



City Council and Power Board
Special Workshop Meeting Agenda
April 4, 2023

PUBLIC NOTICE is hereby given that the Washington City Council and Power Board will hold a Public Electronic Special Meeting on **Tuesday, April 4, 2023 at 5:00 P.M.** hosted in the Boardroom at the Washington City Office located at 111 North 100 East, Washington, Utah. The meeting will be broadcast via Youtube Live linked online at <https://washingtoncity.org/meetings>

- Washington City Power 2023 Cost of Service and Rate Study. Power Director Rick Hansen

POSTED this 28th day of March 2023
Tara Pentz, City Recorder

In accordance with the Americans with Disabilities Act, Washington City will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by calling the City Recorder at 656-6308 at least 24 hours in advance of the meeting to be held.



Washington City Power Department

Electric Financial Projection and Cost of Service Study

Mark Beauchamp, President

Utility Financial Solutions, LLC

Presentation Objectives

- Financial Projection & Targets
 - Debt Coverage Ratios
 - Minimum Cash Reserves
 - Target Operating Income
- Review Cost of Service Results
 - Cost to service each class of customers
 - Monthly Customer Charges
- Review Sample Rate Designs and PCA
- National Landscape for Rate Setting
- Next Steps
 - Guidance on Rate Design

Assumptions

Fiscal Year	Inflation	Growth	Purchase Power Change	Investment Income	Capital Improvements Plan
2023	5.0%	3.2%	49.6%	0.5%	\$ 3,826,250
2024	3.0%	3.1%	3.0%	0.5%	1,857,500
2025	3.0%	2.9%	3.0%	0.5%	3,663,000
2026	3.0%	2.9%	3.0%	0.5%	1,775,000
2027	3.0%	2.8%	3.0%	0.5%	1,866,500
2028	3.0%	2.8%	3.0%	0.5%	1,700,000

Financial Projection

Current Rates

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Adjusted Operating Income	Target Operating Income	Projected Cash Balances	Recommended Minimum Cash
2024	0.0%	5.52	\$ 1,090,616	\$ 1,595,189	\$ 11,804,257	\$ 6,791,358
2025	0.0%	6.21	1,310,042	1,720,585	10,987,337	6,982,312
2026	0.0%	6.24	1,247,249	1,787,500	12,096,959	7,199,516
2027	0.0%	6.53	1,251,344	1,858,485	13,216,786	7,406,845
2028	0.0%	3.84	1,270,330	1,953,776	14,076,579	8,073,520

Financial Projection

Minimum Cash Determination

Description	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028
Minimum Cash Reserve Allocation					
Operation & Maintenance Less Depreciation Expense	12.3%	12.3%	12.3%	12.3%	12.3%
Purchase Power Expense	14.9%	14.9%	14.9%	14.9%	14.9%
Historical Rate Base	1%	1%	1%	1%	1%
Current Portion of Debt Service Payment	83%	83%	83%	83%	83%
Five Year Capital Improvements - Net of bond proceeds	20%	20%	20%	20%	20%
% Plant Depreciated	32%	32%	34%	35%	37%
Calculated Minimum Cash Level					
Operation & Maintenance Less Depreciation Expense	\$ 682,097	\$ 702,560	\$ 723,636	\$ 745,346	\$ 767,706
Purchase Power Expense	2,767,434	2,933,120	3,108,726	3,291,644	3,485,324
Historical Rate Base	533,180	569,810	587,560	606,225	623,225
Current Portion of Debt Service Reserve	636,247	604,422	607,193	591,230	1,024,865
Five Year Capital Improvements - Net of bond proceeds	2,172,400	2,172,400	2,172,400	2,172,400	2,172,400
Minimum Cash Reserve Levels	\$ 6,791,358	\$ 6,982,312	\$ 7,199,516	\$ 7,406,845	\$ 8,073,520
Projected Cash Reserves	\$ 11,804,257	\$ 10,987,337	\$ 12,096,959	\$ 13,216,786	\$ 14,076,579

Cost of Service

Electric Cost of Service Results

Customer Class	Cost of Service	Projected Revenues	% Change
Residential	\$ 19,572,408	\$ 18,422,374	6.2%
Street Lighting	292,205	-	0.0%
Private Area Lighting	21,735	11,743	85.1%
Small Commercial	1,725,884	1,905,989	-9.4%
Large Commercial	4,970,037	5,794,186	-14.2%
Steel Structures	46,783	47,765	-2.1%
Total	\$ 26,629,052	\$ 26,182,057	1.7%

Monthly Charge

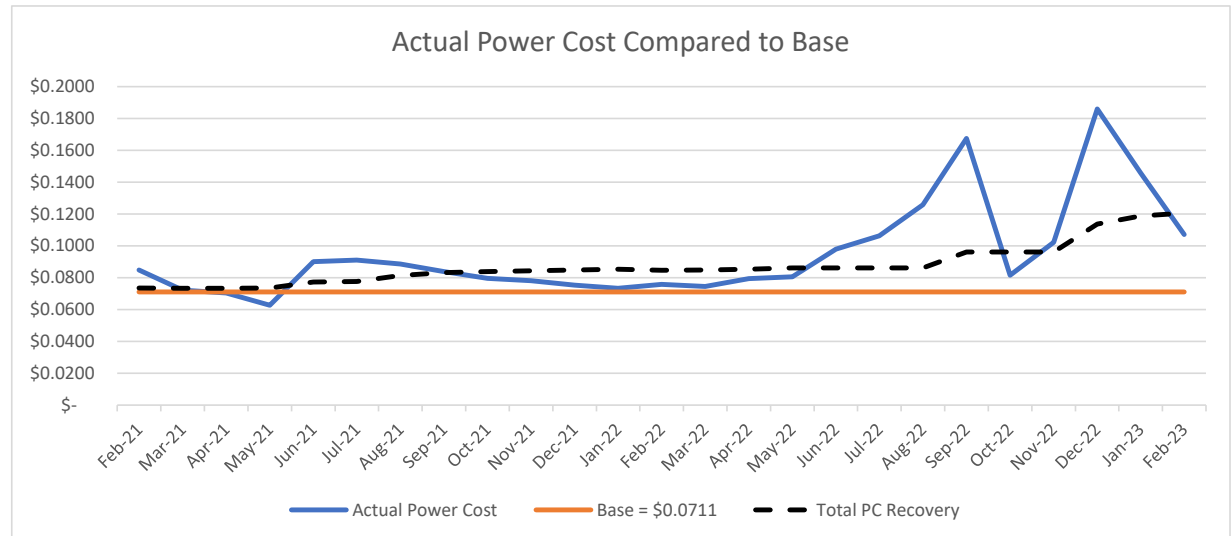
Customer Class	COS Customer Charge	Average Customer Charge
Residential	\$ 19.85	\$ 16.50
Street Lighting	3.14	-
Private Area Lighting	18.65	-
Small Commercial	33.61	22.50
Large Commercial	100.15	92.50
Steel Structures	129.53	92.50

What is a Power Cost Adjustment?

- A mechanism to help ensure power costs are recovered from customers
- PCA reduces Utility risk and exposure to changes in power supply costs
- Mitigates over/under recovery of power supply costs from customers

Historical Monthly Power Cost

- Historically, average costs were close to base cost (PCA close to \$0)
- Power cost have been volatile and increasing, driving up the PCA
 - PCA is forecasted to be \$0.0589 in the test year FY 2024



PCA Recovery Comparison for 2022

Jan 2022 - Dec 2022		
kWh Purchased/Generated		152,156,472
Power Supply Costs	\$	16,469,421
Base Rate Recovery	\$	10,818,325
PCA Recovery		2,505,059
Previous period over recovery		551,743
Total Recovery	\$	13,875,127
Timing Difference	\$	(2,594,293)

Without PCA Cash
Reserves would have
been depleted by
\$5.70 Million

PCA True Up

- Power costs are forecasted to remain at these levels in the short term
- Adding \$0.0289 to the base energy rates brings the forecasted PCA down from \$0.0589 to \$0.0300

Sample: Revenue Neutral Rate Design

Customer Class	Projected Revenues Under Current Rates	Projected Revenues Under Proposed Rates Year 1	Year 1 Change	COS
Residential	\$ 18,422,374	\$ 18,422,374	0.0%	6.2%
Private Area Lighting	11,743	11,743	0.0%	85.1%
Small Commercial	1,905,989	1,905,989	0.0%	-9.4%
Large Commercial	5,796,848	5,796,848	0.0%	-14.2%
Steel Structures	47,765	47,765	0.0%	-2.1%
Totals	\$ 26,184,719	\$ 26,184,719	0.0%	1.7%

Sample: Residential Rate

Washington City Electric Department

Electric Rate Design

Residential

PCA Added to Base	\$	0.02889
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Rates	Current	Scenario 1	Scenario 2	Scenario 3
Monthly Facilities Charge:				
All Customers	\$ 16.50	\$ 17.50	\$ 18.50	\$ 20.00
Energy Charge:				
Block 1 (0 - 800 kWh)	\$ 0.08500	\$ 0.11389	\$ 0.11105	\$ 0.10854
Block 2 (801 - 1,500 kWh)	\$ 0.10630	\$ 0.13519	\$ 0.13519	\$ 0.13519
Block 3 (Excess)	\$ 0.13280	\$ 0.15507	\$ 0.16169	\$ 0.16169
Wind Power Costs Adder:				
All Customers	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50
Renewable Metering Credits				
All Energy	\$ (0.04000)	\$ (0.04000)	\$ (0.04000)	\$ (0.04000)
Renewable PCA Base Adj		\$ (0.02889)	\$ (0.02889)	\$ (0.02889)
Power Cost Adjustment:				
All Energy	\$ 0.05889	\$ 0.03000	\$ 0.03000	\$ 0.03000
Revenue from Rate	\$ 18,422,374	\$ 18,422,374	\$ 18,422,374	\$ 18,422,374
Change from Previous		0.0%	0.0%	0.0%

Scenario 1 - Keep
block differential

Scenario 2 - holding
B2 + B3 same (plus
pca added to base)
and putting change
into B1

Scenario 3 - Raise
CC and put
difference in block 1

Residential Sample Rate

Customer Impacts

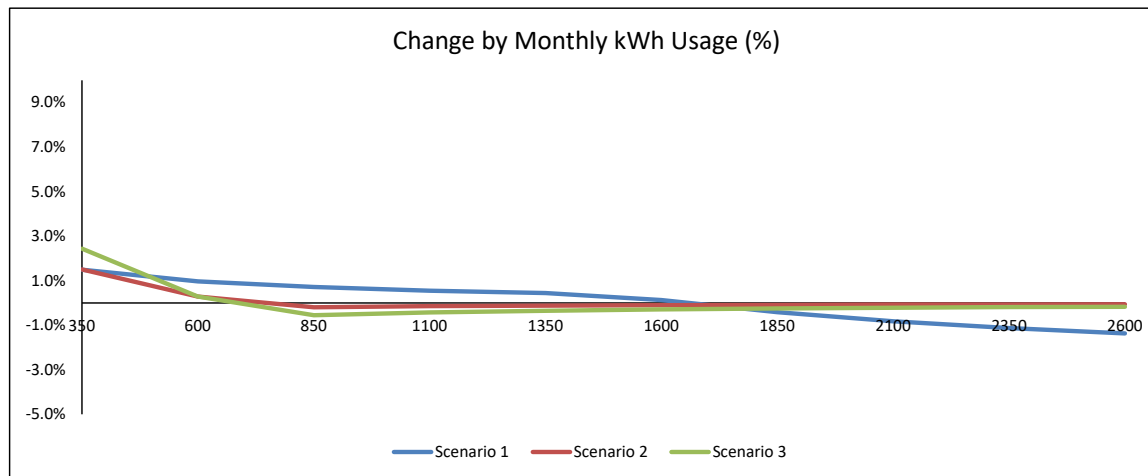


Chart Data (\$
Change)

	Scenario 1	Scenario 2	Scenario 3
350 \$	1.00 \$	1.01 \$	1.63
600 \$	1.00 \$	0.30 \$	0.29
850 \$	1.00 \$	(0.27) \$	(0.78)
1100 \$	1.00 \$	(0.27) \$	(0.78)
1350 \$	1.00 \$	(0.27) \$	(0.78)
1600 \$	0.34 \$	(0.27) \$	(0.78)
1850 \$	(1.31) \$	(0.27) \$	(0.78)
2100 \$	(2.97) \$	(0.27) \$	(0.78)
2350 \$	(4.62) \$	(0.27) \$	(0.78)
2600 \$	(6.27) \$	(0.27) \$	(0.78)

Sample: Small Commercial Rate

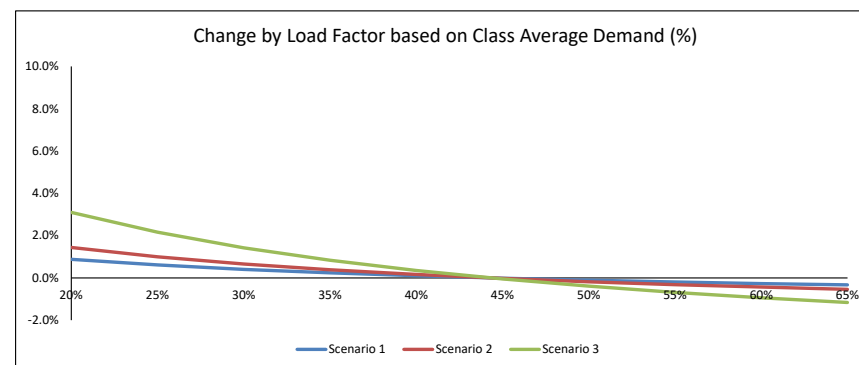
Washington City Electric Department

Electric Rate Design

Small Commercial

PCA Added to Base	\$ 0.02889
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Rates	Current	Scenario 1	Scenario 2	Scenario 3
Monthly Facilities Charge:				
Monthly Charge	\$ 22.50	\$ 25.50	\$ 27.50	\$ 33.50
Energy Charge:				
All Energy	\$ 0.06880	\$ 0.09604	\$ 0.09501	\$ 0.09191
Demand Charge				
All Demand	\$ 10.72	\$ 10.75	\$ 10.75	\$ 10.75
Power Cost Adjustment:				
All Energy	\$ 0.05889	\$ 0.03000	\$ 0.03000	\$ 0.03000
Revenue from Rate	\$ 1,905,989	\$ 1,905,989	\$ 1,905,989	\$ 1,905,989
Change from Previous		0.0%	0.0%	0.0%



Sample: Large Commercial Rate

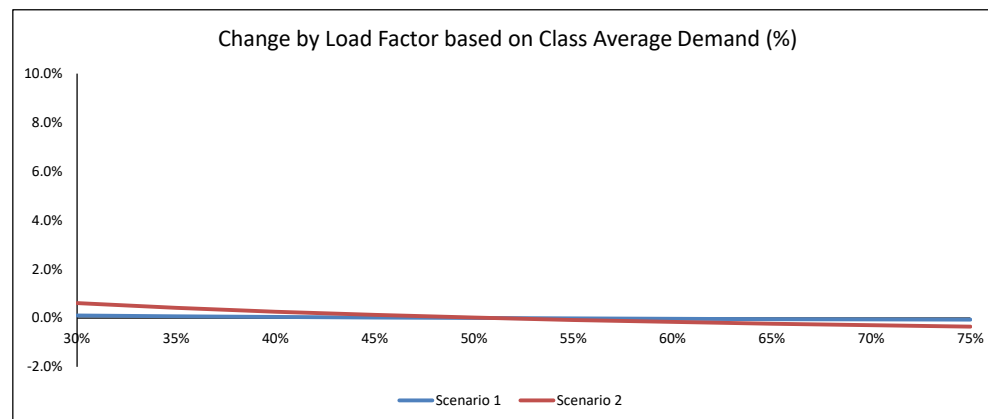
Washington City Electric Department Electric Rate Design

Large Commercial

PCA Added to Base	\$ 0.02889
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Scenario 1 - Breaks link between SC Energy
Scenario 2 - Keeps link to SC Energy's scenario 1

Rates	Current	Scenario 1	Scenario 2
Monthly Facilities Charge:			
Monthly Charge	\$ 92.50	\$ 100.00	\$ 100.00
Energy Charge:			
All Energy	\$ 0.06880	\$ 0.09739	\$ 0.09604
Demand Charge			
All Demand	\$ 11.15	\$ 11.15	\$ 11.65
Power Cost Adjustment:			
All Energy	\$ 0.05889	\$ 0.03000	\$ 0.03000
Revenue from Rate	\$ 5,796,848	\$ 5,796,848	\$ 5,798,108
Change from Previous		0.0%	0.0%



Consider merging Steel Structures Rate with the Large Commercial Rate

Sample: Commercial EV

Washington City Electric Department

Rate Design

Commercial Electric Vehicle Charging

Rates	Secondary
Monthly Facilities Charge:	
All Customers	\$ 33.78
Energy Charge:	
All Energy	\$ 0.10875
Demand Charge	
All Demand	\$ 5.42
Power Cost Adjustment:	
All Energy	\$ 0.03000

Time of Use is becoming the standard

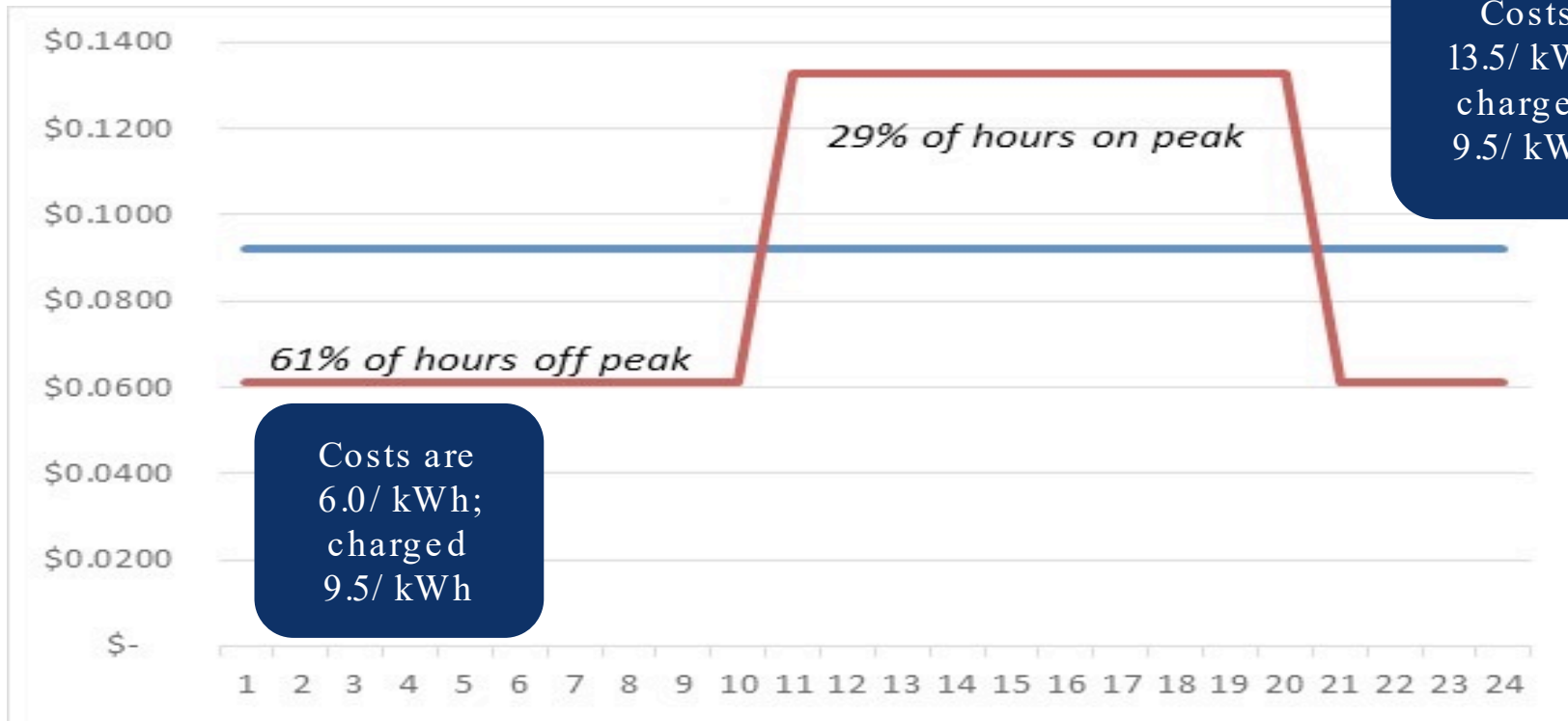
Why? As of 2021...

- 73% of residential customers have AMI metering
- 13% of utilities currently offer TOU pricing to residential
- 8% of residential customers are on time-based rates

What will Time Base Rate Do for Utilities

- Improve system load factors
- Promote electrification
- Reduce peak demands
- Lends itself to decarbonization

Utility Cost Compared to Rates



Residential considerations in future rate designs

- Short term - Creation of three residential rate options for customers
 - Standard residential rate
 - EV time of use rate
 - Residential time of use rate
- Long term – One residential time of use rate
- Demand charges may be several years away

Next Steps

- Guidance on Rate Design
 - Revenue Neutral for 1 year
 - Input on Rate Design Scenarios
 - Input on merging Steel Structures Rate with Large Commercial Rate
 - Commercial EV Rate
- Input on increasing the PCA base from \$0.0711 to \$0.1000



Without a PCA

Sensitivity analysis on the Financial projection if Washington City did not have a PCA

Fiscal Year	No Rate Adjustments	Projected Cash Balances	Sensitivity - Build Cash Back		Sensitivity - Match to Projected Cash		Projected Cash Balances with PCA	Recommended Minimum Cash
			Projected Rate Adjustments	Projected Cash Balances	Projected Rate Adjustments	Projected Cash Balances		
2024	0.0%	\$ (6,093,264)	35.0%	\$ 3,070,456	68.0%	\$ 11,710,534	\$ 11,804,257	\$ 6,791,358
2025	0.0%	(16,839,692)	5.0%	3,587,388	-20.0%	10,290,479	10,987,337	6,982,312
2026	0.0%	(26,550,557)	1.0%	5,861,628	5.0%	12,030,614	12,096,959	7,199,516
2027	0.0%	(37,204,388)	1.0%	7,947,366	0.0%	13,155,670	13,216,786	7,406,845
2028	0.0%	(49,135,940)	1.0%	9,545,328	2.0%	14,163,630	14,076,579	8,073,520