EUCI COURSES

INTRODUCTION TO COST-OF-SERVICE CONCEPTS AND TECHNIQUES FOR ELECTRIC UTILITIES

July 17-18, 2017
Denver Marriott Tech Center
Denver, CO

INTRODUCTION TO RATE DESIGN FOR ELECTRIC UTILITIES

July 19-20, 2017
Denver Marriott Tech Center
Denver, CO

EUCI is authorized by IACET to offer 1.4 CEUs for the Cost of Service course and 1.3 CEUs for the Rate Design course

EUCI is authorized by CPE to offer 16.5 credits for the Cost of Service course and 15.5 credits for the Rate Design course

EUCI is authorized by the Colorado State Supreme Court Board of Continuing Legal and Judicial Education to offer 15 CLE credits for the Cost of Service course and 13 CLE credits for the Rate Design course

INTRODUCTION TO COST-OF-SERVICE CONCEPTS AND TECHNIQUES FOR ELECTRIC

OVERVIEW

This two-day course will lead participants through the cost-of-service process from start to finish in detail. We will discuss and compare differences among investor-owned utilities, municipal utilities, and electric cooperatives in cost-of-service principles and techniques. Both traditional and unbundled cost-of-service analytical techniques will be discussed. Each participant will complete a sample cost-of-service analysis during the course. Training materials will be provided.

RECOMMENDED BACKGROUND

No prior cost-of-service experience is required, although knowledge of utility system infrastructure, business environment, and operations will be helpful. **To participate in model development, a laptop computer with Microsoft Excel 2003 or later is required.**

LEARNING OUTCOMES

- Discuss FERC Uniform System of Accounts
- Identify revenue requirements
- Examine utility case studies
- Discover energy allocation factors
- Define the steps in the ratemaking process
- List cost classifications

WHO SHOULD ATTEND

This course is recommended for policymakers, managers, attorneys, regulators, key accounts representatives, accountants, engineers, and analysts who would like introductory, hands-on training related to cost-of-service concepts and techniques for electric utilities.

> ***"Excellent overview of the entier cost of service process for people new to topic or needing a refresher done by two excellent speakers."***
>
> Budget & Rates Analyst, Great River Energy

INTRODUCTION TO COST-OF-SERVICE AGENDA

MONDAY, JULY 17, 2017

7:30 – 8:00 am **Registration and Continental Breakfast**

8:00 – 8:30 am **Course Overview and Introduction**
- Course objectives
- Course overview
  - o Steps in ratemaking process
  - o Steps in cost-of-service process
  - o Developing cost-of-service analysis – different perspectives
  - o Interpreting cost-of-service results

8:30 – 9:00 am **Overview of Cost-of-Service Process**
- Process overview
- Introduction
- State regulatory process
- Local regulatory process
- Federal mandates
- The cost-of-service team
- Stakeholders

9:00 – 10:15 am **Study Preparation**
- Introduction
- Four important considerations
- Common supporting analyses to ensure success
- Financial planning
- Study period selection
- Load research study
- System loss study
- Resource planning studies
- Minimum system studies
- Accounting for direct assignment
- Lighting study
- Load forecasting

10:15 – 10:30 am **Morning Break**

10:30 – 11:30 am **Policies, Objectives, and Strategies**
- Introduction
- Policies
- Objectives
- Strategies
  - o Marginal vs. embedded costs
  - o Cost unbundling
  - o Competitive pricing
  - o Time-of-use pricing support
  - o Real-time pricing support
  - o Varying return on investment
  - o Cost recovery through rules and regulations
  - o Other strategies

> ***"A great overview for all levels of experience. Materials covered the basics and touched on more complex issues. The speakers had the knowledge and expertise to fully answer all the in-depth questions."***
>
> Analyst, Brubaker & Associates Inc.

INTRODUCTION TO COST-OF-SERVICE AGENDA

MONDAY, JULY 17, 2017 (CONTINUED)

11:30 am – 12:30 pm **Group Luncheon**

12:30 – 2:15 pm **Revenue Requirement**

- Introduction
  - o Steps in rate design process
  - o Definition
  - o What is included in revenue requirement
- Test year concept
  - o Known and measurable adjustments
  - o Used and useful adjustments
  - o Components
- Utility approach (IOU)
  - o FERC Uniform System of Accounts
  - o Rate base
    - Components
    - Definitions
  - o Return on rate base
    - Weighted average cost of capital (WACC)
    - Cost of debt
    - Cost of equity
  - o Utility case studies
- Utility approach (regulated cooperative)
- Cash approach (municipal)
- Debt service coverage ratio
- Comparison
- Adjustments to base rates
- Introduction to cost-of-service model
- ATTACHMENTS: revenue requirements examples 5-1 through 5-4

2:15 – 2:30 pm **Afternoon Break**

2:30 – 4:00 pm **Revenue Requirement (cont.)**

- Classroom exercise No. 1: revenue requirement test year adjustment – adding a new load
- Classroom exercise No. 2: revenue requirement test year adjustment – adding a new resource

4:00 – 4:30 pm **Cost Allocation Methodologies**

- Introduction
  - o Steps in ratemaking process
  - o Sample cost allocation methods
- Common approaches to cost allocation
  - o Embedded
  - o Marginal
- Common approaches to cost allocation
  - o Bundled
  - o Unbundled

INTRODUCTION TO COST-OF-SERVICE AGENDA

TUESDAY, JULY 18, 2017

7:30 – 8:00 am **Continental Breakfast**

8:00 – 8:30 am **Review of Day 1**

8:30 – 10:00 am **Functionalization of Costs**

- Introduction
  - o Steps in ratemaking process
    - Bundled approach
    - Unbundled approach
- Business unit concept
  - o Products and services
  - o Allocations
    - Direct
    - Derived
- Classroom exercise No. 3: functionally unbundling costs

> ***"Very dynamic and engaging speakers! I learned a lot that added relevance and helped put my daily work tasks in perspective."***
>
> Sr. Regulatory Analyst, NiSource/ NIPSCO

10:00 – 10:15 am **Morning Break**

10:15 – 11:00 am **Classification of Costs**

- Introduction
  - o Steps in ratemaking process
  - o Basic cost categories
- Fixed and variable costs
- Cost classifications
  - o Demand-related
  - o Energy-related
  - o Customer-related
  - o Revenue-related
  - o Direct assignments
- Classification of functions
- Special studies
  - o Minimum systems
  - o Zero intercept
- Classroom exercise No. 4: classification of distribution plant

> ***"This course is worth the time for anyone new to cost of service modeling and analysis."***
>
> Administrator – COS, Tampa Electric Company

11:00 – 11:45 am **Rate Class Determination**

- Overview of issues
  - o Rate classes
  - o Number of classes
  - o Type of classes
  - o Classes within classes
  - o Rate class trends: community solar
  - o Cost-of-service support

11:45 am – 12:45 pm **Group Luncheon**

INTRODUCTION TO COST-OF-SERVICE AGENDA

TUESDAY, JULY 18, 2017 (CONTINUED)

12:45 – 2:15 pm **Development of Allocation Factors**

- Introduction
  - o Steps in ratemaking process
- Demand allocation factors
  - o Coincident peak
  - o Non-coincident peak
  - o Sum of max demands
  - o Average and excess
  - o Other
  - o Utility Case Studies
- Energy allocation factors
- Customer allocation factors
- Revenue allocation factors
- Direct assignment
- Classroom exercise No. 5: development of demand allocation factors

> ***"This class was very beneficial for me. It has given me more of a high-level view of the cost-of-service concepts and techniques."***
>
> Regulatory Affairs Coordinator, Entergy

2:15 – 3:15 pm **Allocation of Costs**

- Classroom exercise No. 6: allocated cost-of-service

3:15 – 3:30 pm **Afternoon Break**

3:30 – 4:00 pm **Interpreting Cost-of-Service Results**

- Introduction
- Subsidization
  - o Inter-class subsidization
  - o Intra-class subsidization

4:00 – 4:15 pm **Course Wrap-Up**

> ***"Would highly recommend this course for anyone who is seeking to learn solid fundamental skills in cost-of-service study and rate design concepts."***
>
> Staff Counsel, Kentucky PSC

> ***"The course content and speakers exceeded my expectations."***
>
> Sr. Manager, Member Relations, Tri-State G&T

INTRODUCTION TO RATE DESIGN FOR ELECTRIC UTILITIES

OVERVIEW

This two-day course will introduce rate design concepts to participants. The course will build upon information discussed and developed in the Introduction to Cost-of-Service Concepts and Techniques for Electric Utilities course. Each participant will work through sample rate design exercises during the course. Training materials will be provided.

RECOMMENDED BACKGROUND

No prior rate design experience is required, although knowledge of utility system infrastructure, business environment, and operations will be helpful. **To participate in model development, a laptop computer with Microsoft Excel 2003 or later is required.**

LEARNING OUTCOMES

- Discuss pricing interface and implications of risk
- Examine how to develop cost curves
- Review classroom exercises on developing cost curves, solar installation, and designing bundled rates
- List ratemaking guidelines
- Identify special rate provisions

WHO SHOULD ATTEND

This course is recommended for policymakers, managers, attorneys, regulators, key account representatives, accountants, engineers, and analysts who would like introductory, hands-on training related to rate design concepts for electric utilities.

> ***"Make rate development positions easier by attending an EUCI course taught by experienced professionals that can be easily understood."***
>
> Administrator – COS, Tampa Electric Co.

> ***"This program benefits a wide section of industry professionals and facilitates individuals with various backgrounds to work and learn together."***
>
> Counsel, SC House

INTRODUCTION TO RATE DESIGN AGENDA

WEDNESDAY, JULY 19, 2017

7:30 – 8:00 am **Registration and Continental Breakfast**

8:00 – 8:30 am **Course Overview and Introduction**
- Introduction
  - o Building on cost of service
  - o Overlap
  - o Background and requirements
- Instructors
- The process

> ***"This course was wsell presented and worth my time."***
>
> Sr. Manager, Member Relations, Tri-state G&T

8:30 – 9:30 am **General Ratemaking and Regulatory Principles**
- Introduction
- Bonbright principles
- Regulations
- Factors
- Objectives
- Ratemaking guidelines
  - o Factors
  - o Rate adjustments
  - o Competing objectives
- Equity
- Rate levels
- Social engineering
- Competition
- Simplicity

> ***"Very helpful class to a new rate designer! Important to understand as our industry is facing very challenging times."***
>
> Rate Specialist, Alabama Power Company

9:30 – 11:30 am **Electric Utility Pricing: Trends That Matter**
- Fundamental trends affecting electric utility pricing
  - o Global changes
  - o Utility environment
  - o Advanced metering infrastructure
  - o Customer environment
- Pricing interface
- Pricing implications of risk
- Transactional risk / Decoupling
- Risk management strategies
- Pricing strategies

10:20 – 10:45 am **Morning Break**

10:45 – 11:30 am **Electric Utility Pricing: Trends That Matter (Continued)**
- Storage
- Solar rate considerations/ value of solar
- Classroom exercise No. 1: special rate design – solar installation

11:30 am – 12:30 pm **Group Luncheon**

INTRODUCTION TO RATE DESIGN AGENDA

WEDNESDAY, JULY 19, 2017 (CONTINUED)

12:30 – 2:00 pm **Applying Cost-of-Service Results**
- Cost-of-service overview
- Developing cost curves
  - o Bundled embedded cost
  - o Unbundled embedded cost
  - o Marginal cost
- Evaluation of competitive alternatives
- Classroom exercise No. 2: developing cost curves

2:00 – 2:15 pm **Break**

2:15 – 3:30 pm **Traditional Rate Design**
- Rate overview
- Flat rate (energy only)
- Two-part rate (customer/energy or energy/demand)
- Three-part rate (energy/demand/customer)
- Blocked rates
  - o Declining
  - o Inverted/inclining
- Wright rate
- Relationship between rate design and cost curves
- Classroom exercise No. 3: designing bundled rates

3:30 – 4:00 pm **Unbundled Rate Design**
- Unbundled rate overview
- Traditional bundled vs. unbundled
- Unbundling strategies

THURSDAY, JULY 20, 2017

7:30 – 8:00 am **Continental Breakfast**

8:00 – 8:30 am **Review of Day 1**

8:30 – 9:15 am **Marginal Cost Pricing**
- Resources
- Application and use
- Short run and long run
- Marginal capacity costs
- Production cost modeling
- Marginal energy costs
- Marginal transmission costs
- Revenue reconciliation
- Dilemma of reconciliation

> ***"Excellent overview of how rates are designed and the many political and economic factors that go into them."***
>
> Budget & Rates Analyst,
> Great River Energy

INTRODUCTION TO RATE DESIGN AGENDA

THURSDAY, JULY 20, 2017 (CONTINUED)

9:15 – 10:45 am **Time Based Rates and Demand Management**

- Review of EPAct 2005
- Time-of-Use Overview
- Real Time Pricing
- Critical Peak Pricing
- Load Reduction Credits
- Other Approaches
- Smart Metering
- Time-of-Use
  - o Seasonal
  - o Daily / Hourly
  - o Cost Differentials
  - o Variations
- ATTACHMENT: Examples of Rate Design 8-1 through 8-6
- Designing Time-of-Use Rate
  - o Time Periods
  - o Cost Differentials
  - o Price Elasticity
  - o Changes – Class Load Characteristics
  - o Changes – Revenue
  - o Changes – Time Related Costs
  - o Rate Level Adjustments
- Demand Management

10:45 – 11:00 am **Morning Break**

11:00 am – 12:00 pm **Special Rate Provisions**

- Minimum Bills
- Demand Ratchets
- Power Factor
- Service Voltage
- Paying for Growth
- Customer Ownership of Facilities
- Energy Cost Adjustment Charges
- Net Metering
- Standby Rates
- Feed-In Tariffs
- Special Contracts
- Others

12:00 – 1:00 pm **Group Luncheon**

1:00 – 2:30 pm **Classroom Exercise No. 4a – Residential Rate Design**

2:30 – 2:45 pm **Afternoon Break**

2:45 – 3:30 pm **Classroom Exercise No. 4b – Commercial Rate Design**

> ***"The many years of experience of the instructors was readily evident through their excellent responses to student questions and their engaging discussion of the class topics."***
>
> Manager of Engineering Services, GVEA

INTRODUCTION TO RATE DESIGN AGENDA

THURSDAY, JULY 20, 2017 (CONTINUED)

3:30 – 4:00 pm **Interclass Transitions and Communicating the Plan**

- Introduction
- Rate form transition problems
- Promotional and special rates
- Communicating the plan
  - Confidence in data
  - Summarize process
  - Known and measurable changes to test year
  - Do not hide facts
- Example graphs
- Communications summary

4:00 – 4:15 pm **Course Wrap-Up**

INSTRUCTORS

Scott H. Burnham

Executive Consultant, NewGen Strategies & Solutions LLC

Mr. Burnham has over 18 years of experience in consulting, management, cost-of service, feasibility analyses and valuation services. His responsibilities include development of revenue requirements, costs-of-service allocation methodologies, rate design and revenue adequacy studies, utility valuation analyses and other engineering economic analysis. His project feasibility, financing and system acquisition projects have provided clients with a sound financial basis upon which to make decisions on purchasing, selling or modifying facilities. His rate related projects have included those that required the development and review of retail and wholesale electric rates, and rate structures, and analysis of rate riders for interruptible industrial rates, environmental cost adjustment rates, energy / fuel cost recovery and others. He has also assisted industrial customers in rates negotiation and evaluation.

Mr. Burnham has also been involved in feasibility and implementation studies, independent engineering reviews, operation and maintenance reviews, planning studies and valuation studies for generation assets. He has led multiple projects that have focused on determining the value of distributed solar resources to specific utilities. His clients have included municipal utilities, investor-owned utilities, electric cooperatives, and private sector clients.

David A. Berg, P.E.

Principal, Dave Berg Consulting, LLC

Mr. Berg is a Principal with Dave Berg Consulting, LLC, and has more than 32 years of experience. He specializes in consulting services requiring a combination of technical and financial expertise. His electric industry restructuring and pricing work has assisted utilities in stabilizing their customer base and revenues in an increasingly complicated environment as well as in educating them on the particular industry changes that could affect their operations most significantly. His project feasibility, financing and system acquisition projects have provided clients with a sound technical and financial basis upon which to make decisions on purchasing, selling or modifying facilities. He understands the special issues confronting small and medium size municipal utilities, as well as the joint action agencies serving these utilities. He has also assisted industrial customers in analyzing particular industry issues that impact their operations.

Mr. Berg has also been involved in financial and technical evaluation of power generation projects that utilize alternative fuels. These have included landfill gas, biomass and wind generation projects.

Mr. Berg is a popular speaker both at utility training sessions and state and national conferences, due to his ability to focus on the essential points of complicated issues and to recommend actions appropriate to the audience.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

INSTRUCTIONAL METHODS

PowerPoint presentations, classroom discussions, and question-and-answer sessions will be used in this conference.

IACET CREDITS

EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 1.4 CEUs for the Cost of Service course and 1.3 CEUs for the Rate Design course

CPE CREDITS

EUCI is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: www.learningmarket.org.

Upon successful completion of this event, program participants interested in receiving CPE credits will receive a certificate of completion. **EUCI is authorized by CPE to offer 16.5 credits for the Cost of Service course and 15.5 credits for the Rate Design course**

CLE CREDITS

We are proud to announce that the State of Colorado Supreme Court Board of Continuing Legal & Judicial Education has recognized EUCI as a sponsor of continuing legal education activities.

EUCI is authorized by the Colorado State Supreme Court Board of Continuing Legal and Judicial Education to offer 15 CLE credits for the Cost of Service course and 13 CLE credits for the Rate Design course

EVENT LOCATION

A room block has been reserved at the Denver Marriott Tech Center, 4900 Syracuse Street, Denver, CO 80237, for the nights of July 16-19, 2017. Room rates are $179 plus applicable tax. Call **1-303-779-1100** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is June 18, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

REGISTER 3, SEND THE 4TH FREE

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

Please make checks payable to: “PMA"

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PLEASE REGISTER

◯ **BEST VALUE: BOTH COURSES: INTRODUCTION TO COST-OF-SERVICE CONCEPTS AND TECHNIQUES FOR ELECTRIC UTILITIES AND INTRODUCTION TO RATE DESIGN FOR ELECTRIC UTILITIES**: JULY 17-20, 2017: US $2495
EARLY BIRD ON OR BEFORE JUNE 30, 2017: $2295

OR CHOOSE A SINGLE COURSE BELOW:

◯ **INTRODUCTION TO COST-OF-SERVICE CONCEPTS AND TECHNIQUES FOR ELECTRIC UTILITIES**
JULY 17-18, 2017: $1495
EARLY BIRD ON OR BEFORE JUNE 30, 2017: $1295

◯ **INTRODUCTION TO RATE DESIGN FOR ELECTRIC UTILITIES**
JULY 19-20 2017: $1495
EARLY BIRD ON OR BEFORE JUNE 30, 2017: $1295

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

Print Name | Job Title

Company

What name do you prefer on your name badge?

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City | State/Province | Zip/Postal Code | Country

Phone | Email

List any dietary or accessibility needs here

CREDIT CARD INFORMATION

Name on Card | Billing Address

Account Number | Billing City | Billing State

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

OR Enclosed is a check for $ _____ to cover _____ registrations.

Substitutions & Cancellations
Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before June 16, 2017 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.