



CONNECTIONS **SUMMIT**

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Future Focused Financial and Rate Strategy the “Why”

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Utility Financial Solutions, LLC



- International consulting firm providing cost of service, financial plans and rate designs to utilities across the country, Canada, Guam and the Caribbean
- Instructors for cost of service and financial planning for APPA, speakers for organizations and agencies across the
- Hometown Connections Preferred Vendor

Overview of the Why

- **Why** do we need to focus on the future
- **Why** is it important to look at for a future focused utility
- **Why** are there some disruptions to the industry
 - Management/Board/Council
 - Technologies
- **Why** rollout or change is important
- The “**How**” is session two so stick around!

The Obvious and the Not So Obvious

- Potential disruptions on the technology side can be a little more apparent
- More subtle obstacles are the finances and how decision makers react to those challenges
- We've tried to address both in these sessions
 - Financial
 - Technology



Why Do We Need to Focus on the Future

- Undisrupted service to our customers
 - Reliability
 - Financial
 - Customer Oriented
- Reliability with distributed energy resources or other technologies
- Financial
 - Do you know what your financial risks are
 - Do you have the policies in place to mitigate risk
- Customer Service – do you have the systems in place to provide the best info to your customers
 - Billing
 - Customer service training

What is Important to Look at for a Future Focused Utility

Do you have the policies and procedures in place:

1. Power cost adjustments
2. Cash reserve
3. Proper rate structures – demand, TOU
4. Line extension
5. Collaboration and Support when needed

What are Some Disruptions to the Industry

- Technologies such as solar, EV
 - Are your distribution transformers and lines ready
 - EVs overloading transformers
- Power supply volatility
- Inflation – exponentially on distribution infrastructure; transformers wires and general
- Lack of collaboration electric management and finance
 - Do you know what your cash balances really are?
- Board resistance to rate structure changes; especially customer charges
- (collaboration and resistance are typically internal disruptions)

Why change is important

- Volatility in power supply costs
 - Doing “emergency” PCAs across the country
- Cash balances plummeting
 - No PCA
 - Inflation and supply chain issues – capital tripling
- Board/councils used to the status quo
- Reliability concerns – actual concerns across the country; calls daily of how to address these issues

Technology Disruptions

Why Disruptive Tech is Making Innovative Rates Necessary

- Power Generation Constraints
 - Push away from – coal, natural gas, nuclear, hydro
 - Push toward – solar, wind, batteries
- Power Delivery Constraints
 - Transmission delivery strained
 - Distribution systems strained
- New Customer Loads
 - Electric vehicles – increasing peak load charging requirements
 - Distributed generation – solar, customer peak load
 - Data centers, crypto mining – energy intensive
- Evolving Customers
 - Historically customers were similar in usage within class
 - Customers no longer similar within same class

Rates with Demand (peak kW) and Time-Based Rates (kWh TOU)

- Demand – customer’s peak monthly usage (peak kW)
 - Fair allocation of distribution related costs to support their peak usage
- Time-Base rates (TOU) – customer’s energy usage during different hours of the month that mirrors power supply costs
 - Basic TOU is On Peak & Off Peak – traditionally day & night
 - More advance is – On Peak, Off Peak & Critical Peak – critical peak to recoup expensive power supply demand (CP capacity, CP transmission)
 - (fair, fixed monthly customer charge for fixed cost contribution & PCA for variable power supply assumed)

Why Peak Usage Important (Peak Demand / Load - peak kW)

- Peak Demand
 - Direct relationship to distribution sizing (transformers, wires, poles, substations)
 - Correlates to additional and higher power supply peaks (capacity, transmission)
- Distributed Generation – Solar
 - Typical residential peak 5 kW without solar
 - Typical residential peak 5 kW without solar (solar not producing @ peak usage)
- EV Charging – max kW increasing
 - Typical residential EV level I was 2 kW, now seeing level II 20 kW+
 - Typical commercial EV level III was 60 kW+, now seeing level III 250 kW, 350 kW
 - Tesla Semi and Cybertruck level III typical 750 kW to 1 MW, level IV estimated 3.7 MW

Pros/Cons of Various Rate Options to Address Disruptions

- Demand/energy
 - Distribution demand (customer peak usage) fair allocation of system impacts
 - Flat energy rate does not consider time-value of energy
- Demand/TOU
 - More accurate pricing for both customer distribution impacts and time of energy usage
 - Challenging to evolve rates to mirror changing power supply cost signals
- TOU
 - Does not fairly account for customer distribution impacts
 - Has utility fixed cost recovery in kWh rates not directly tied to power costs

Customer Understanding/Acceptance of Potential Rate Designs

- Most customers don't understand electric rates
 - They should **NOT** be expected to fully understand - keep messaging simple
 - Rate changes should be gradual to minimize impacts and to maximize acceptance
- Simplify rate components for better understanding
 - Customer charge – **fixed cost recovery** for customer service, meter reading, billing (charges that don't go away with varying customer usage)
 - Demand charge – customer peak usage of energy during month for fixed cost recovery to **support the distribution system**
 - TOU energy kWh – **time-based energy charge** to mirror power costs (when to and when not to use power)
- Gradual rate changes
 - Slowly evolve rates to keep average customer bill similar while allowing outliers to pay their fair share over time

Successful Implementation of Innovative Rates

- Understand metering capabilities
- Test metering to billing integration
- Show rate components on customer's bill even with \$0 initially

Smooth Transition to a Capable CIS Systems

- Assess current customer billing and collection systems
- Ensure that they can or will support
 - Demand billing for all customers
 - TOU energy for all customers
- Get requirements documented and written guarantee prior to new system selection
- Test early to ensure that all capabilities and systems work as planned
- Show new rate components on bills even with \$0 impact or change

Modern Bill Print and Payment Options

- Ensure that all billing components are clearly on bill
 - Show quantity, rate and subtotal for all line items
 - Clearly show subtotal rolling up to total bill with taxes etc.
- Customers should at least be able to follow the math even if they don't understand electric rate methodologies
- Savvy customers want access to their detailed historical usage and billing
- Customers have grown to expect flexible payment options
 - Away from manual payment methods
 - To a variety of digital payment methods

Session Two Will Address How to Move Forward

- PCA calculations
- Financial target ranges
- Extensions policies
- Board/Council education
- Rate payer education
- Navigating road to innovative rates
 - Rate components example, TOU examples
 - AMI metering and an MDMS
 - Cost of service and financial planning
 - Customer communication and rate rollout
 - Case study of innovative rate rollout

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