about measures that help residential, commercial, and industrial customers save energy and position your utility to provide a high level of customer service and reliability. Review strategic planning tools and best practices to align your energy efficiency program goals and strategies with your utility's goals.

### Course Topics

- Defining energy efficiency, load management, conservation and associated concepts
- Common and emerging efficiency measures — lighting, heating, ventilation, air conditioning, smart thermostats, and controls
- Federal, state, and local landscape and policies driving energy efficiency
- Ways to assess energy efficiency potential
- Strategic planning approaches to use energy efficiency programs to support utility goals, such as reducing peak load, improving customer service, and promoting economic development

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Energy Efficiency Management Certificate Program.

### Who Should Attend

Staff from small, medium, and large public power utilities that want to start an energy efficiency program, already manage energy efficiency programs but want to scale them up, are interested in various aspects of energy efficiency, or want to earn a professional credential.

### Instructor

**Rebecca Foster**, Director, Vermont Energy Investment Corporation, Burlington, Vermont

## Designing Efficiency Programs to Serve Your Customers

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Learn how to design an energy program that achieves your utility's strategic goals while serving your customer base. Integrate Design Thinking exercises and other program planning tools to generate ideas and insights to inform program design. Effectively engage your customers with behavioral and marketing strategies.

### Course Topics

- Market assessment — identifying customer barriers and motivations and using market research techniques to inform program design
- Program design — selecting a program approach to match utility and customer goals and resources to overcome customer barriers
- Cost-effective programs for different customer classes — prescriptive and custom rebates, upstream programs, financing, etc.
- Design Thinking exercises to generate ideas and insights to inform program design
- Behavioral science insights and marketing techniques to effectively engage customers

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Energy Efficiency Management Certificate Program.

### Who Should Attend

Staff from small, medium, and large public power utilities that want to start an energy efficiency program, already manage energy efficiency programs but want to scale them up, are interested in various aspects of energy efficiency, or want to earn a professional credential.

### Instructor

**Elizabeth Palchak**, Consultant, Vermont Energy Investment Corporation, Burlington, Vermont

## Energy Efficiency Program Implementation, Reporting and Evaluation

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Create an implementation plan for successful program execution. Gain tools and techniques to track and evaluate energy savings and cost-effectiveness. Create a right-size data tracking plan that fits your utility's needs, based on goals, reporting requirements, budget, and staff availability.

### Course Topics

- Program implementation — developing a plan that includes all aspects of program delivery, including goal-setting, incentives, marketing, and outreach
- Tools, resources, and templates to support program planning, reporting, and budgeting
- Techniques to measure energy and demand savings, participation and cost-effectiveness
- Evaluation, measurement and verification (EM&V) approaches to evaluate program results, including process evaluation, impact evaluation, and savings verification
- Right-sizing your data tracking and reporting system based on utility goals and resources

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Energy Efficiency Management Certificate Program.

### Who Should Attend

Staff from small, medium, and large public power utilities that want to start an energy efficiency program, already manage energy efficiency programs but want to scale them up, are interested in various aspects of energy efficiency, or want to earn a professional credential.

### Instructor

**Carol Weston**, Director, Programs and Implementation, Vermont Energy Investment Corporation, Burlington, Vermont

## Emerging Trends and Opportunities in Energy Efficiency and Distributed Energy Resources

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Learn about industry trends in energy efficiency, including the rapid transformation of the lighting market and the rise of connected devices. Learn the benefits of distributed energy resources (DER) and key opportunities for municipal utilities to improve customer service, increase reliability and reduce costs through a range of DER activities.

### Course Topics

- Impact of rapid market transformation on energy efficiency programs and savings opportunities
- Capturing behavioral and operational savings through connected devices
- Latest trends in real-time EM&V and measuring savings at the meter
- Demand reduction and load management opportunities through energy efficiency, demand response, battery storage, and electric vehicles
- Integrating DERs into utility and power system planning

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Energy Efficiency Management Certificate Program.

### Who Should Attend

Staff from small, medium, and large public power utilities that want to start an energy efficiency program, already manage energy efficiency programs but want to scale them up, are interested in various aspects of energy efficiency, or want to earn a professional credential.

### Instructor

**Damon Lane**, Lead Analyst, Vermont Energy Investment Corporation, Burlington, Vermont



# Financial Planning

## Performing a Utility Financial Check-Up

### Performing a Utility Financial Check-Up

#### Length

1 day

#### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

#### Course Overview

Assess your utility's financial health and find out how to set and achieve key financial targets—cash requirements, rate of return, debt coverage ratio, age of system, capital re-investment, debt policies, transfers to the city, rate structures for revenue stability, accounting and budgeting practices. Review best practices for capital planning and debt issuance. Get practical insights from examples of other utilities across the country on using key targets to improve or maintain your utility long-term financial health. Understand the short and long-term implications of financial decisions. Learn how to communicate utility financial performance and rate changes to governing bodies and customers.

#### Course Topics

- Monitoring a utility's financial health
- Setting proper revenue requirements
- What should be reported to management and governing bodies
- Key financial targets and indicators to guide strategic decision making
- Identifying rate structure risk and methods to minimize and control risk
- Social, environmental, and political risks to consider when establishing financial policies
- Determining cost drivers and allocations
- Proper capital planning
- Monitoring, exposure, and methods to control the utility's revenue stability
- Timing of rate structure reviews
- Communicating utility financial performance and rate changes to policymakers and customers

#### Course Level

**Basic.** No prerequisites; no advance preparation.

#### Who Should Attend

General managers, finance and accounting personnel, rate analysts, financial planners, as well as policymakers.

#### Instructor

**Dawn Lund**, Vice President, Utility Financial Solutions, Leland, Michigan





# Governance & Strategic Planning

## Conduct a Governance Check-Up

### Governance Workshop: Sustaining Public Power's Value through Effective Governance

### Understand the Value of Long-Term Strategic Planning

### Strategic Planning: A Step-by-Step Approach

2-hour sessions also available  
on the topics listed above

## Conduct a Governance Check-Up

### Length

Half day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

To be effective, today's public power governing boards and city council members should maintain a clear understanding of complex issues, including new federal regulations, emerging technologies, volatile wholesale energy markets, state and local government budget pressures, and the need to attract younger workers with the right skill sets. They also need to understand their roles and responsibilities as stewards of the electric utility. Through this course, public power governing officials will learn how to assess the effectiveness of the utility's policy-making, strategic focus, communications, and oversight of utility operations and customer service. Receive a brief overview of industry conditions and then learn how to work with, and guide, the utility staff through the governance check-up process.

### Course Topics

- How to develop and sustain an environment of trust and involvement between the governing body and utility staff to allow the utility to accomplish its strategic plan
- Understanding of roles for the governing body and staff
- Providing policy and strategic direction for utility operations
- Ensuring good communications and working relationship between utility and city officials
- Monitoring utility performance
- Board's role in identifying and advocating for the needs of customers
- Board's role in establishing comprehensive cybersecurity program

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power policymakers, utility managers, and others involved in strategic planning activities. This course is often paired with elements of the Governance Workshop: Sustaining Public Power's Value through Effective Governance course, to provide a full day of training.

### Instructor

**Tim Blodgett**, President & CEO, Hometown Connections, Golden, Colorado

## Governance Workshop: Sustaining Public Power's Value through Effective Governance

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Protecting the many benefits of living and working in a public power community requires excellence in utility governance. Yet, most citizens serving in governance roles come to the board, commission, or city council without utility or governance experience. This workshop provides detailed training on understanding and communicating the value of public power, strategies for successful board operations, the duties and legal obligations of governing officials, and techniques for providing effective oversight, direction, and support to utility management.

### Course Topics

#### Communicate the Public Power Advantage

- Understanding the public power business model
- Strategic roadmap for success
- Capturing and communicating your utility's value

#### Understand Board Roles and Responsibilities

- Characteristics of high performing governing boards
- Duties, roles, and responsibilities of utility boards
- Assuring effective communication and board-management relations
- Anatomy of a successful board meeting

#### Know Your Statutory and Fiduciary Duties

- Understanding board/management policy responsibilities
- Complying with statutory and fiduciary duties
- Ensure duty of care, establish duty of loyalty and maintain duty of obedience
- Representing the interests of, and communicating with, customers and other stakeholders

### Measure and Improve Performance

- Managing the CEO: hiring, firing, and performance evaluation/management
- Evaluating governing board performance: what and how to measure
- Utility performance: identifying key performance areas, indicators, and metrics
- Methods for measuring utility performance and communicating performance to stakeholders

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for newly elected or appointed policymakers, though experienced policy officials will also benefit. Utility managers are encouraged to attend with their commissioners, utility board or council members.

### Instructors

**Tim Blodgett**, President & CEO, Hometown Connections, Denver, Colorado

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado

## Understand the Value of Long-Term Strategic Planning

### Length

Half day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

New federal regulations, evolving technologies, volatile wholesale energy markets, budget pressures, workforce issues, and rising customer expectations mean the status quo is no longer good enough. Today's environment demands that public power utilities give careful consideration of the roles that they play and the value they bring to their customers and their communities. Among the most important aspects of utility governance are identifying the organizational priorities and setting the utility's strategic direction, usually through a strategic-planning process. This course explores the values that must be present in strategic planning in a public organization, outlines one process for utility strategic planning, and the governing board's role in that process.

### Course Topics

- What does a good strategic planning process include? Who should participate?
- Governing board's role and the importance of engagement
- Capturing the voice of the customer
- Translating community/customer values, concerns and priorities into strategic objectives

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power policymakers, utility managers, and others involved in strategic planning activities. This course is often paired with Strategic Planning: A Step-by-Step Approach, to provide a full day of training.

### Instructor

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado

## Strategic Planning: A Step-by-Step Approach

### Length

Half day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

This is not your father's electric industry; significant change is not only coming, it's here. Public power has a decision to make: will it stay the course and continue doing what it's always done? Or will it take a hard look at how it can and should serve its communities? Review the nuts and bolts of a strategic planning process and how your utility can navigate the industry's uncertain future, brought on by new technologies, power sources, competitors and changing customer expectations. Walk through what a strategic planning process for public power can look like and how a utility can take control of its future.

Learn how to design and implement a successful strategic plan for a public power electric utility, state association, or joint action agency. Review a process to identify operational strengths and weaknesses, build organizational consensus and create alignment around key utility and community priorities.

### Course Topics

- Facilitating the development of a strategic plan with (and getting buy-in from) organization staff and governing officials
- Communicating the goals of the plan within the organization and to the community
- Tracking the deployment of the plan elements and measuring their effectiveness
- Create a step-by-step blueprint for adapting to utility market conditions, regulatory changes, and the evolving expectations of customers

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power policymakers, utility managers, and others involved in strategic planning activities. This course is often paired with Understand the Value of Long-Term Strategic Planning, to provide a full day of training.

### Instructor

**Steve VanderMeer**, Senior Vice President, Hometown Connections, Fort Collins, Colorado



# Key Accounts

## Implementing a Customer-Focused Key Accounts Program

### Developing Your Key Accounts Representative

### The Effective Key Accounts Toolbox

### Certificate Program: Electric Utility Industry Overview + 3 classes above

## Implementing a Customer-Focused Key Accounts Program

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

The electric industry is in constant flux and changes are causing many large commercial and industrial customers to modify their operations. Public power utilities need to stay ahead of these decisions and position themselves as customized service providers for key account customers.

Discover how to engage key accounts customers and build programs around their needs, while focusing on the strategic needs of the utility. Learn how to build and implement a successful key accounts program—develop a clear and concise plan of action, assure adequate resources, get leadership and business community support, and procure commitment to maintaining and growing the program.

### Course Topics

- Identify key accounts and their value to the utility
- Determine financial, budget and resource requirements
- Conduct customer research to determine needs and expectations
- Obtain buy-in from management, colleagues, and the business community
- Develop measurable program goals
- Launch a key accounts program
- Apply the four phases of key accounts program development
- Revitalize an existing key accounts program

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Key Accounts Certificate Program.

### Who Should Attend

Designed for public power key account managers and representatives. Other utility staff involved in key accounts, or those looking for professional development credentials, will also benefit.

### Instructor

**Erick Rheam**, Vice President, Automated Energy, Bloomington, Indiana

## Developing Your Key Accounts Representative

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Simply having a key accounts program does not ensure success. As customers become more sophisticated, trained account executives offer the utility a competitive advantage in managing and retaining key accounts. Learn essential account management and customer relationship skills.

### Course Topics

- Identify the characteristics of a successful key accounts representative
- Assemble an effective key accounts team
- Create strong relationships between key account staff and customers
- Establish account-specific goals and strategies
- Develop an action plan to meet with customers and solve operational issues
- Lead an effective on-site customer meeting
- Review communications and follow-up
- Get tips and techniques for focus and organization

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Key Accounts Certificate Program.

### Who Should Attend

Designed for public power key account managers and representatives. Other utility staff involved in key accounts, or those looking for professional development credentials, will also benefit.

### Instructor

**Erick Rheam**, Vice President, Automated Energy, Bloomington, Indiana

## The Effective Key Accounts Toolbox

### Length

1.5 days

### Accreditation

Recommended CEUs 1/PDHs 10.25/CPEs 12.2

Field of Study: Specialized Knowledge

### Course Overview

As public power utilities face increasing competition, it is important to leverage every resource to obtain a competitive advantage. Key account staff must understand the challenges business customers are facing and partner to develop solutions and strategies. Learn about resources and tools you can use to build relationships, provide customized services, and add value for your key accounts.

Complete the post-course exam and work through a template to start building your customer action plan. Bring information on one key account — contact and business information and relevant contact history — to include in your customer action plan.

### Course Topics

- Determine where you stand with the customer
- Use customer relationship management tools and surveys to measure and enhance relationships
- Facilitate a key accounts annual meeting
- Leverage the power of customer advocacy
- Evaluate the latest key accounts programs and tools
- Work with other utility departments and associations, power suppliers, and joint action agencies
- Develop and review your own customer action plan

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Key Accounts Certificate Program.

### Who Should Attend

Designed for public power key account managers and representatives. Other utility staff involved in key accounts, or those looking for professional development credentials, will also benefit.

### Instructor

**Erick Rheam**, Vice President, Automated Energy, Bloomington, Indiana



# Leadership

## Financial Planning, Management and Budgeting: What Managers Need to Know

### Strategic Leadership for Public Power

### Certificate Program: Electric Utility Industry Overview + 2 classes above

## Financial Planning, Management and Budgeting: What Managers Need to Know

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

A critical aspect allowing managers to complete projects and programs is the ability to fund system improvements with a limited impact on customers and elected officials. This program gives managers insight and understanding on financial management, budgeting techniques, long-term financial planning methods and an understanding of the various forms of electric rates. The course also addresses how to convey these methods to utility policymakers.

### Course Topics

- Bond rating agencies
- Determining revenue requirements
- Contributions to city governments
- Financial targets
- Developing a long-term financial plan
- Cost of service studies and information
- Electric rate designs and significant factors affecting rates

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Public Power Manager Certificate Program.

### Who Should Attend

Designed for mid-level public power managers and supervisors interested in improving their management, communications, leadership knowledge and skills. New senior managers, and those with experience, who wish to refresh or enhance their knowledge and skills by participating in a highly interactive program that has been developed specifically for public power, will also benefit from this course.

### Instructor

**Mark Beauchamp, CPA, CMA, MBA,** President, Utility Financial Solutions, Holland, Michigan

## Strategic Leadership for Public Power

### Length

3 days

### Accreditation

Recommended CEUs 2/PDHs 20/CPEs 22.5

Field of Study: Specialized Knowledge

### Course Overview

This course will provide participants with an in-depth perspective on public power leadership by focusing on the development of the individual leader and the leader's role in guiding and developing their organization and its workforce. Participants will use the DiSC Work of Leaders profile as a source of personal information that will be used during the course to increase awareness of their predominant leadership style and its impact on others. Each of the following dimensions of leadership will be presented in separate course modules of approximately three hours each: awareness, character, community, empowerment, service, sustainability.

### Course Topics

#### Module One: Awareness

- Setting purpose
- Seeing and influencing organizational realities
- Recognizing and managing larger system influences

#### Module Two: Character

- Driving values
- Meeting expectations for ethical behavior
- Developing yourself

#### Module Three: Community

- Building relationships
- Moving beyond differences
- Communicating effectively

#### Module Four: Empowerment

- Sharing power
- Empowering teams and groups
- Developing people for the future

#### Module Five: Service

- Serving customers
- Understanding constituents
- Driving performance and accountability

#### Module Six: Sustainability

- Setting a vision for the future
- Fostering innovation
- Leading change

### Course Level

**Basic.** No prerequisites; no advance preparation. This course is a requirement for the Association's Public Power Manager Certificate Program.

### Who Should Attend

Designed for mid-level public power managers and supervisors interested in improving their management, communications, leadership knowledge and skills. New senior managers, and those with experience, who wish to refresh or enhance their knowledge and skills by participating in a highly interactive program that has been developed specifically for public power, will also benefit from this course.

### Instructors

**Betsy Aylin, Ph.D.**, Executive Consultant, Collaborative Learning, Inc., Austin, Texas

**R. John Miner, P.E.**, President, Collaborative Learning, Inc., Austin, Texas



# Safety & Disaster Planning

**2017 American Public Power Association Safety Manual**

**Accident Investigation and Near Miss Reporting**

**Best Practices in Mutual Aid and Disaster Planning**

**FEMA Basics for Public Power**

**Overview and Practical Applications of the 2017 National Electrical Safety Code**

## The 2017 American Public Power Association Safety Manual

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Get up to speed with safety best practices with the 2017 American Public Power Association's Safety Manual (16th edition). The new edition of the manual has been expanded to include OSHA and other federal and industry standards. It features revisions to definitions and general rules, health and environmental control, chemical and physical hazard control, personal protective equipment, and electric utility operations. Interpret the new rules and understand how they apply to your utility. Benefit from a deep dive into changes in the electric utility operations section and overhead T&D topics such as working near exposed and de-energized lines, pole work, grounding, and more. All attendees will receive a copy of the 2017 Safety Manual.

### Course Topics

- APPA Safety Manual application, organization and purpose
- Significant revisions contained in the 2017 edition including all new OSHA regulations
- Rule intents and interpretations; rule interpretation questions and issues contributed by course participants
- In-depth review of Overhead Distribution and Transmission (Section 507). This section includes topics such as:
  - Working on or Near Exposed Energy Lines and Equipment
  - Climbing and Working on Poles
  - Working on Energized Lines Barehanded and with Live-Line Tool
  - Working on De-Energized Lines and Equipment
  - Grounding
  - Hazardous Energy Control

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Managers, safety professionals, electric utility engineers, designers, technicians, field personnel and utility staff who are responsible for or who make decisions concerning safety within transmission and distribution systems.

### Instructor

**Mike Willetts**, Director of Training and Safety, Minnesota Municipal Utilities Association, Marshall, Minnesota



## Accident Investigation and Near Miss Reporting

### Length

Half-day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

Conducting accident investigations and developing a platform for reporting and recording near misses are critical practices that can prevent future incidents from unsafe behavior or conditions. This course will highlight the important role of near-miss reporting in the culture of safety at a utility; developing a positive platform for reporting and recording near misses to prevent them from escalating to lost-time incidents; conducting accident investigations with emphasis on root cause analysis; and how to use this information to prevent future incidents. The instructor will discuss step-by-step reporting methods for near misses and how to educate employees on the importance of training documentation. Participants will also work through practical group exercises, using utility case studies, to learn how to investigate and perform a root cause analysis.

### Course Topics

- Goals of accident investigation and prevention
- Value of reporting and recording near misses
- Importance of maintaining training records
- Accident prevention through education
- Performing an accident investigation
- Root cause analysis methods
- Real-life case study exercises

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Managers, safety professionals, electric utility engineers, designers, technicians, field personnel and utility staff who are responsible for or who make decisions concerning safety within transmission and distribution systems.

### Instructor

**Marc Machacek**, Regional Safety Coordinator, Minnesota Municipal Utilities Association, Marshall, Minnesota

## Best Practices in Mutual Aid and Disaster Planning

### Length

Half-day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

2017 brought four major back-to-back hurricanes — Harvey, Irma, Maria, and Jose. Clearly, natural disasters are increasing in frequency and severity, while customer tolerance for outages is declining. No utility, regardless of its location, can afford to remain unprepared. Join the authors and experts for an in-depth look at the new public power storm restoration guide. Share lessons learned and identify best practices in power restoration. Explore the full range of issues involved in disaster response and recovery — emergency planning, mitigation and preparedness, maintenance and engineering, damage assessment, crew staging and deployment, and the scalability of outage management systems. Learn how to estimate when power can be restored and how to communicate with customers and other stakeholders in emergencies. Understand how best you can mobilize mutual aid to supplement your restoration efforts.

### Course Topics

- Emergency planning
- Mitigation and preparedness
- Maintenance and engineering
- Damage assessment and wires down
- Response and recovery, including estimated restoration time
- Customer information
- Emergency communication
- Mutual assistance
- IT: outage management systems scalability

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Public power managers, safety professionals and utility staff who are responsible for or who make decisions concerning safety within transmission and distribution systems.

### Instructors

**Anthony Hurley**, Director, Utility Practice, Witt O'Brien's, Houston, Texas

**Charlie Fisher**, Senior Managing Director, Witt O'Brien's, Washington, D.C.

## FEMA Basics for Public Power

### Length

Half-day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

FEMA's Public Assistance Grant Program provides reimbursement of costs associated with debris removal, emergency protective measures, and the repair and restoration of damaged facilities. But, this disaster assistance is subject to eligibility rules applicable to the applicant, facility, work, and cost. Receive an overview of FEMA's Public Assistance Program and learn how to best position your utility to maximize FEMA disaster grant funding. Explore issues faced by public power utilities when recovering from a major disaster, the process of documenting your damages, and the steps that can be taken before a disaster strikes that will make recovery efforts easier for your utility.

Learn about federal procurement guidelines and requirements, how to avoid common mistakes that can lead to disallowance of funding, hear about FEMA's appeals process, and what to expect if you are targeted for an audit. Discover ways to improve regulatory compliance when designing and executing procurement and contracting processes involved in FEMA disaster grant funding.

### Course Topics

- FEMA eligibility
- FEMA public assistance grant process
- Project worksheet development
- Five helpful tips for dealing with FEMA
- Overview of federal procurement regulations
- Procurement and contracting methods
- Procurement checklist
- Avoiding deobligation
- Common reasons for deobligation
- Interacting with FEMA and Homeland Security's Office of the Inspector General

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for utility managers, operations, finance, procurement, legal, and accounting staff, as well as others interested in learning more about FEMA eligibility, procurement requirements, processes and procedures.

### Instructor

**Bill Riley**, Managing Director, Witt O'Brien's, Washington, D.C.

## Overview and Practical Applications of the 2017 National Electrical Safety Code

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

The 2017 edition of the National Electrical Safety Code (NESC), published by the Institute of Electrical and Electronics Engineers (IEEE), is the national standard for safety in the design, construction, operation, and maintenance of electric and communication systems. This course will address the origins of the NESC and its fundamental applications to electric utility transmission and distribution systems. It will highlight the important changes that are effective with the 2017 edition.

### Course Topics

- NESC purpose, organization and application
- Significant revisions contained in the 2017 NESC (Sections 1-3 and 9; Parts 1-4)
- NESC compliance, legal liability and risk management
- Rule interpretations and sources of help for compliance
- Recognition and correction of code violations
- Code interpretation questions and compliance issues contributed by course participants

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Managers, safety professionals, electric utility engineers, designers, technicians, and all field personnel who are responsible for or who make decisions concerning transmission and distribution systems.

### What to Bring

Participants are required to bring a copy of the 2017 National Electric Safety Code.

### Instructor

**John Miner**, President, Collaborative Learning, Inc., Austin, Texas



# Technical Training

## Overhead Distribution Systems

### Best Practices in Overhead Distribution Line Design

### Underground Distribution Systems

### Advanced Topics in Underground Distribution

### Distribution System Economics: Making the Business Case

### Grounding and Lightning Protection for Overhead and Underground Distribution

### Applied Electrical Distribution Theory

### Electrical Distribution Principles, Applications and Improvements

### Improving the Reliability of Your Distribution System

### Maintenance of High Voltage Electrical Distribution Systems

## Overhead Distribution Systems

### Length

3 days

### Accreditation

Recommended CEUs 2/PDHs 20/CPEs 22.5

Field of Study: Specialized Knowledge

### Course Overview

Learn about the planning, design, installation, and maintenance principles that drive today's overhead distribution practices. Learn how to update your utility's overhead line design and construction standards, make better design decisions, reduce construction costs, and enhance safety and service reliability.

### Course Topics

- Overview of overhead distribution
- Overhead conductors
- NESC general requirements for overhead lines
- Overhead line clearances and structure loading (with NESC requirements)
- Overhead line structure types and design
- Guying and anchoring for overhead line structures
- Insulation, insulation coordination and lightning protection
- Basic calculations related to overhead distribution systems
- Overhead line grounding

### Course Level

**Basic/Intermediate.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### What to Bring

Participants are required to bring a calculator and a copy of the 2017 National Electric Safety Code.

### Instructor

**John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Best Practices in Overhead Distribution Line Design

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Proper engineering design of overhead lines is essential to public and employee safety, as well as to reliable and cost-effective operation and maintenance. This practical one-day course explores the legal, regulatory and ethical requirements applicable to the professional practice of overhead line design. Through presentations, examples, and exercises, learn how to assess and improve your line design process by incorporating modern design tools and best practices. Review examples of the many National Electrical Safety Code (NESC) violations that can be found on most overhead distribution systems (inadequate clearances and separations, excessive tensions, and structural overloads) and learn how to avoid or correct them.

### Course Topics

- Federal and state public utilities laws and regulations that apply to overhead lines (including NESC and OSHA)
- Typical state engineering practice laws and regulations
- Professional engineering ethics and standards of conduct for distribution engineers and designers
- Line design protocols (design criteria, construction standards, documentation, joint use attachment standards, engineering reports, and records management policies and practices)
- Line design software applications
- The line design process and how to improve it
- Line designer training and continuing education

### Course Level

**Basic Level.** No prerequisites; no advance preparation. It is highly recommended that you attend this course in conjunction with the Overhead Distribution Systems class.

### What to Bring

Bring examples of distribution design criteria, construction standards, work order packages, and joint-use agreements, as well as position descriptions and training/continuing education requirements for distribution engineers and designers. You are also encouraged to bring your state professional engineering practice law and regulations for discussion.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Constructing, Operating and Maintaining Underground Distribution Systems

### Length

3 days

### Accreditation

Recommended CEUs 2/PDHs 20/CPEs 22.5

Field of Study: Specialized Knowledge

### Course Overview

Learn all about the effective design, construction, operation and maintenance of underground electric distribution systems. Review critical factors involved in the conversion of overhead systems to underground. Discuss real-life examples and work through practical design problems.

### Course Topics

- Policy and service guidelines
- Underground distribution planning, design and layout
- Maintenance practices
- Operations, safety and regulatory requirements
- Cable design and application
- Terminating underground cable
- Fusing, fuse coordination, fault location and surge protection techniques
- Review of the 2017 NESC that pertains to underground systems (Part 3) and work practices (Part 4)

### Course Level

**Basic/Intermediate.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructors

**Larry Koshire, P.E.**, President, Koshire Consulting, LLC, Rochester, Minnesota

**Mark Swan, P.E.**, Principal, MDS Engineering Consulting, LLC, Colorado Springs, Colorado

## Advanced Topics in Underground Distribution Systems

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Underground distribution continues to be the installation method of choice in many applications on public power utilities. Although the initial installation cost of underground distribution is almost always greater than equivalent overhead distribution, it offers a wide range of advantages, including greater operating reliability, lower operating and maintenance costs, better public safety and, of course, reduced visibility and greater public acceptance. This course will cover current and emerging topics in underground distribution.

### Course Topics

- How to make the decision between overhead and underground distribution alternatives, including customer expectations
- How to ensure long-life cable installations
- State-of-the-art cable specification, purchasing, handling and installation (including cable pulling calculations)
- Extending the life of in-service cable through improved lightning protection and thermal loading
- Underground distribution service considerations for commercial customers
- Customer load estimation
- Transformer sizing, loading, and specification features
- Steady-state and transient voltage considerations
- Methods for prioritizing capital and operating expenditures for underground distribution
- Implications of smart grid and other new technologies

### Course Level

**Basic/Intermediate.** No prerequisites; no advance preparation. Some previous knowledge of and experience with underground distribution systems is helpful.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Distribution System Economics: Making the Business Case

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

As the bread and butter of all public power systems, the distribution system is essential to business success. Is your distribution system reliable; resilient; and nimble enough to meet changing policies, technologies, and customer expectations? Does your utility have a plan and budget for expansion, renovation, and replacement of aging components?

Dive into the business management side of electrical distribution. Learn how to present a compelling business case to your management and board for effective distribution management and investment. Review the basics of distribution management, then work through exercises and case studies to identify the key factors that will ensure your system's continued success through the evolutionary years ahead.

### Course Topics

- Business and regulatory imperatives and best practices for a safe and functional distribution system
- Fiduciary responsibility for managing distribution assets
- Engineering economics applied to loss evaluation, investment alternatives, financial risk management, customer contributions, etc.
- Application exercises — transformer purchasing with loss evaluation, circuit reconductoring economics, customer contributions for line extensions, etc.

### Course Level

**Basic.** No prerequisites; no advance preparation.

### What to Bring

Attendees are required to bring a calculator.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Grounding and Lightning Protection for Overhead and Underground Distribution

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Learn the purpose and principles of grounding and National Electrical Safety Code compliant grounding practices. Review the theory of lightning surges and the principles and practices of insulation coordination and application of lightning arresters. Benefit from a hands-on approach that includes videos, quizzes, problem solving, group discussions, and time for questions/ answers.

### Course Topics

- Purposes of grounding
- NESC requirements for effectively grounded systems
- Approved grounding methods in overhead and underground distribution applications
- Lightning surges and their effects on the distribution system
- Insulation ratings and coordination
- Lightning arresters and their application

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Applied Electrical Distribution Theory

### Length

1 day

### Accreditation

Recommended CEUs .7/PDHs 6.5/CPEs 7.8

Field of Study: Specialized Knowledge

### Course Overview

Learn the fundamentals of electric circuit theory and the application of theory to electric utility distribution systems. Review the relationships between voltage, current, resistance and reactance, real and reactive power in single-phase and three-phase alternating current (AC) circuits. Perform some commonly encountered AC circuit calculations that are used to determine conductor and equipment ampacity ratings, circuit voltage drop, power factor, energy losses, and customer load estimation.

### Course Topics

- Direct and alternating current circuit elements (energy sources, conductors, loads, voltage, current, opposition to current flow)
- Alternating current principles in single and three-phase circuits (Kirchoff's voltage and current laws, Ohm's law, impedance, phase angle, voltage/current relationship, reactance and phase angle, real and reactive power)
- Circuit component ratings (voltage, current, power, thermal limits)
- Common circuit calculations (current flow, voltage drop, power, power factor, energy losses)
- Customer load estimation

### Course Level

**Basic.** no prerequisites; no advance preparation.

### Who Should Attend

Designed for utility distribution engineers, technicians, designers, construction and operations personnel, and professionals looking to increase their understanding of electric utility distribution.

### What to Bring

Participants are required to bring their own scientific calculator.

### Instructor

**Mark Swan, P.E.**, Principal, MDS Engineering Consulting, LLC, Colorado Springs, Colorado

## Electrical Distribution Principles, Applications and Improvements

### Length

3 days

### Accreditation

Recommended CEUs 2/PDHs 20/CPEs 22.5

Field of Study: Specialized Knowledge

### Course Overview

Receive a comprehensive and practical overview of electric utility distribution. Learn about electrical distribution system planning, design and operating criteria, as well as principles and practices related to customer loads and services, grounding, voltage regulation, insulation coordination, overvoltage protection, and overcurrent protection. Review overhead, underground, and network distribution characteristics, advantages and disadvantages, components, and equipment. Because the distribution system is the heart of a public power utility, you'll also hear about business imperatives for distribution system performance and performance improvement.

### Course Topics

- Overhead, underground, and network distribution systems
- Distribution system components and equipment
- Distribution system planning, design, and operating criteria
- Distribution standards and regulatory requirements
- Customer loads and services
- Grounding
- Voltage regulation
- Insulation coordination and overvoltage protection
- System faults, overloads, and overcurrent protection
- Business imperatives for distribution system performance
- Distribution performance measurement
- Distribution economics and system improvements

### Course Level

**Basic/Intermediate.** No prerequisites; no advance preparation.

### What to Bring

Participants are required to bring their own scientific calculator and are encouraged to bring copies of distribution planning criteria and design guides from their respective utilities for class reference and discussion.

### Instructor

**M. Thomas Black, P.E.**, Management Consultant, Collaborative Learning, Inc., Phoenix, Arizona

## Improving the Reliability of Your Distribution System

### Length

Half-day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

Reliability is one of the most important attributes of electric utility distribution systems. Today's regulators, customers, and prospective customers are more astute about measuring reliability and know what to look for when evaluating electric cooperatives and investor-owned utilities when it comes to reliability, but they must be diligent about preventing service interruptions and respond promptly when interruptions occur.

### Course Topics

- Explore reliability from the perspective of regulators, customers, and utility employees, with a focus on improving service reliability
- Gain a deeper understanding of the indices that are used to measure reliability and the factors to consider when setting performance targets and comparing performance with others
- Learn best practices that support reliable systems and operations and specific initiatives for performance improvement
- Learn how to build an organizational culture that supports a reliable infrastructure, operation, and customer service
- Review elements of the Association's RP3 program

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc., Austin, Texas

## Maintenance of High Voltage Electrical Distribution Systems

### Length

Half-day

### Accreditation

Recommended CEUs .3/PDHs 3.25/CPEs 3.5

Field of Study: Specialized Knowledge

### Course Overview

This course provides the perspective needed to develop or enhance and carry out an effective program of maintenance for both overhead and underground high voltage electric utility distribution systems. Topics include principles and elements of corrective, preventive and predictive maintenance programs as well as specific activities related to the inspection, testing and maintenance of distribution lines and equipment. Also included is coverage of NESC maintenance requirements, risk management, cost accounting and evaluation of maintenance programs using productivity and service level measures and benchmarks.

### Course Topics

- Overview of distribution maintenance
- Regulatory aspects of distribution maintenance
- Maintenance management
- Overhead line maintenance practices
- Underground line maintenance practices
- Equipment maintenance practices

### What to Bring

Participants are required to bring a calculator and are encouraged to bring sample T&D maintenance management for class reference and discussion.

### Course Level

**Basic.** No prerequisites; no advance preparation.

### Who Should Attend

Designed for public power professionals and skilled personnel including: engineers, designers, technicians and field personnel, as well as for all those involved in the management, construction, safety and operational aspects of transmission and distribution systems.

### Instructor

**R. John Miner**, President, Collaborative Learning, Inc.,  
Austin, Texas





# Certificate Programs

## Customer Service Management Certificate Program

## Energy Efficiency Management Certificate Program

## Key Accounts Certificate Program

## Public Power Manager Certificate Program

## Customer Service Management Certificate Program

### Length

4-5 days

### Program Overview

Nurturing customer relationships and meeting customer needs are as critical to your utility's success as keeping the lights on. Customer preferences are evolving, and expectations for instant access to information and support are increasing. As a public power utility, your organization needs the support and goodwill of the communities you serve. The Association's Customer Service Management Certification Program® provides practical training and guidance on how to build and sustain a culture of outstanding customer service involving all stakeholders—utility employees, governing board members, and city officials. This program explores the mainstays of good customer service and how everyone at your organization can uphold them.

### Program Requirements

To earn this certificate, participants must complete the following requirements within one year:

#### Complete the five required courses

- Electric Utility Industry Overview\*
- Strategies for Successful Customer Service Operations
- Utility Collections: The Complete Process
- Modeling Customer Service in Your Leadership Style
- Utilizing Technology to Enhance Customer Service

\*A 5-part webinar series can also be taken in place of this class. Participants who can demonstrate knowledge of the utility industry, through work experience or coursework, may also opt-out of this course.

#### Pass an online exam

- Consists of 75 multiple choice questions, based on the required coursework.

#### Submit a plan for a customer service department assessment or service improvement project

- Complete a project that focuses on evaluating and improving the customer service culture and operations of your organization.

### Who Should Attend

This program focuses on developing a culture of excellence in customer service among all public power utility employees and governing officials. Therefore, while the course content is designed for customer service managers, supervisors, and representatives, the course is also recommended for utility senior managers with cross-departmental responsibilities, governing board representatives, and senior officials.

## Energy Efficiency Management Certificate Program

**Length**  
4-5 days

### Program Overview

Who manages energy efficiency programs at your utility? Are they up to speed with the latest trends, technologies, policies, and requirements? Successful programs do not happen by accident—they require an understanding of the industry, marketplace, customers and many other elements. When done well, energy efficiency can play an important role in achieving utility goals and improving customer service.

The Energy Efficiency Management Certificate Program covers all aspects of energy efficiency portfolio and program planning, implementation, and evaluation, preparing you to help residential, commercial, and industrial customers save energy, while enjoying high reliability and quality service.

### Program Requirements

To earn this certificate, participants must complete the following requirements within one year. Courses can also be taken individually:

#### Complete the five required courses

- Electric Utility Industry Overview\*
- Energy Efficiency: Concepts and Strategies
- Designing Efficiency Programs to Serve Your Customers
- Energy Efficiency Program Implementation, Reporting and Evaluation
- Emerging Trends and Opportunities in Energy Efficiency and Distributed Energy Resources

\*A 5-part webinar series can be taken in place of the Industry Overview class. Participants who can demonstrate knowledge of the industry, through work experience or coursework, may also opt-out of this course.

#### Pass an online exam

- Consists of 100 multiple choice questions, based on the required coursework.

#### Submit a plan for an energy efficiency program business plan

- The plan will be a model for any energy efficiency program your utility undertakes. It will include all topics, actions, and issues that a project manager must address while managing an energy efficiency project.

#### Who Should Attend

Staff from small, medium, and large public power utilities that want to start an energy efficiency program, already manage energy efficiency programs but want to scale them up, are interested in various aspects of energy efficiency, or want to earn a professional credential.

## Key Accounts Certificate Program

**Length:**  
3-4 days

### Program Overview

Discover how to support and grow businesses in your community to enhance your reputation and revenue. Your commercial and industrial key accounts need special attention—the Key Accounts Certificate Program is designed to show you how to nurture strategic relationships and build trust and loyalty. Whether you plan to start a utility key accounts program or want to take your current program to the next level, this curriculum provides the skills, knowledge and tools for success. Join the program to learn from real-world examples, get tools and templates, practice skills, and network with public power peers from across the nation.

### Program Requirements

To earn this certificate, participants must complete the following requirements within one year. Courses can also be taken individually:

#### Complete the four required courses

- Electric Utility Industry Overview\*
- Implementing a Customer-Focused Key Accounts Program
- Developing Your Key Accounts Representative
- The Effective Key Accounts Toolbox

\*A 5-part webinar series can be taken in place of the Industry Overview class. Participants who can demonstrate knowledge of the industry, through work experience or coursework, may also opt-out of this course.

#### Pass an online exam

- Consists of 100 multiple choice questions, based on the required coursework.

#### Submit a customer action plan

- Demonstrate how your utility plans to address the needs of a selected account.

#### Who Should Attend

Designed for public power key account managers and representatives. Other utility staff involved in key accounts, or those looking for professional development credentials, will also benefit.

## Public Power Manager Certificate Program

### Length

4-5 days

### Program Overview

With ever-increasing pressures and challenges on utilities from heightened customer expectations, changing regulations, technology advances, and a changing workforce, those who lead and manage public power utilities must be equipped with the knowledge and skills to create an effective and sustainable organization with engaged, skilled and committed employees. The Public Power Manager Certificate Program is designed for a new generation of leaders as well as existing supervisors and managers. It will help these leaders provide organizational direction as they navigate a changing and complex industry environment.

### Program Requirements

To earn this certificate, participants must complete the following requirements within one year. Courses can also be taken individually:

#### Complete the three required courses

- Electric Utility Industry Overview\*
- Financial Planning, Budgeting and Performance: What Managers Need to Know
- Strategic Leadership for Public Power  
Focused on six key leadership areas: awareness, character, community, empowerment, service and sustainability

\*A 5-part webinar series can be taken in place of the Industry Overview class. Participants who can demonstrate knowledge of the industry, through work experience or coursework, may also opt-out of this course.

#### Post-course Project

- Complete a post-course project that applies principles from the six key leadership dimensions learned in class.
- Participants may choose to complete one of three project types.

#### Who Should Attend

Designed for mid-level public power managers and supervisors interested in improving their management, communications, leadership knowledge and skills. New senior managers, and those with experience, who wish to refresh or enhance their knowledge and skills by participating in a highly interactive program that has been developed specifically for public power, will also benefit from this course.



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