UTILITY RATE DESIGN AND THE INFLUENCE OF EMERGING TECHNOLOGIES

October 7-8, 2019
Renaissance Phoenix Downtown Hotel
Phoenix, AZ

POST-CONFERENCE WORKSHOP
Performance Based Ratemaking (PBR)
TUESDAY, OCTOBER 8, 2019

UTILITY CASE STUDIES:
Arizona Public Service
Cobb EMC
PG&E
PNM Resources
Salt River Project
Southern California Edison (SCE)
Southern Company
Xcel Energy

“It’s critical for utility pricing professionals to be aware of industry rate making trends. The EUCI Rate Design Conference provides an excellent opportunity for peer utilities to discuss these trends.”

Sr. Director Strategic Pricing, CPS Energy

HOST UTILITY

SUPPORTING ORGANIZATIONS

EUCI is authorized by IACET to offer 1.0 CEUs for this conference and 0.4 CEUs for the workshop.
OVERVIEW

Electric and natural gas utilities are undergoing sweeping changes as their industries transform. Advanced metering, distributed generation (including rooftop solar), home battery storage, smart(er) thermostats and more efficient appliances: all influence utility rate design. In some cases such as advanced metering and thermostats, the capabilities accommodate rates that were not previously feasible — for example, demand response tariffs that encourage customers to use less power during system emergencies or hours with high wholesale costs. In other cases, as with distributed generation and battery storage, the new technology may allow customers to exploit the utility's existing rates to create potential inequities regarding fixed-cost recovery.

Utilities aren’t the only ones in the power industry to explore new rate designs and pricing options. Their regulators are calling for change. Stakeholders and intervenors are also getting into the act. Under current regulatory frameworks, rate design reform discussions among all stakeholders must start “today” if utilities hope to meet the needs of their customers in the next decade (“tomorrow”). To assess the impact of increased renewables and enabling technologies on utility rate structures, EUCI’s 17th Annual Rate Design conference brings together subject matter experts in the utility rate design field — providers, regulators, and industry experts. The blend of relevant presentations and panel discussions will provide current industry trends, state-of-the-art perspectives and best practices in innovative pricing and the valuation of distributed resources operating in a modernized grid.

LEARNING OUTCOMES

• Explore rate design options for addressing higher penetrations of distributed generation
• Discuss the impact of energy storage has on rate design
• Hear about emerging rate design issues from the perspective of industry regulators
• Discuss customer perspectives and their willingness to accept different rate design and pricing options
• Explore the rate design challenges of accommodating distributed energy
• Evaluate the impact of electric vehicles and distributed energy resources on residential rate design
• Discuss the potential unintended consequences of certain rate designs
• Explore whether traditional Bonbright ratemaking models still work effectively in today's utility business environment

WHO SHOULD ATTEND

This conference was developed for:
• Utility executives
• Corporate communication professionals
• Contact center management professionals
• Commissioners
• Commission staff
• Attorneys
• Regulatory affairs managers
• Pricing and load research managers
• Customer representatives and organizations
• Cost of service analysts
• Financial analysts
• Rate design, product development and customer strategy professionals

“EUCI offers a careful balance of continuing education, thought-provoking discussion, and networking.”

SVP, Regulatory & External Affairs, Baltimore Gas and Electric
AGENDA

MONDAY, OCTOBER 7, 2019

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

8:30 – 8:40 am    Conference Overview and Introduction of Conference Chairs

8:45 – 9:05 am    Opening Address from Arizona Public Service

Arizona Public Service (APS) was founded in 1886 and is the largest and longest-serving electric company in the state, serving 11 of Arizona's 15 counties. In these changing times, APS recognizes new technologies and growing customer expectations are leading to rapid changes at the company and in more generally throughout the industry. The utility's corporate vision is to create a sustainable energy future for Arizona. This opening segment will review how innovative rate design supports the accomplishment of that long-term APS mission.

Barbara Lockwood, Vice President, Arizona Public Service (APS)

9:05 am – 12:30 pm Session I: The Impact of Energy Storage on Rate Design

10:00 – 10:20 am Networking Break

Energy storage continues to make headlines and garner attention from the public, electric utilities, lawmakers, and regulators. Rate design plays a pivotal role in the pace of adoption of Distributed Energy Resources (DER), including energy storage. Broader industry trends such as the growth of DERs and reevaluation of traditional rate design all typically include energy storage considerations. In this session, industry experts will discuss how rate design can affect the adoption of energy storage and how the impact of energy storage can affect rate design.

TOU Rates to Support Distributed Storage Resources

Utilities are increasingly considering TOU rates to shift load. However, TOU rates have the potential to encourage distributed storage technologies that arbitrage the price differential between on-peak and off-peak time periods. In this presentation, learn how Decoupling and TOU rates could be used to align the utility's financial interests with the deployment of distributed storage resources.

Steve Wishart, Manager, Pricing and Planning, Xcel Energy

Southern California Edison’s New “TOU-D-PRIME” Rate

On March 1, Southern California Edison introduced a new optional rate schedule intended specifically for homeowners with energy storage: the TOU-D-PRIME rate. This TOU-D-PRIME rate has all the elements of an advantageous rate for energy storage system (ESS) economics. In this presentation, learn how your utility can incentivize behind-the-meter residential energy storage and hear about SCE’s larger migration efforts to TOU rates.

Andre Ramirez, Senior Advisor, Regulatory Affairs, Pricing Design & Research, Southern California Edison (SCE)

Rate Design Considerations to Aid Energy Storage

The penetration of customer-sited distributed generation (DG) continues to grow in many markets. Reduced costs for energy storage may allow the industry to move beyond net metering, as customers with DG could pair their generation with storage to efficiently respond to time-differentiated and/or demand-based rates. In this presentation, attendees will learn how dispatching energy storage against different retail rate designs can improve battery economics.

John Fernandes, Senior Consultant – Emerging Technologies, Customized Energy Solutions (CES)
 Session I: The Impact of Energy Storage on Rate Design (continued)

Rate Design Impacts of Energy Storage
With the proliferation of energy storage including a growing number of state mandates and targets, has rate design for storage kept pace? Considerations such as the cost of charging, potential participation in both retail and wholesale markets, and standby and buyback rates designed originally for backup generators. In this session, attendees will learn about approaches being taken in some states to dealing with these challenges.

Kevin Hernandez, Director, ScottMadden, Inc.
Kristen Barone, Utility of the Future, Engineer, Orange & Rockland Utilities, Inc. (invited)

Residential Customer Generation Price Plan at Salt River Project (SRP)
In February 2015, the SRP Board approved a new Customer Generation Price Plan for residential customers who choose to produce some of their own electricity. The purpose of the demand charge, which is included in the plan, is to provide SRP customers with the ability to manage their energy use to maximize their opportunity to save money. This presentation will provide updates on the new DG price plans including the use of battery storage.

Mark Carroll, Principal Analyst, Salt River Project

 Session II: Regulatory Perspectives on Rate Design

This regulatory session will take a comprehensive look at Rate Design. Each speaker will provide a brief regulatory overview on rate design issues in their respective regions, particularly with respect to addressing emerging issues such as distributed generation, electric vehicles and advanced metering. This session will also include a moderated panel discussion on evolving regulatory concerns with energy policy initiatives.

The Net Billing Pilot in Jamaica
In 2012 the electricity regulator in Jamaica approved the implementation of a Net Billing Pilot Program for small scale renewable energy generators. This was undertaken in preference to the more popular net-metering model used elsewhere. In this session the tariff construct and logic as well as the result of the pilot will be discussed.

Cedric Wilson, Deputy Director General, Office of Utilities Regulation (OUR)

Are Demand Charges Due for Reform? – A Vermont Review
Demand charges took hold in Vermont about a century ago and have existed largely unaltered despite significant advances in metering, better communications capabilities, opportunities for load management, and regional wholesale market reforms. After an 8-month conversation with utilities and stakeholders, the Department concluded a report finding that traditional demand charges are indeed due for a makeover. In this session, Riley Allen, Deputy Commissioner, discusses the nature of the changes needed, along with how and why Vermont reached these conclusions.

Riley Allen, Deputy Commissioner, Vermont Department of Public Service

Afternoon Break
Session III: Best Practices in Electric Vehicles & DG Rate Design
The generation of electricity by renewable sources like solar and wind continues its swift ascendency across North America. With these increases in distributed generation (DG), electric vehicles (EVs) ownership and automated energy management – it is important for providers to continue to update their rates. EVs have the potential to provide substantial benefits to society by reducing emissions while lowering both transportation fuel costs and electricity rates. Effective EV rate design is critical for ensuring that these benefits are realized. In this session, attendees will learn about the approaches to dealing with these new challenges.

The Lifestyle Rate Program at Cobb EMC
To increase electric vehicle (EV) adoption in northwest metro Atlanta, Cobb EMC is the first utility in the nation to offer free home charging to accelerate EV adoption. This is the utility’s revolutionary NiteFlex rate, which is part of Cobb EMC’s Lifestyle rate program that includes Niteflex and a demand rate. This presentation will provide results of how customers are responding to this innovate rate.

Tim Jarrell, Vice President, Power Supply and Planning, Cobb EMC

Electric Vehicles Mythbusting
While Electric Vehicle (EV) sales have grown rapidly in the U.S. and are forecast to increase many consumers are still uninformed about the basic facts of owning and operating an EV. In this session, the speakers will share the benefits that EVs can provide to consumers and the role that electricity providers can play in educating consumers about them. Darren Epps, with Georgia Power, will discuss the utility’s efforts in EV education and David Kolata with the Illinois Citizens Utility Board (CUB), will discuss a new study on the potential effects of EVs on residential electricity rates.

Darren Epps, Product Development Specialist, Southern Company
David Kolata, Executive Director, Citizens Utility Board (CUB)

EV Load Growth Through Increased Smart Charging Infrastructure
This session will provide an outlook on current EV market growth – vehicles, load, and related electrified technologies and discuss alternative rate structures to enable transportation electrification. It will also consider various options for utility programs, including potential utility deployments and capitalized investments.

Renee Samson, Director of Utility Solutions, ChargePoint Inc.
AGENDA

TUESDAY, OCTOBER 8, 2019

8:00 – 8:30 am  Continental Breakfast

8:30 am – 12:00 pm  Session IV: Alternative Ratemaking Approaches

10:00 – 10:15 am  Morning Break

Today’s utilities face increasing renewables penetration and regulatory burdens that pose significant threats to profit margins. Designing rates that properly value and enable a high penetration of alternative generation sources to reduce greenhouse gas admission — while recognizing the interests of utility shareholders and non-self-generating customers — is a challenge for utilities throughout North America. In this session, hear from utilities and advocates on different ways to approach alternative rate design in order to educate consumers and have their best interest in mind.

Evolving Pricing Strategies for Emerging Technologies
Can the traditional Bonbright ratemaking model still work effectively in today’s utility business environment? How can we send appropriate pricing signals to consumers to change behaviors, and encourage them use energy more efficiently, but still fully recover utility costs? Can we successfully “unbundle” rates, and show customers what they are paying for? We’ll learn more about what PNM Resources is doing to support the growth of EVs and distributed generation across their customer base, including the concept of an “inverted” TOU rate.

Stella Chan, Director, Pricing and Load Research, PNM Resources

Learnings and Best Practices from PG&E: Time-of-Use Residential Customer Outreach and Education
Pacific Gas and Electric Company has conducted two multi-year pilots to better prepare for full rollout of TOU rates to its diverse population of customer groups with consideration to varying climates, energy consumption habits, income and education levels, and language need. This presentation will detail PG&E’s go-to-market strategy, diversity of collateral and messages for residential customers, and results of each pilot towards achieving its goals.

Erika Wasmund, Principal Marketing Strategist, Residential Time-of-Use Rate Plans, Pacific Gas & Electric (PG&E)

Current Rate Strategies for APS and What’s on the Horizon
In May 2018 APS completed a first of its kind migration to a new suite of residential rates and this transition has accelerated the adoption of advanced residential rates in the APS service territory. In addition, APS introduced a new extra-high load factor rate with sustainability features for extra-large commercial customers. APS will file a new rate review in late 2019 so find out where APS may go from here in residential and commercial rate design.

Leland Snook, Director, Rates & Rate Strategy, Arizona Public Service Company (APS)

A Look at Consumer Advocacy & Regulatory Considerations
This presentation will provide consumer advocate perspectives on whether net metered Distributed Generation (DG) customers pay an appropriate amount for grid access. If DG customers produce substantial cross subsidies, what solution best balances all consumer’s concerns?

Joe Rosenthal, Principal Attorney, Connecticut Office of Consumer Counsel
OVERVIEW

The way we generate, distribute, consume, and pay for power today has been slowly evolving over the past decades. Customers are generating some of their own power, advanced metering structures allow for more sophisticated rate design, and large industrial—and even some residential customers—can actively adjust their demand in reaction to price signals and peak events. Because of this current environment and ever-changing consumer preferences, some regulators are looking at new PBR-like mechanisms to incentivize utilities to respond to these changing needs.

Utilities must look for ways to recover enough revenue to provide a reasonable return for shareholders. States are looking at alternative ratemaking approaches, including performance-based regulation (PBR), to encourage consideration of third-party options, reduce frequency of rate cases, and decouple cost considerations from load changes. Join us for this PBR workshop where you’ll learn the principles of sound ratemaking and regulatory objectives, the need for PBR because of increasing DER and elements of a successful PBR mechanisms.

WORKSHOP AGENDA

- What is PBR and Why You Should Care?
  o History of PBR
    - First implemented in 1990s, but was replaced with advent of multiyear plans/decoupling
    - Examples
    - Lessons Learned: What worked and what didn’t work
- Current Environment – What is Prompting the Need for Change?
  o Consumer preferences are changing; to incentivize utilities to respond to these changing needs, some regulators are looking at new PBR-like mechanisms
    - These will likely include new metrics, including sustainability, promotion of interconnection, and in some cases inclusion of local labor workforces
    - Increasingly, utilities will need to further demonstrate that capital investments have had a positive impact on customers, beyond traditional reliability measure
- Steps and Options for Implementing PBR
  o Design elements
  o Design considerations
- Case Studies
- Conclusions & Takeaways
WORKSHOP INSTRUCTORS

Tim Lyons  
Partner, ScottMadden

Tim Lyons has more than 30 years of experience in the energy industry. Tim has held senior positions at several gas utilities and energy consulting firms. His experience includes rate and regulatory support, sales and marketing, customer service, and strategy development. Prior to joining ScottMadden, Tim was vice president of sales and marketing for Vermont Gas, where he was responsible for all customer-related functions, including sales and marketing, call center, and field service operations. He has also served as vice president of marketing and regulatory affairs for Providence Gas (now part of National Grid), director of rates at Boston Gas (also part of National Grid), and project director at Quantec, LLC, an energy consulting firm. Tim has testified before public utilities commissions in Connecticut, Maine, Maryland, Massachusetts, Rhode Island, and Vermont. Tim holds a B.A. from St. Anselm College, an M.A. in economics from The Pennsylvania State University, and an M.B.A. from Babson College.

Mark Meitzen, PhD  
Senior Consultant, Christensen Associates

Mark Meitzen is a Senior Consultant at Christensen Associates, where he has been employed since 1990. Dr. Meitzen is currently serving as principal investigator on NCFRP24, Preserving and Protecting Freight Infrastructure and Routes. He was a principal author of the November 2008 Christensen Associates' study of the U.S. freight railroad industry commissioned by the Surface Transportation Board. He was also the project manager and one of the principal authors of Christensen Associates' supplemental report to the STB on railroad capacity and investment issues. Dr. Meitzen has expertise in the economic analysis of network industries including telecommunications, railroad, electricity and postal. In addition to the recent STB study, his work in the railroad industry includes analysis of railroad mergers and application of the STB's Constrained Market Pricing standards, including its Stand-Alone Cost methodology.

Dr. Meitzen also serves as an economic expert in regulatory proceedings on incentive regulation, pricing and economic costing matters. He also has experience in civil litigation matters as an expert witness on antitrust, intellectual property and employment issues. Prior to joining Christensen Associates, Dr. Meitzen was a corporate economist at Southwestern Bell Telephone Company and was an assistant professor of economics at Eastern Michigan University and the University of Wisconsin-Milwaukee.
INSTRUCTIONAL METHODS

Case Studies, Panel Discussions and PowerPoint presentations will be used in the program.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

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

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 1.1 CEUs for this conference and 0.4 CEUs for the workshop.

EVENT LOCATION

A room block has been reserved at Renaissance Phoenix Downtown Hotel, 100 North 1st Street, Phoenix, AZ 85004, for the nights of October 7-8, 2019. Room rates are US $229 plus applicable tax. Call 1-602-333-0000 for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is September 13, 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 this conference may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

SPONSORSHIP OPPORTUNITIES

Do you want to drive new business through this event’s powerful audience? Becoming a sponsor or exhibitor is an excellent opportunity to raise your profile before a manageably sized group of executives who make the key purchasing decisions for their businesses. There is a wide range of sponsorship opportunities available that can be customized to fit your budget and marketing objectives, including: Platinum, gold, or VIP sponsor, Reception host, Networking break host, Tabletop exhibit, Workshop sponsor, Lanyard sponsor, Luncheon host and Breakfast host.

REGISTER CALL 201-871-0474 or CLICK HERE
A room block has been reserved at Renaissance Phoenix Downtown Hotel, 100 North 1st Street, Phoenix, AZ 85004, for the nights of October 7-8, 2019. Room rates are US $229 plus applicable tax. Call 1-602-333-0000 for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is September 13, 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.

**SPECIAL BUNDLE PRICE UTILITY RATE DESIGN AND THE INFLUENCE OF EMERGING TECHNOLOGIES CONFERENCE AND POST-CONFERENCE WORKSHOP**

OCTOBER 7-8, 2019: US $1895
EARLY BIRD on or before SEPTEMBER 20, 2019: US $1695

**UTILITY RATE DESIGN AND THE INFLUENCE OF EMERGING TECHNOLOGIES CONFERENCE ONLY**

OCTOBER 7-8, 2019: US $1495
EARLY BIRD on or before SEPTEMBER 20, 2019: US $1295

**POST-CONFERENCE WORKSHOP ONLY: PERFORMANCE BASED RATEMAKING (PBR)**: TUESDAY, OCTOBER 8, 2019: US $595
EARLY BIRD on or before SEPTEMBER 20, 2019: US $495

**I’M SORRY I CANNOT ATTEND, BUT PLEASE EMAIL ME A LINK TO THE CONFERENCE PROCEEDINGS FOR US $395**

**EVENT LOCATION**

Mail Directly To:
PMA Conference Management
PO Box 2303
Falls Church VA 22042
201 871 0474
Fax 253-663-7224
register@pmaconference.com

---

**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

---

**SPECIAL BUNDLE PRICE**

UTILITY RATE DESIGN AND THE INFLUENCE OF EMERGING TECHNOLOGIES CONFERENCE AND POST-CONFERENCE WORKSHOP

OCTOBER 7-8, 2019: US $1895
EARLY BIRD on or before SEPTEMBER 20, 2019: US $1695

UTILITY RATE DESIGN AND THE INFLUENCE OF EMERGING TECHNOLOGIES CONFERENCE ONLY

OCTOBER 7-8, 2019: US $1495
EARLY BIRD on or before SEPTEMBER 20, 2019: US $1295

POST-CONFERENCE WORKSHOP ONLY: PERFORMANCE BASED RATEMAKING (PBR): TUESDAY, OCTOBER 8, 2019: US $595
EARLY BIRD on or before SEPTEMBER 20, 2019: US $495

I’M SORRY I CANNOT ATTEND, BUT PLEASE EMAIL ME A LINK TO THE CONFERENCE PROCEEDINGS FOR US $395

---

**CREDIT CARD INFORMATION**

Name on Card
Account Number
Exp. Date
Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)
Billing Address
Billing City
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 September 6, 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.