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Future Focused Financial and Rate Strategy the “How”

Speakers:

Dawn Lund - Vice President, Utility Financial Solutions, LLC

Chris Lund – Rates and Technology Manager, Utility Financial Solutions, LLC

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

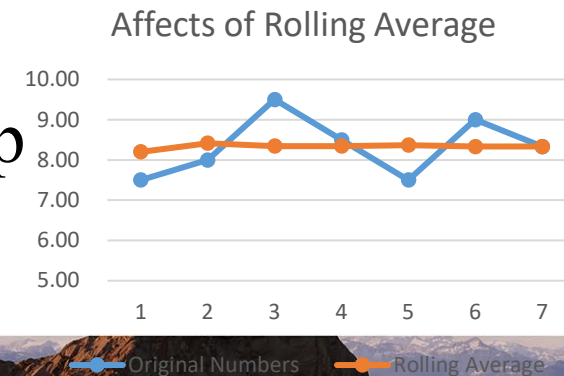
The Obvious and the Not so Obvious Continued

- Session one we focused more on the “**Why**” – this we’ll focus more on the “**How**”
- Financial disruption mitigation
- Technology disruption mitigation
- 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

How Do We Get Ready Financially

PCA Strategy

- Power supply volatility = **Implement a PCA ASAP**
- Automatic kWh charge that is passed-through to customers for increasing power costs
- Limits utilities expense risk (PP 60-80% O&M)
 - Does not limit board control of rates, concentrate on things more likely in their control – distribution and admin related (20%- 40%)
- Reduces amount and frequency of rate adjustments
- Typically done a 6 to 12 month average with a true-up



Cash Reserve Policy

- Cash Balances – **Develop a Cash Reserve Policy ASAP**
- Based on financial risks to the utility
- List methodology and show calculations in policy for ease of update in the future
- Future management, boards and councils will continue to maintain adequate reserve levels
- Identify time period to restore cash reserve if falls below minimum cash levels

Cash restored through issuance of debt, rate adjustments, reduced expenses

Cash Reserve Methodology

Five Risk Factors to Consider	% Risk Range to Allocate	MINIMUM Reserves
O&M Expenses (Less Power Costs and Depreciation)	12.3%	\$2,958,904
Power Costs	15.6%	5,675,082
Historical Investment in Assets	2.0%	3,311,700
Annual Debt Payment	80.4%	505,879
Total Five-Year Capital Plan	20.0%	1,800,000
Total of These Five Items		\$14,251,565

Financial Spot Checks

- **You don't have to be a financial expert**
- Operating income – should be positive
- Cash reserve roughly 55% of O&M expenses
- Debt coverage ratio – cash flow statement 1.5 times payment
- Age of System – eyeball it – at least half of historical investment
- Debt to Equity – eyeball it – less than half of NBV
- One or two of these may not matter – several might
- Cash and debt coverage ratio most important



Educate Board, Council and the Rate-Payer NOW

- **Educate on importance of financial targets**
 - Critical they understand
 - Don't wait until an increase is needed – ongoing process
- Get input from them = “buy-in”
- Get formal approval on targets
- **More likely to act and support when needed**

Line Extension Policies

- **Connecting new customers**
 - Who pays what?
- **Charges for transformer to customer meter**
 - Easiest to charge “standard”, pre-calculated fees
 - Most accurate to charge entire cost to each customer at actual cost
 - Common for utilities to cover portion (marginal distribution and admin related contribution for 3 to 7 years), customer pays rest at cost
- **Impact fees**
 - Intended to cover cost of servicing new loads from substation to customer transformer
 - Not as common for utilities to charge, depends on state and local policies
- **Payment options**
 - Customer pays up front
 - Customer pays over initial contracted term
 - Utility pays and customer reimburses over contracted term

How to Navigate Road to Innovative Rates

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Navigating Road to Innovative Rates

- Rate components example, TOU examples
- AMI metering and an MDMS (metering and billing)
- Cost of service and financial planning (integration with rates)
- Customer communication and rate rollout
- Case study of innovative rate rollout

Rate Components Example

- Customer charge – monthly fixed cost recovery
- 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)

TOU Structure Example 1

1 Season (Annual), 2 TOU periods (On Peak, Off Peak)

Start Time	End Time	Hour Ending	Annual
12:00 AM	12:59 AM	1	Off Peak
1:00 AM	1:59 AM	2	Off Peak
2:00 AM	2:59 AM	3	Off Peak
3:00 AM	3:59 AM	4	Off Peak
4:00 AM	4:59 AM	5	Off Peak
5:00 AM	5:59 AM	6	Off Peak
6:00 AM	6:59 AM	7	Off Peak
7:00 AM	7:59 AM	8	On Peak
8:00 AM	8:59 AM	9	On Peak
9:00 AM	9:59 AM	10	On Peak
10:00 AM	10:59 AM	11	On Peak
11:00 AM	11:59 AM	12	On Peak
12:00 PM	12:59 PM	13	On Peak
1:00 PM	1:59 PM	14	On Peak
2:00 PM	2:59 PM	15	On Peak
3:00 PM	3:59 PM	16	On Peak
4:00 PM	4:59 PM	17	On Peak
5:00 PM	5:59 PM	18	On Peak
6:00 PM	6:59 PM	19	On Peak
7:00 PM	7:59 PM	20	On Peak
8:00 PM	8:59 PM	21	On Peak
9:00 PM	9:59 PM	22	Off Peak
10:00 PM	10:59 PM	23	Off Peak
11:00 PM	11:59 PM	24	Off Peak

TOU Structure Example 2

2 Seasons (Summer, Non-Summer), 3 TOU periods (On Peak, Off Peak, Critical Peak)

Start Time	End Time	Hour Ending	Summer	Non-Summer
12:00 AM	12:59 AM	1	Off Peak	Off Peak
1:00 AM	1:59 AM	2	Off Peak	Off Peak
2:00 AM	2:59 AM	3	Off Peak	Off Peak
3:00 AM	3:59 AM	4	Off Peak	Off Peak
4:00 AM	4:59 AM	5	Off Peak	Off Peak
5:00 AM	5:59 AM	6	Off Peak	Off Peak
6:00 AM	6:59 AM	7	Off Peak	Off Peak
7:00 AM	7:59 AM	8	On Peak	On Peak
8:00 AM	8:59 AM	9	On Peak	Critical Peak
9:00 AM	9:59 AM	10	On Peak	Critical Peak
10:00 AM	10:59 AM	11	On Peak	Critical Peak
11:00 AM	11:59 AM	12	On Peak	On Peak
12:00 PM	12:59 PM	13	On Peak	On Peak
1:00 PM	1:59 PM	14	On Peak	On Peak
2:00 PM	2:59 PM	15	Critical Peak	On Peak
3:00 PM	3:59 PM	16	Critical Peak	On Peak
4:00 PM	4:59 PM	17	Critical Peak	On Peak
5:00 PM	5:59 PM	18	Critical Peak	On Peak
6:00 PM	6:59 PM	19	On Peak	Critical Peak
7:00 PM	7:59 PM	20	On Peak	Critical Peak
8:00 PM	8:59 PM	21	On Peak	Critical Peak
9:00 PM	9:59 PM	22	Off Peak	Off Peak
10:00 PM	10:59 PM	23	Off Peak	Off Peak
11:00 PM	11:59 PM	24	Off Peak	Off Peak

Rate Component Cost Allocation (sample only – revenue requirements for residential class)

- Total utility costs 100% = sample \$10 M total costs
 - Administration and distribution (non power supply) 32% = \$3.2 M
 - Power supply 68% = \$6.8 M
- Basic rate components
 - Customer charge 45% of non power supply costs = \$1.4 M
 - Distribution demand charge 55% of non power supply costs = \$1.8 M
 - Energy charge (flat) rate 100% of power supply costs = \$6.8 M
 - TOU example
 - On Peak 68% = \$4.6 M
 - Off Peak 32% - \$2.2 M

AMI Metering and MDMS for Innovative Rates

- Understand alternatives on how to track and bill customer usage
- **Alternative One (traditional TOU)**
 - All peak demand and time-base usage tallied at meter
 - Summary demand and TOU usage passed from meter to billing
- **Alternative Two (preferred)**
 - Meters configured to pass interval data to MDMS
 - Summary demand and TOU usage passed from MDMS to billing

Financial Analysis Integration with Innovative Rates

- It is critical that innovative rates consider prior financial planning goals and targets
- Smooth and consistent rate evolution is best
- Minimize sudden impacts to customers
- Maximize fair financial recovery over time

Customer Communication and Rate Rollout

- Successful demand rollout with minimal customer communication needed
 - Slow and gradual evolution with minimal impact to average customer
- Time-based rates require more customer communication
 - Simple color coding can help to understand TOU periods
 - Rates vary by time-of-day so customer awareness is important
 - Successful gradual transition can minimize impacts
 - Some may offer multiple TOU rate alternatives
 - Consider TOU strategy
 - Opt in – Customer asks to be on rate
 - Opt out – Customer asks to be taken out of rate
 - Mandatory – Customer must be on a TOU rate (single or multiple TOU rate alternatives)

Case Study of Innovative Rates Rollout

- Traditional Rates – increase customer charge, phase out kWh blocks, balance PCA

Phase Out Energy Blocks, balance PCA						
Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 8.00	\$ 10.50	\$ 13.00	\$ 15.50	\$ 18.00	\$ 20.50
Energy Charge:						
Block 1 (0 - 500 kWh)	\$ 0.09668	\$ 0.12759	\$ 0.12722	\$ 0.12685	\$ 0.12648	\$ 0.12611
Block 2 (Excess)	\$ 0.08460	\$ 0.11793	\$ 0.11998	\$ 0.12203	\$ 0.12408	\$ 0.12611
Power Cost Adjustment:						
All Energy	\$ 0.03128	\$ -	\$ -	\$ -	\$ -	\$ -

Case Study of Innovative Rates Rollout

- Demand / energy (flat energy) – increase customer charge, phase out kWh blocks, introduce kW, balance PCA

Distribution Demand Option, balance PCA	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 8.00	\$ 10.50	\$ 13.00	\$ 15.50	\$ 18.00	\$ 20.50
Energy Charge:						
Block 1 (0 - 0 kWh)	\$ 0.09668	\$ 0.12235	\$ 0.11675	\$ 0.11114	\$ 0.10553	\$ 0.09993
Block 2 (Excess)	\$ 0.08460	\$ 0.11269	\$ 0.10951	\$ 0.10632	\$ 0.10313	\$ 0.09993
Demand Charge						
All Demand	\$ -	\$ 1.00	\$ 2.00	\$ 3.00	\$ 4.00	\$ 5.00
Power Cost Adjustment:						
All Energy	\$ 0.03128	\$ -	\$ -	\$ -	\$ -	\$ -

Case Study of Innovative Rates Rollout

- Demand / TOU (time-based energy) - increase customer charge, introduce TOU kWh, introduce kW, balance PCA

Distribution Demand Option w/TOU, balance PCA	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Rates	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Monthly Facilities Charge:						
All Customers	\$ 8.00	\$ 10.50	\$ 13.00	\$ 15.50	\$ 18.00	\$ 20.50
Energy Charge:						
On Peak	\$ 0.09668	\$ 0.12972	\$ 0.13149	\$ 0.13325	\$ 0.13501	\$ 0.13678
Off Peak	\$ 0.08460	\$ 0.10564	\$ 0.09541	\$ 0.08517	\$ 0.07493	\$ 0.06470
Demand Charge						
All Demand	\$ -	\$ 1.00	\$ 2.00	\$ 3.00	\$ 4.00	\$ 5.00
Power Cost Adjustment:						
All Energy	\$ 0.03128	\$ -	\$ -	\$ -	\$ -	\$ -

Case Study of Innovative Rates Rollout – Summary Year 5

- Summary rates at Year 5 – increase customer charge, kWh and kW alternatives, balance PCA

Phase Out Energy Blocks, balance PCA	Traditional Rates	Phase Out Energy Blocks, balance PCA	Distribution Demand Option, balance PCA	Distribution Demand Option w/TOU, balance PCA	
Rates	Current	Year 5	Year 5	Year 5	
Monthly Facilities Charge:					
All Customers	\$ 8.00	\$ 20.50	\$ 20.50	\$ 20.50	
Energy Charge:					
Block 1 (0 - 500 kWh)	\$ 0.09668	\$ 0.12611	\$ 0.09993	\$ 0.13678	On Peak
Block 2 (Excess)	\$ 0.08460	\$ 0.12611	\$ 0.09993	\$ 0.06470	Off Peak
Power Cost Adjustment:		\$ -	\$ -	\$ -	
All Energy	\$ 0.03128	\$ -	\$ 5.00	\$ 5.00	

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