Path to the Future:
A Roadmap for Future Financial Success

2023 Annual ElectriCities Conference

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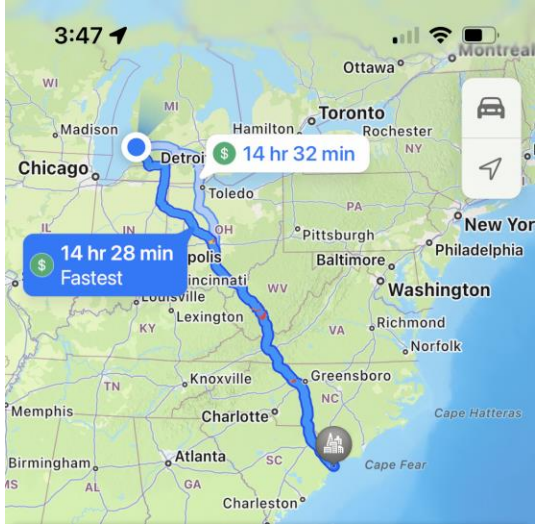
- Instructors for cost of service and financial planning for APPA, speakers for organizations across the country, including AWWA
- Hometown Connections preferred vendor

UFS Staff at the APPA's National Conference 2022

A Roadmap for Financial Success



- Prepare – Financial Targets and Policies
  - Budget
  - 5-year Plan for Capital Improvements
  - Financial Policies – Cash reserves, Line Extension, Power Cost Adjustment
- Plan – Manage Risk through Revenue Stability
  - What will we do if our cash goes below the policy?
  - Do we have large capital need in the future that will require a debt issuance?
    - Metering and billing system replacements + requirements
    - Transformers/substations
  - Educate Governing Body
- Destination – Rate structures
  - Define utility goals, even if they are “down the road”

Do you know what I'm talking about?

We haven't had a rate increase in XX years ☺

- Board/Council avoids rate adjustments
- Operating at a loss
- Spending down cash
- Foregoing capital investment
- System aging
- Need major improvements
- We want to be the lowest cost provider….

- **All of these point to lack of financial policies**

Prepare:
Financial Targets + Policies

Move your utility forward with stability

What are Financial Policies

- Adopted by the legislative body - written guidance on core financial areas
- Clarity to be understood by staff and decision makers
- Consistency as staff and elected officials change
- Helps your managers make consistent and reliable decisions

Should public power have a rate of return?

- Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations
  - Fund Interest expense
  - Fund inflationary increase on historical investment of system

Determination of Target Operating Income (ROR)

- Operating Income divided by Net Book Value (Rate of Return %)
- Do for all utilities = upward pressure on electric when not healthy

A	Net Book Value (NBV)	$	36,000,000
B	Operating Income		1,536,000
(B/A)	**ROR %**		**4.3%**

Typically 4-6% for municipals

Why a Cash Reserve Policy?

- Customers and governing body may not understand why utilities need to maintain reserves
- List methodology and show calculations in policy for ease of update in the future
- Periodic reviews of cash levels and rate adjustments
- Identify time period to restore cash reserve if falls below minimum cash levels
  - **Cash restored through issuance of debt, rate adjustments, reduced expenses in next 3-5 years**
- Future management, Boards and Councils will continue to maintain adequate reserve levels

Minimum Cash

- Policy should identify **minimum** cash reserve level
  - Cash should be allowed to be above the minimum level
  - Cash reserves will fluctuate over time depending on age of assets and capital improvement program
- Most Common Policy: Number of Days of O&M
  - 90-120+ Days
  - Higher bond rating 200+

Determination of Minimum Cash:

At Least 5 Factors to Consider

Five Risk Factors to Consider	% Risk Range to Allocate	Influenced By:
O&M Expenses (Less Power Costs and Depreciation)	12-25%	Billing Cycle - timing of expenses VS Receipts
Power Costs	10-25%	Max Month converted to working capital days
Historical Investment in Assets	1-3%	Age of System, Likelihood of ice, wind, other
Annual Debt Payment	50-100%	Timing of Debt Payments
Total Five-Year Capital Plan	20%	1/5 of five-year plan - funds beginning of season
Total of These Five Items		**$X,XXX,XXX MINIMUM Recommendation**

Minimum Cash Reserve Policy

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

Simplification of Policy

Once the methodology is established - simplify policy for number of days of O&M

Policy Simplification		
Annual Expense	$	24,000,000
Power Supply		36,356,174
Total Expenses	$	60,356,174
Minimum Cash Reserve	$	14,251,556
Factor ($60.4M/$14.3M)		4.23
Days Cash on Hand (365/4.23)		86.0

Minimum Reserve Policy

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%	3,311,700
Annual Debt Payment	~~80.4%~~	100%	505,879
Total Five-Year Capital Plan	20.0%		1,800,000
Total of These Five Items			~~$14,251,565~~

Add other line items unique to your utility

Debt Coverage Ratio

- Identifies cash generated by operations above the debt service payment
- Debt coverage ratios mandated by covenants and established in bond ordinances
- Know your requirements and calculate with the yearly budget process

General Calculation

- Cash generated by operations divided by debt service
- Typical formula:
  - Net Income, plus depreciation expense plus interest expense
  - Divided by Debt Service Payment
- Typical requirements are 1.25X

Build in Safety Factor

- When setting rates a safety factor must be built into the coverage ratio for planning purposes
  - Electric sales dependent on weather
  - Power supply prices fluctuate
  - Unexpected expense can occur
  - Unexpected Transfers to city
- Potentially causes the utility to fall below coverage requirements
- Safety factor of 0.2 is typically added to Bond Coverage requirement

Bond Covenent Requirement	Saftey Factor	Minimum Target Level for Planning Purposes
1.10	0.20	1.30
1.20	0.20	1.40
1.25	0.20	1.45

PILOT and Debt Coverage Ratio

Actual Ordinance	Financial Planning	Item
$ 268,986	$ 268,986	Net income (PILOT Included in O&M)
1,256,890	1,256,890	Depreciation
789,465	789,465	Interest Expense
1,058,932	-	PILOT Payment
$ 3,374,273	$ 2,315,341	Cash flow from operations
1,986,543	1,986,543	Debt Payment
1.70	1.17	Debt Coverage Ratio
	1.25	**In Ordinance**

Meeting stated ordinance, but not for financial planning purposes
Could you really forgo paying the City??

Plan:

Piecing the Targets Together for a smooth ride

Financial Projection
Base Case – No Rate Increase

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
Year 1	0.00%	$ 140,298,723	$ 141,333,703	$ (1,034,980)	$ 35,313,396	$ 6,975,000	-	2.34
Year 2	0.00%	143,900,552	146,605,317	(2,704,765)	29,549,231	6,265,000	-	2.14
Year 3	0.00%	145,430,257	150,971,486	(5,541,229)	20,701,100	6,516,000	-	1.78
Year 4	0.00%	147,395,894	155,879,882	(8,483,988)	7,246,116	8,123,000	-	1.42
Year 5	0.00%	148,176,101	160,519,276	(12,343,175)	(7,718,630)	7,068,000	-	1.13
Recommended Operating Income Target - Year 1				$ 10,887,198				
Recommended Operating Income Target - Year 5				$ 10,273,763				
Recommended Minimum Cash - Year 1					$ 40,304,223			1.40
Recommended Minimum Cash - Year 5					$ 44,995,205			1.40

Financial Projection
Debt Coverage

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
Year 1	0.00%	$ 140,298,723	$ 141,333,703	$ (1,034,980)	$ 35,313,396	$ 6,975,000	-	2.34
Year 2	0.00%	143,900,552	146,605,317	(2,704,765)	29,549,231	6,265,000	-	2.14
Year 3	0.00%	145,430,257	150,971,486	(5,541,229)	20,701,100	6,516,000	-	1.78
Year 4	0.00%	147,395,894	155,879,882	(8,483,988)	7,246,116	8,123,000	-	1.42
Year 5	1.50%	150,139,276	160,519,276	(10,379,999)	(5,755,455)	7,068,000	-	1.43
Recommended Operating Income Target - Year 1				$ 10,887,198				
Recommended Operating Income Target - Year 5				$ 10,273,763				
Recommended Minimum Cash - Year 1					$ 40,304,223			1.40
Recommended Minimum Cash - Year 5					$ 44,995,205			1.40

Financial Projection
Operating Income Adjustments

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
Year 1	9.50%	$ 152,251,052	$ 141,333,703	$ 10,917,349	$ 47,265,726	$ 6,975,000	-	3.86
Year 2	1.00%	157,342,310	146,605,317	10,736,993	55,331,769	6,265,000	-	3.88
Year 3	2.00%	161,831,873	150,971,486	10,860,388	63,723,187	6,516,000	-	3.94
Year 4	1.50%	166,199,289	155,879,882	10,319,407	70,469,815	8,123,000	-	3.93
Year 5	2.50%	170,898,520	160,519,276	10,379,244	80,282,259	7,068,000	-	4.88
Recommended Operating Income Target - Year 1				$ 10,887,198				
Recommended Operating Income Target - Year 5				$ 10,273,763				
Recommended Minimum Cash - Year 1					$ 40,304,223			1.40
Recommended Minimum Cash - Year 5					$ 44,995,205			1.40

Financial Projection
Minimum Cash Reserve Target

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
Year 1	4.00%	$ 145,331,282	$ 141,333,703	$ 3,997,579	$ 40,345,956	$ 6,975,000	-	2.98
Year 2	1.00%	150,294,744	146,605,317	3,689,427	41,139,540	6,265,000	-	2.97
Year 3	2.00%	154,575,379	150,971,486	3,603,893	41,813,217	6,516,000	-	2.98
Year 4	3.50%	161,519,807	155,879,882	5,639,925	43,168,289	8,123,000	-	3.26
Year 5	0.90%	163,735,895	160,519,276	3,216,620	44,930,808	7,068,000	-	3.66
Recommended Operating Income Target - Year 1				$ 10,887,198				
Recommended Operating Income Target - Year 5				$ 10,273,763				
Recommended Minimum Cash - Year 1					$ 40,304,223			1.40
Recommended Minimum Cash - Year 5					$ 44,995,205			1.40

Financial Projection
Recommended Rate Track

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
Year 1	2.80%	$ 145,331,282	$ 141,333,703	$ 3,997,579	$ 40,345,956	$ 6,975,000	-	2.98
Year 2	2.80%	152,669,729	146,605,317	6,064,412	43,514,526	6,265,000	-	3.27
Year 3	2.80%	158,116,137	150,971,486	7,144,652	47,806,147	6,516,000	-	3.43
Year 4	2.80%	164,233,081	155,879,882	8,353,199	52,069,264	8,123,000	-	3.62
Year 5	2.80%	169,308,261	160,519,276	8,788,985	59,693,430	7,068,000	-	4.55
Recommended Operating Income Target - Year 1				$ 10,887,198				
Recommended Operating Income Target - Year 5				$ 10,273,763				
Recommended Minimum Cash - Year 1					$ 40,304,223			1.40
Recommended Minimum Cash - Year 5					$ 44,995,205			1.40

Do You Have a Capital Plan?

- Helps ensure long-term success by maintaining and replacing its physical assets
- Working document or roadmap for critical and long-term replacement
  - ***Capital Budget*** is spending for upcoming year
  - ***Capital Plan*** extends five plus years
- Involves governing bodies strategic planning, Engineering and financial planning
- Prepared collectively increases “buy-in” among decision makers, employees and rate-payers
- Should be updated annually to reflect changing needs, priorities, and funding opportunities

Capital Plan Example

Account Category / Project Description	Fiscal Year 2021-22	Fiscal Year 2022-2023	Fiscal Year 2023-24	Fiscal Year 2024-25	Fiscal Year 2025-26
TRANSMISSION PLANT					
1. Overhead Conductors & Devices					
a. Transmission (re-conductor 34 throughout system)	$ 200,000	$ 100,000	$ 100,000	$ 250,000	$ 250,000
b. Engineering	$ 65,000	$ 65,000	$ 65,000	$ 65,000	$ 65,000
2. Equipment Broadway Substation					
a. Remove Station Transformer (other projects must precede this removal)			$ 150,000	$ 150,000	$ 150,000
"Transmission Plant" Subtotal	**$ 265,000**	**$ 165,000**	**$ 315,000**	**$ 465,000**	**$ 465,000**
DISTRIBUTION PLANT					
1. Poles / Towers / Fixtures (New Construction)	$ 150,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
2. Overhead Conductors & Devices					
a. Downtown network upgrades		$ 350,000	$ 350,000	$ 350,000	$ 350,000
b. New System Additions - Unknown Customer Activity		$ 10,000	$ 10,000	$ 25,000	$ 10,000
3. Overhead Street Lights					
a. Convert Mercury Vapor Lights and HPS to Magnetic Induction & LED	$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 55,000
b. Install Decorative Street Lights - 5th-9th, West Main St ., State St.			$ 100,000		
c. Strain pole signal/walk lights Broadway & 3rd	$ 100,000	$ 100,000			
4. Underground Conversions, Conductors & Devices					
a. 11th st underground conversions (15kV)	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
b. Sioux trail/Old Saulk backyard underground conversion	$ 100,000				
5. Distribution Transformers	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
"Distribution Plant" Subtotal	**$ 605,000**	**$ 815,000**	**$ 815,000**	**$ 730,000**	**$ 715,000**
GENERAL PLANT					
1. Trucks & Trailers					
a. Electric Utility Vehicle replace 72	$ 12,000				
b. Backhoe replacement, split w/ W		$ 65,000	$65,000		
c. Electric F150	$ 25,000	$ 25,000			
d. Backyard machine	$ 100,000	$ 100,000			
2. Tools & Shop Equipment	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000
a. Misc. Tooling					
"General Plant" Subtotal	**$ 147,000**	**$ 200,000**	**$ 75,000**	**$ 10,000**	**$ 10,000**
TOTAL COMMITMENT BY YEAR	**$ 1,017,000**	**$ 1,180,000**	**$ 1,205,000**	**$ 1,205,000**	**$ 1,190,000**

How Much is Enough Capital?

- Recording with reasonable depreciation rates
- Accumulated depreciation/total historical investment in system
- Between 0.40 - 0.60 average range
- Over 0.60 depreciated system is aging
  - Capital program will probably be increasing in the future

Historical Investment	$	32,500,000
Accumulated Depreciation		17,258,000
% Depreciated		**53%**

Destination: Modernizing Electric Rates

Know the direction you are going and how to design rates to meet those goals

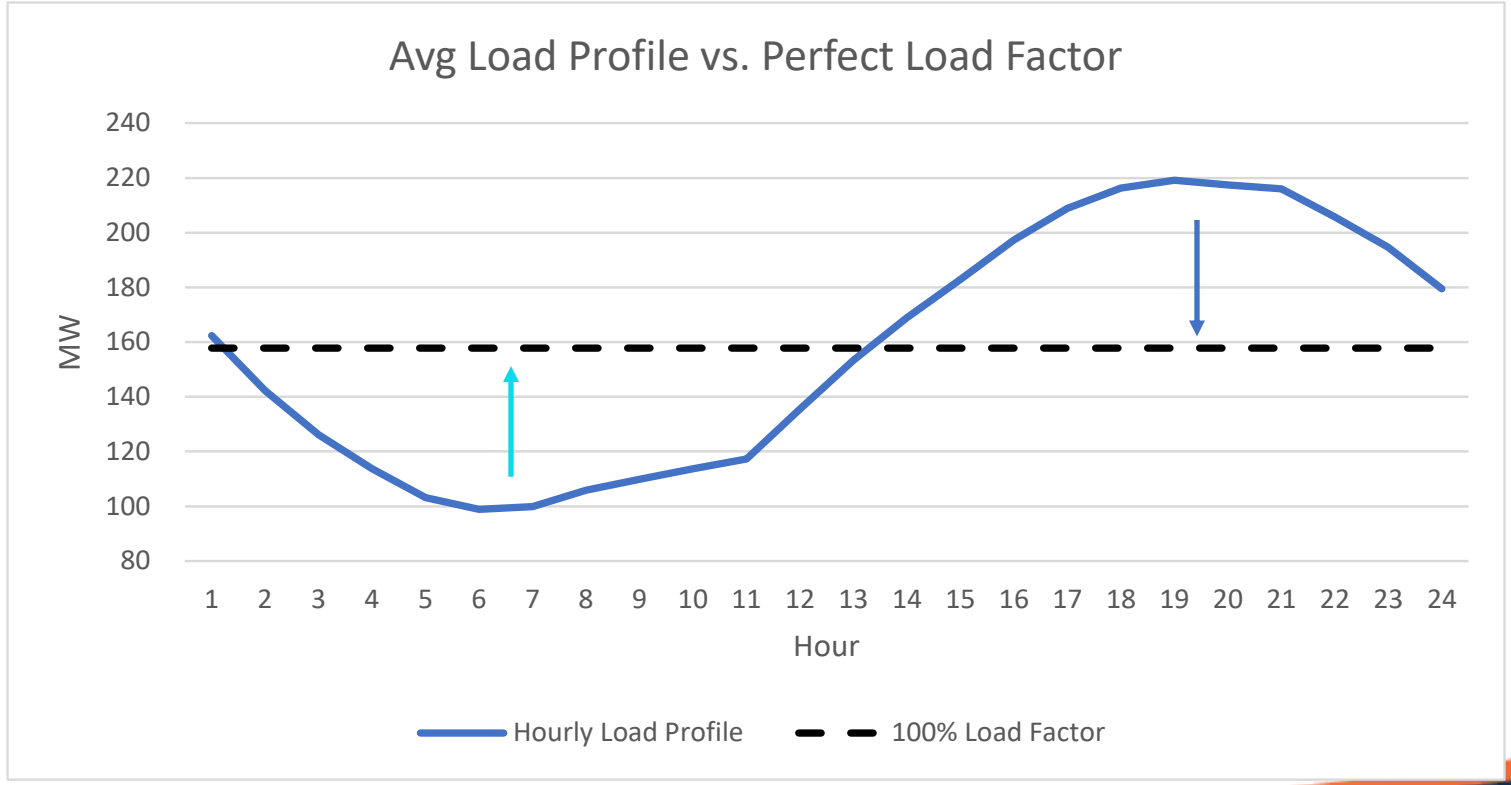
Historical Establishment of Rates

- Previously customers were placed into rate classes bases on similar usage patterns and customer requirements
    - Customer Load factors
    - When energy was used
    - Metering requirements
    - Service levels – Secondary/Primary/Sub-T
- Categories of Rates:
    - Residential; Commercial; Industrial

Customer usage patterns now vary substantially from class averages

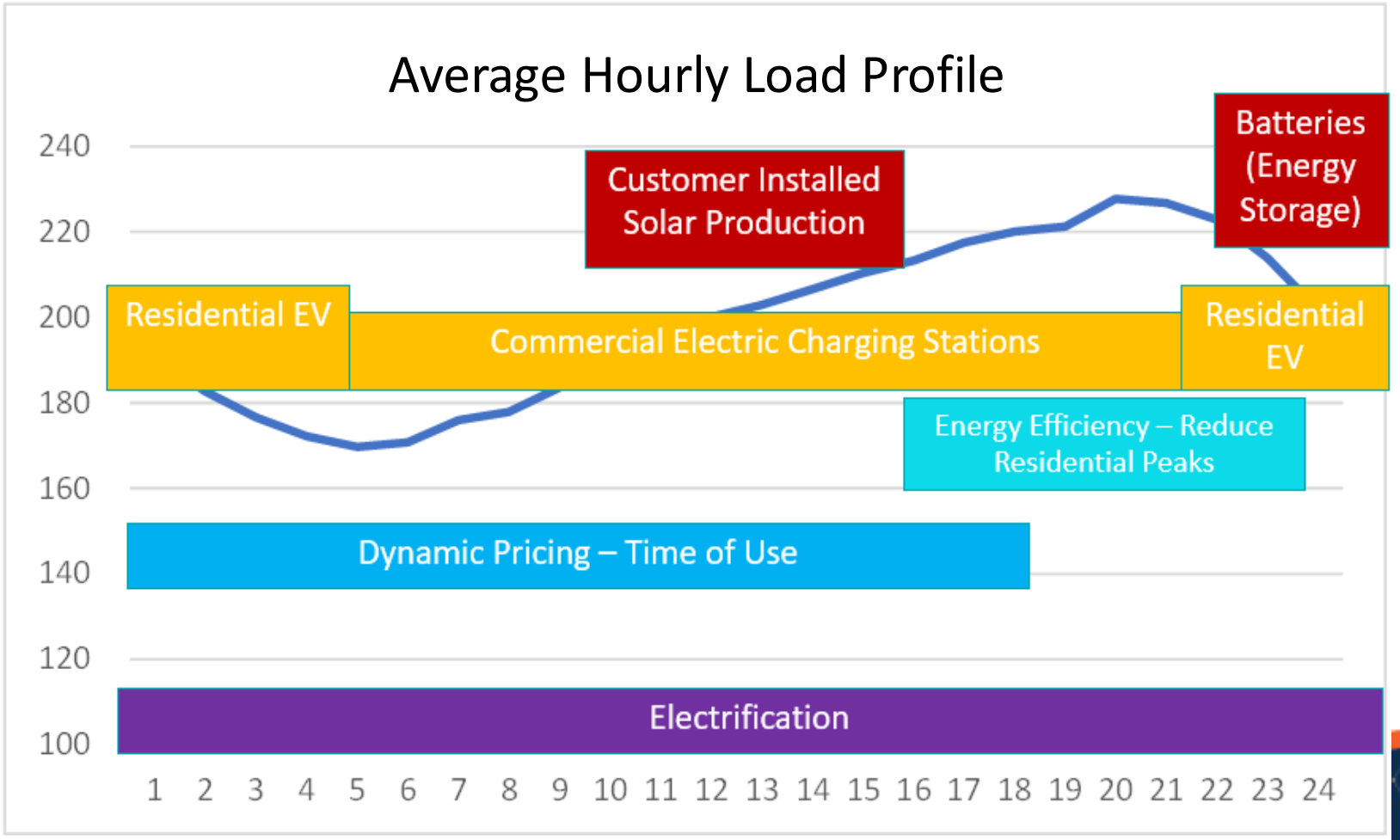
Utility Objective

Improve Load Factor

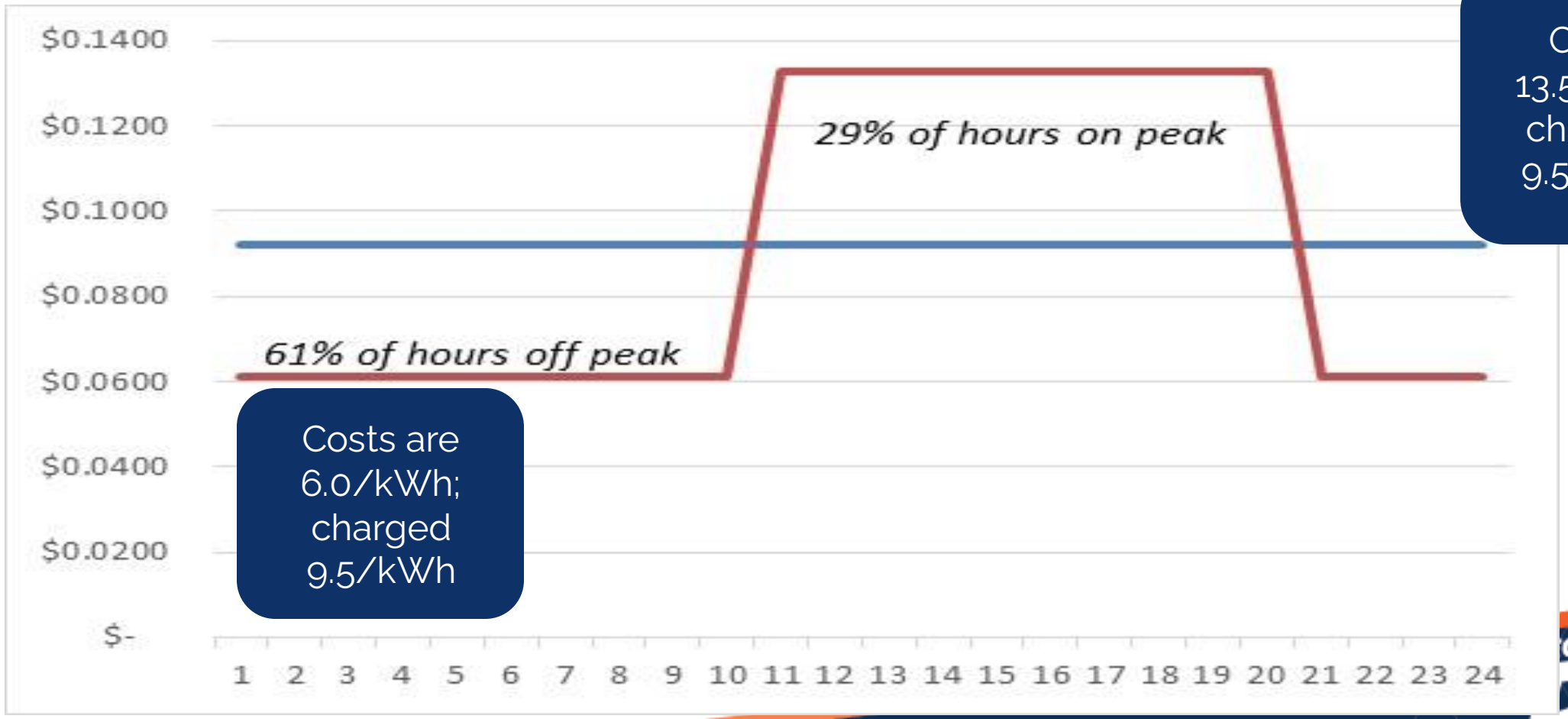


Technology Impacts on Hourly System Usages

- Improving Load Factors
- Reduce energy use during high-cost hours
- Lower the need for additional generation resources



Example Utility Costs Compared to Rates

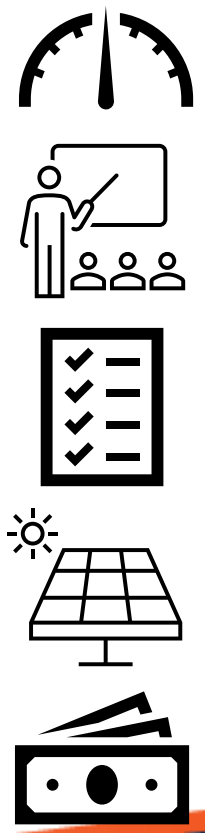


Costs 13.5/kWh charged 9.5/kWh

Costs are 6.0/kWh; charged 9.5/kWh

Concerns About Time Differentiated Rates

- Investment needed for AMI, database management and billing system
- Customer education (Acceptance of rate?)
- Customer bill impacts?
- Will solar customers benefit or be adversely impacted?
- Do we have the technology in place for billing?
- Should we offer a PILOT program to work out any potential issues?



Implementation of Time-Based Rates

Suggestions:

- Full implementation offering for residentials with Charging Stations
- Phase in for Residential Customers

✓ Develop a Long-Term Transition Plan

Rates	Current	Phase One	Phase Two	Phase Three
Monthly Facilities Charge:				
Single Phase	$ 15.50	$ 15.50	$ 15.50	$ 15.50
Three Phase	$ 27.75	$ 27.75	$ 27.75	$ 27.75
Energy Charge:				
Power Supply On-Peak Energy	$ 0.09800	$ 0.11900	$ 0.14000	$ 0.16100
Power Supply Off-Peak Energy	$ 0.09800	$ 0.09100	$ 0.08400	$ 0.07700
Revenue from Rate	$ 2,281,638	$ 2,281,139	$ 2,280,640	$ 2,280,141
Change from Previous		0.0%	0.0%	0.0%
Average Increase		**2.0%**	**1.9%**	**1.9%**
Average Decrease		**-2.1%**	**-2.2%**	**-2.3%**

How do Residential EV's Impact Electric Sales?

- kWh's per vehicle: (1 mile = 0.25 kWh)

Annual Miles	kWh's	Number of homes	Additional kWh Sales
15,000	3,750	1,000	3,750,000
10,000	2,500	1,000	2,500,000
5,800	1,450	1,000	1,450,000

Transportation is projected to account for 21% of electric sales by 2050

- Additional 300 kWh/month per residential home
- EV's are projected to represent between 25% - 50% of new car purchases by 2030

Load Factor and Average Cost

Demand Charge	$	15.80
Energy Rate	$	0.084

Load Factor		Average Cost per kWh
5%	$	0.52
10%	$	0.30
20%	$	0.19
40%	$	0.14
60%	$	0.12

Infrastructure	Basis for Charge
Power Supply	Customers contribution toward Peak
Transmission	Customers contribution toward Peak
Sub-Transmission	Customers contribution toward Peak
Distribution	Customer Peak

- Rates tend to be developed based on class averages
- The load factor of car charging stations often results in greater diversity and may result in charging rates above costs when based on the general service rate tariff

Commercial Charging Station Rate Tariff

Rate Component	General Service Rate Tariff	EV Charging Rate Tariff
Customer Charge	$ 40.00	$ 40.00
Demand Charge (per kW)	$ 15.80	$ 2.30
Power Supply	9.00	-
Transmission	3.00	-
Sub-Transmission	1.50	-
Distribution	2.30	2.30
Energy Rate (per kWh)		
Off Peak	$ 0.084	$ 0.060
On Peak	0.084	0.167
Critical Peak	0.084	0.234

Load Factor	General Service Rate Tariff	EV Charging Rate Tariff
5.0%	$ 795	$ 322
10.0%	$ 917	$ 512
20.0%	$ 1,163	$ 893
40.0%	$ 1,653	$ 1,653
60.0%	$ 2,144	$ 2,414

In Summary

- **Prepare** – Financial Targets and Policies
- **Plan** – Manage Risk through Revenue Stability
- **Destination** – Define utility goals, even if they are “down the road”

Questions?