EUCI COURSES

ELECTRIC COST-OF-SERVICE – ESSENTIAL CONCEPTS FOR A CHANGING INDUSTRY

July 15-16, 2019
Embassy Suites Chicago Downtown Magnificent Mile
Chicago, IL

ELECTRIC UTILITY PRICING – TRENDS IN COST RECOVERY

July 17-18, 2019
Embassy Suites Chicago Downtown Magnificent Mile
Chicago, IL

> ***"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.

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

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EUCI is authorized by CPE to offer 15 credits for the Cost of Service course and 15 credits for the Rate Design course

ELECTRIC COST-OF-SERVICE – ESSENTIAL CONCEPTS FOR A CHANGING INDUSTRY

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.

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

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.**

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.

"Wonderful opportunity to learn the ins-and-outs of cost of service."

Economist, Oregon PUC

"They were very knowledgeable and gave lots of great info and examples. They made the data easy to understand. I'm very impressed."

Utility Rate Analyst, City of Longmont

ELECTRIC COST-OF-SERVICE AGENDA

MONDAY, JULY 15, 2019

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

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

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

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

> ***"Great course for someone with a year or so in the industry. Very informative, thank you!"***
>
> Sr. Accountant, Xcel Energy

10:15 – 10:30 am **Morning Break**

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

ELECTRIC COST-OF-SERVICE AGENDA

MONDAY, JULY 15, 2019 (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

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

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

ELECTRIC COST-OF-SERVICE AGENDA

TUESDAY, JULY 16, 2019

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**

ELECTRIC COST-OF-SERVICE AGENDA

TUESDAY, JULY 16, 2019 (CONTINUED)

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

- Introduction
  - Steps in ratemaking process
- Demand allocation factors
  - Coincident peak
  - Non-coincident peak
  - Sum of max demands
  - Average and excess
  - Other
  - ***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
  - Inter-class subsidization
  - Intra-class subsidization

4:00 – 4:15 pm **Course Wrap-Up**

> ***"It was a very engaging and insightful class. Scott and David were also very knowledgeable with tons of experience to draw upon."***
>
> Utility Accountant, LADWP

> ***"Great course for forecasting and load research professionals to see how projections and interval data by rate class impact COS results."***
>
> Forecast Analyst Lead, Tampa Electric Co.

> ***"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

ELECTRIC UTILITY PRICING – TRENDS IN COST RECOVERY

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.

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

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.**

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.

"This program benefits a wide section of industry professionals and facilitates individuals with various backgrounds to work and learn together."

Counsel, SC House

"Make rate development positions easier by attending an EUCI course taught by experienced professionals that can be easily understood."

Administrator – COS, Tampa Electric Co.

ELECTRIC UTILITY PRICING AGENDA

WEDNESDAY, JULY 17, 2019

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

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

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

9:30 – 10:20 am **Electric Utility Pricing: Trends That Matter**
- Fundamental trends affecting electric utility pricing
  - Global changes
  - Utility environment
  - Advanced metering infrastructure
  - 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**

"Great class to learn the vernacular and basics of rate design. Perfect class for someone moving into this role at their company."

Financial Analyst, Green Mountain Power

"Very helpful class to a new rate designer! Important to understand as our industry is facing very challenging times."

Rate Specialist, Alabama Power Company

"Great introduction into the world of ratemaking!"

Operations Analysis Engineer, NIPSCO

ELECTRIC UTILITY PRICING AGENDA

WEDNESDAY, JULY 17, 2019 (CONTINUED)

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

2:00 – 2:15 pm **Afternoon 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
  - Declining
  - 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 18, 2019

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

"I would highly recommend this course with these speakers for anyone wanting to have a fundamental understanding of rate design."

Staff Counsel, Kentucky PSC

ELECTRIC UTILITY PRICING AGENDA

THURSDAY, JULY 18, 2019 (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**

"This course was well presented and worth my time."

Sr. Manager, Member Relations, Tri-state G&T

"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

"Great job!"

Regulatory Analyst, WA UTC

ELECTRIC UTILITY PRICING AGENDA

THURSDAY, JULY 18, 2019 (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**

> ***"I thought each speaker brought a new, different perspective and found each very engaging and informative."***
>
> Attorney, Winstead PC

COURSE 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 these courses.

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 1.3 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 15 credits for the Cost of Service course and 15 credits for the Rate Design course.

EVENT LOCATION

A room block has been reserved at the Embassy Suites Chicago Downtown Magnificent Mile, 511 North Columbus Drive, Chicago, IL 60611, for the nights of July 14-17, 2019. Room rates are $229 plus applicable tax. Call **1-312-423-6309** or **click here** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is June 14, 2019 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 courses may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

- To Register, **CLICK HERE** or:

Mail Directly To:
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PO Box 2303
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f: 253-663-7224

PLEASE REGISTER

◯ **BEST VALUE: BOTH COURSES: ELECTRIC COST-OF-SERVICE – ESSENTIAL CONCEPTS FOR A CHANGING INDUSTRY AND ELECTRIC UTILITY PRICING – TRENDS IN COST RECOVERY**:
JULY 15-18, 2019: US $2495
EARLY BIRD on or before JUNE 28, 2019: $2295

OR CHOOSE A SINGLE COURSE BELOW:

◯ **ELECTRIC COST-OF-SERVICE – ESSENTIAL CONCEPTS FOR A CHANGING INDUSTRY**
JULY 15-16, 2019: $1495
EARLY BIRD on or before JUNE 28, 2019: $1295

◯ **ELECTRIC UTILITY PRICING – TRENDS IN COST RECOVERY**
JULY 17-18, 2019: $1495
EARLY BIRD on or before JUNE 28, 2019: $1295

EVENT LOCATION

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ENERGIZE WEEKLY

Energize Weekly is EUCI's free weekly newsletter, delivered to your inbox every Wednesday. We provide you with the latest industry news as well as in-depth analysis from our own team of experts. Subscribers also receive free downloadable presentations from our past events.

◯ Sign me up for Energize Weekly

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

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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 14, 2019 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
EUCI reserves the right to alter this program without prior notice.