



Electric Cost of Service and Rate Design Study

May 16, 2023

Craig Brown, 1898 & Co. | Part of Burns & McDonnell

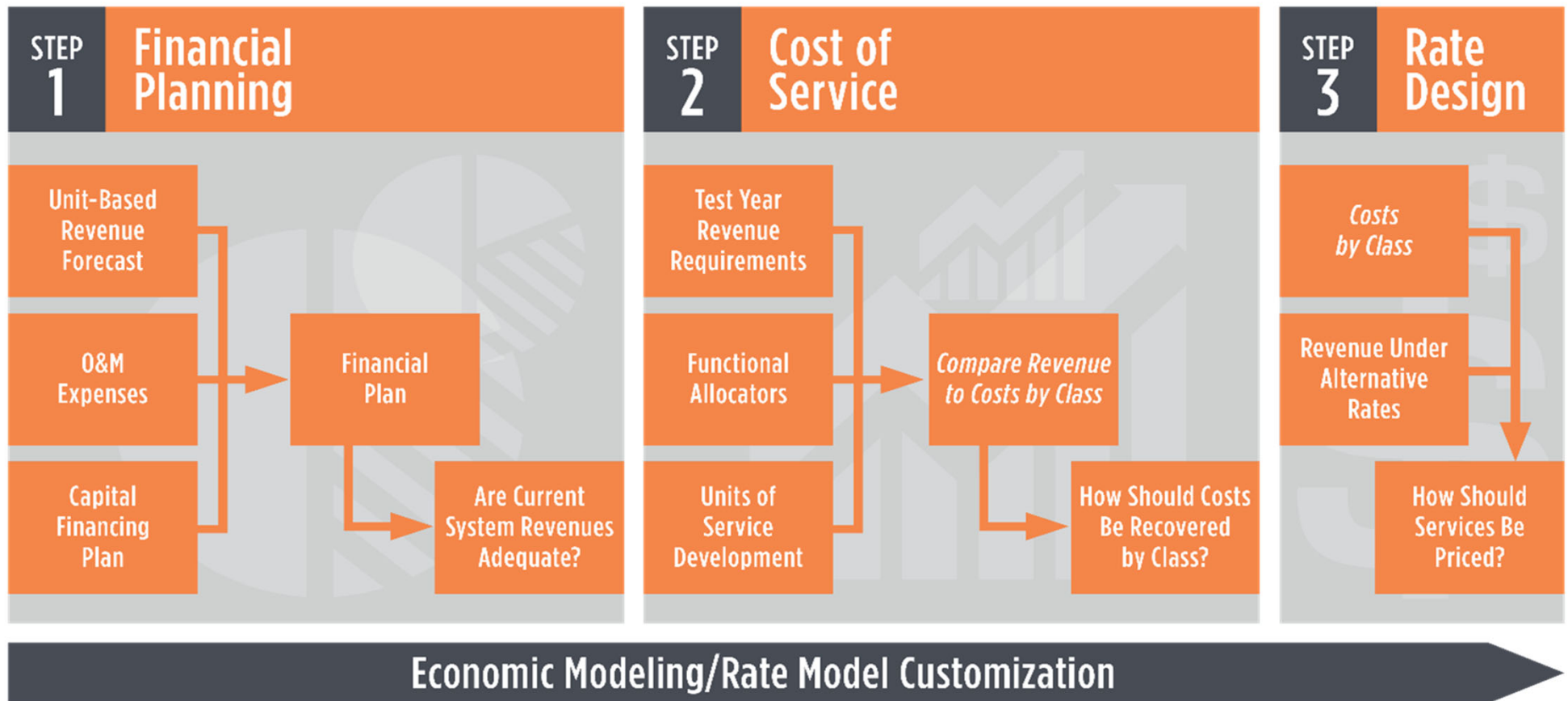


Agenda

- Overview of the Rate Study Process
- Test Year Revenue Requirement
- Cost of Service Study
- Rate Design Concepts
- Rate Design Recommendations
- New PURPA Standards



Rate Study Process



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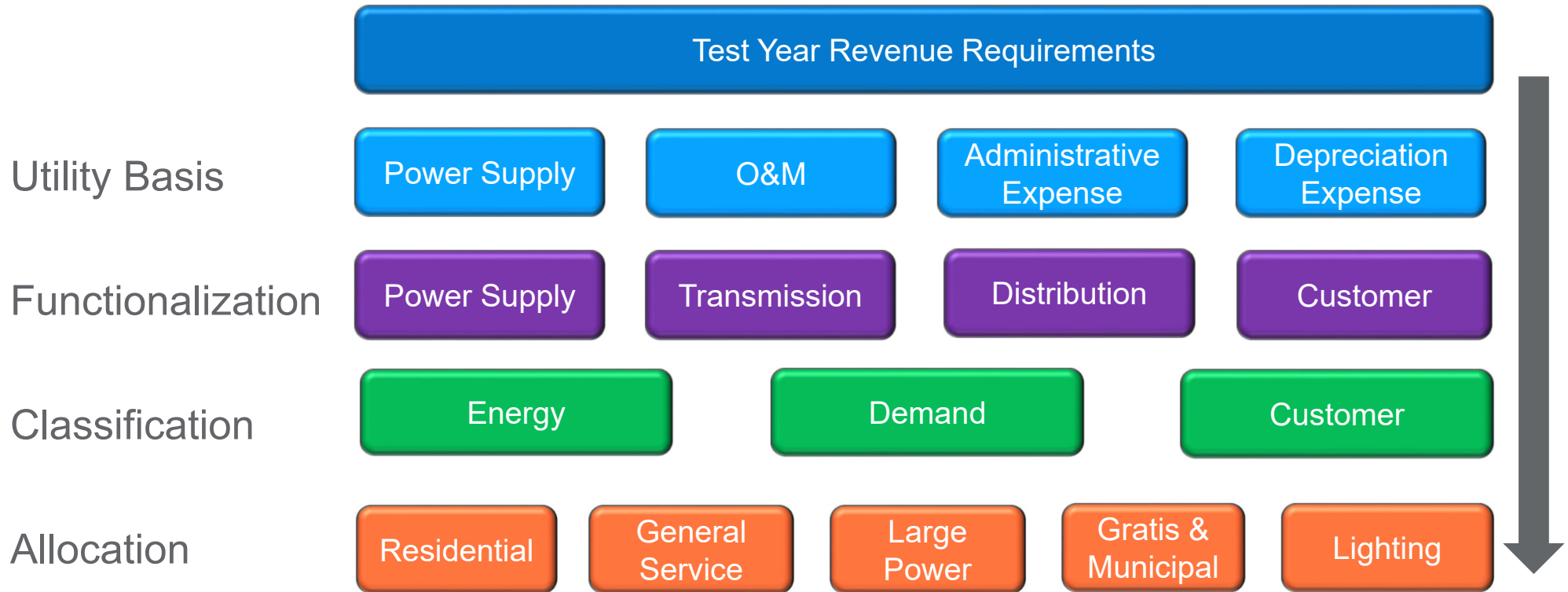
Revenue Requirements and Cost of Service Study

Test Year Revenue Requirement

- Utility Basis Revenue Requirement
- KYMEA Power Supply costs increase 11.8%
- O&M expenses are based on the FY 2024 proposed budget.
- Net revenue requirements, are estimated to be \$63.6 million
- Net income without rate adjustment is -\$1.55 million

Line	Description	Test Year	Test Year Adjustments	Adjusted Test Year
		Fiscal Year July 1 - June 30	2024	
REVENUE REQUIREMENTS				
1	Operations and Maintenance			
2	Power Cost	\$46,704,318	\$0	\$46,704,318
3	Payroll	\$2,536,041	\$0	\$2,536,041
4	Employee Benefits	\$1,655,790	\$0	\$1,655,790
5	Distribution Station	\$90,352	\$0	\$90,352
6	Overhead Lines	\$1,072,500	\$0	\$1,072,500
7	Underground Lines	\$61,235	\$0	\$61,235
8	Street Lights	\$40,489	\$0	\$40,489
9	Security Lights	\$19,338	\$0	\$19,338
10	Transmission	\$10,000	\$0	\$10,000
11	Total Operations and Maintenance	\$52,190,062	\$0	\$52,190,062
12	General and Administration Expenses			
13	Payroll	\$803,611	\$0	\$803,611
14	Employee Benefits	\$1,116,626	\$0	\$1,116,626
15	Other G&A Expenses	\$7,498,273	\$0	\$7,498,273
16	Depreciation	\$2,395,724	\$0	\$2,395,724
17	Total General and Admin Expenses	\$11,814,233	\$0	\$11,814,233
18	Gross Cost of Service	\$64,004,296	\$0	\$64,004,296
19	Less Other Revenue	(\$998,674)	\$563,674	(\$435,000)
20	Net Revenue Requirement	\$63,005,622	\$563,674	\$63,569,296
REVENUE				
21	Revenue Under Existing Rates	\$62,014,386		\$62,014,386
22	Net Income	(\$991,236)	(\$563,674)	(\$1,554,910)

Cost of Service Study Process



Unbundled Revenue Requirement

Description	Adjusted Test Year 2024	Power Supply		Transmission	Distribution			Customer	
		Energy	Demand	Demand	Demand	Customer	Lighting	Customer	Revenue
		POWER-ENG	POWER-DEM	TRANS-DEM	DIST-DEM	DIST-CUST	DIST-LIGHTS	CUST	REV
<u>Revenue Requirements</u>									
Power Supply	\$ 46,704,318	\$ 21,214,574	\$ 16,554,028	\$ 8,935,717	\$ -	\$ -	\$ -	\$ -	\$ -
Operations and Maintenance	\$ 5,485,744	\$ -	\$ -	\$ 10,000	\$ 4,027,366	\$ 1,378,766	\$ 69,612	\$ -	\$ -
General and Admin Expenses	\$ 5,031,831	\$ -	\$ -	\$ 332,432	\$ 3,155,936	\$ 1,111,440	\$ 44,360	\$ 387,663	\$ -
CORPORATE ALLOCATION	\$ 6,782,402	\$ -	\$ -	\$ 65,030	\$ 3,583,140	\$ 1,522,714	\$ 17,910	\$ 1,593,609	\$ -
Total Cost of Service	\$ 64,004,296	\$ 21,214,574	\$ 16,554,028	\$ 9,343,178	\$ 10,766,442	\$ 4,012,920	\$ 131,882	\$ 1,981,272	\$ -
<u>Less Other Revenue:</u>									
Other Revenue	\$ (435,000)	\$ -	\$ -	\$ (633)	\$ (23,925)	\$ (10,097)	\$ (75)	\$ (400,270)	\$ -
Total Revenue Adjustments	\$ (435,000)	\$ -	\$ -	\$ (633)	\$ (23,925)	\$ (10,097)	\$ (75)	\$ (400,270)	\$ -
Net Revenue Requirement	\$ 63,569,296	\$ 21,214,574	\$ 16,554,028	\$ 9,342,545	\$ 10,742,518	\$ 4,002,822	\$ 131,807	\$ 1,581,002	\$ -

Allocation Factors

	Total System	Residential	General Service	Large Power	Large Industrial HLF	Gratis/Elec Dept	Municipal Rates	Lighting Rates
Energy Factors								
Total Energy Requirement	661,796,268	216,039,936	77,207,478	156,061,055	171,786,391	13,645,358	22,959,756	4,096,294
Energy Factor	1.000	0.326	0.117	0.236	0.260	0.021	0.035	0.006
Demand Factors								
Coincident Peak Contribution	128,352	49,314	16,021	29,686	24,508	3,115	5,241	468
Coincident Peak Factor	1.000	0.384	0.125	0.231	0.191	0.024	0.041	0.004
Non-Coincident Peaks	165,946	70,449	22,030	37,107	26,142	3,461	5,823	935
NCP Factor	1.000	0.425	0.133	0.224	0.158	0.021	0.035	0.006
Primary NCP	165,128	70,101	21,921	36,924	26,013	3,444	5,794	930
Primary NCP Factor	1.000	0.425	0.133	0.224	0.158	0.021	0.035	0.006
Secondary NCP	165,128	70,101	21,921	36,924	26,013	3,444	5,794	930
Secondary NCP Factor	1.000	0.425	0.133	0.224	0.158	0.021	0.035	0.006
Customer Factors								
Number of Customers	274,329	202,606	49,657	2,683	155	1	2,530	16,697
Customer Factor	1.000	0.739	0.181	0.010	0.001	0.000	0.009	0.061
Customer Weighting Factor		1.00	1.50	10.00	10.00	1.00	1.00	0.20
Weighted No. of Customers	311,342	202,606	74,486	26,830	1,550	1	2,530	3,339
Weighted Customer Factor	1.000	0.651	0.239	0.086	0.005	0.000	0.008	0.011
Meter Weighting Factor		126.03	337.31	337.31	337.31	337.31	337.31	0.00
Weighted Meter Investment	44,095,254	25,534,434	16,749,803	905,003	52,283	337	853,394	-
Weighted Customer Factor	1.000	0.579	0.380	0.021	0.001	0.000	0.019	0.000
Other Factors								
Revenue	61,808,503	22,335,957	8,273,595	14,509,374	13,164,816	1,203,721	2,072,193	248,847
Revenue Allocation Factors	1.000	0.361	0.134	0.235	0.213	0.019	0.034	0.004
Street Lights	1.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
Allocation Factor Summary								
A. Total Energy	100.00%	32.64%	11.67%	23.58%	25.96%	2.06%	3.47%	0.62%
B. Coincident Peak	100.00%	38.42%	12.48%	23.13%	19.09%	2.43%	4.08%	0.36%
C. NCP	100.00%	42.45%	13.28%	22.36%	15.75%	2.09%	3.51%	0.56%
D. NCP-Primary	100.00%	42.45%	13.28%	22.36%	15.75%	2.09%	3.51%	0.56%
E. NCP-Secondary	100.00%	42.45%	13.28%	22.36%	15.75%	2.09%	3.51%	0.56%
F. Customers	100.00%	73.86%	18.10%	0.98%	0.06%	0.00%	0.92%	6.09%
G. Weighted Customers	100.00%	65.08%	23.92%	8.62%	0.50%	0.00%	0.81%	1.07%
H. Revenue	100.00%	36.14%	13.39%	23.47%	21.30%	1.95%	3.35%	0.40%
I. Lighting	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

FY 2024 Cost of Service Results

	Total System	Residential	General Service	Large Power	Large Industrial HLF	Gratis/Elec Dept	Municipal Rates	Lighting Rates
Return at Present Rates								
Net Plant	\$ 46,970,509	\$ 22,980,036	\$ 7,691,138	\$ 8,370,555	\$ 5,048,658	\$ 660,698	\$ 1,228,286	\$ 991,137
Net Income at Present Rates	\$ (1,554,910)	\$ (2,733,268)	\$ (195,851)	\$ 633,879	\$ 993,201	\$ (86,183)	\$ (143,551)	\$ (23,136)
Rate of Return at Present Rates	-3.3%	-11.9%	-2.5%	7.6%	19.7%	-13.0%	-11.7%	-2.3%
Relative ROR	1.00	3.59	0.77	(2.29)	(5.94)	3.94	3.53	0.71

Equalized Rate of Return								
Net Plant	\$ 46,970,509	\$ 22,980,036	\$ 7,691,138	\$ 8,370,555	\$ 5,048,658	\$ 660,698	\$ 1,228,286	\$ 991,137
Equalized Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Return @ Equalized Rate of Return	\$ 3,287,936	\$ 1,608,603	\$ 538,380	\$ 585,939	\$ 353,406	\$ 46,249	\$ 85,980	\$ 69,380
Revenue Deficiency @ Present Rates	\$ 4,842,846	\$ 4,341,871	\$ 734,230	\$ (47,940)	\$ (639,795)	\$ 132,432	\$ 229,531	\$ 92,515
Revenue Under Present Rates	\$ 62,014,386	\$ 22,335,957	\$ 8,273,595	\$ 14,509,374	\$ 13,164,816	\$ 1,203,721	\$ 2,072,193	\$ 454,729
Indicated % Adjustment	7.8%	19.4%	8.9%	-0.3%	-4.9%	11.0%	11.1%	20.3%

FY 2024 Unit Costs of Service by Classification

Units Costs Of Service	Total System	Residential	General Service	Large Power	Large Industrial HLF	Gratis/Elec Dept	Municipal Rates	Lighting Rates
Test Year Billing Units								
Customer Bills	274,329	202,606	49,657	2,683	155	1	2,530	16,697
Energy Sales (kWh)	652,292,339	212,937,428	76,098,716	153,819,892	169,319,400	13,449,400	22,630,035	4,037,468
Billed Demand (kW)	784,800			434,920	349,880			
Unit Costs of Service by Classification								
Total Energy Costs								
Total Cost	\$ 21,214,574	\$ 6,925,387	\$ 2,474,967	\$ 5,002,701	\$ 5,506,793	\$ 437,416	\$ 735,999	\$ 131,311
\$/kWh	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325
Total Demand Costs								
Total Cost	\$ 36,639,091	\$ 14,510,160	\$ 4,658,604	\$ 8,391,607	\$ 6,637,023	\$ 852,470	\$ 1,434,371	\$ 154,856
\$/kW	\$ 160.95	n/a	n/a	\$ 19.29	\$ 18.97	n/a	n/a	n/a
\$/kWh	\$ 0.0562	\$ 0.0681	\$ 0.0612	\$ 0.0546	\$ 0.0392	\$ 0.0634	\$ 0.0634	\$ 0.0384
Total Customers Costs								
Total Cost	\$ 5,715,631	\$ 3,633,679	\$ 1,335,875	\$ 481,188	\$ 27,799	\$ 18	\$ 45,375	\$ 191,698
Monthly Cost Per Consumer	\$ 20.83	\$ 17.93	\$ 26.90	\$ 179.35	\$ 179.35	\$ 17.93	\$ 17.93	\$ 11.48
Test Year Revenue Requirements	63,569,296	25,069,225	8,469,446	13,875,496	12,171,615	1,289,904	2,215,745	477,865

Cost basis for Basic Monthly Customer Charge in FY 2024

Cost basis for Basic Monthly Demand Charge in FY 2024

Cost basis for energy charges are less than 4 cents per kWh for all classes

Target Class Rate Adjustments

- Targeted class adjustments based on COS results
- 150% of system average for Residential and Lighting
- Below system average increase for Large Power and Large Power HLF.
- Above system average for Gratis and Municipal

Target Rate Adjustments			
Class	Indicated COS Adj	FY 2024	FY 2025
Residential	19.44%	5.85%	5.85%
General Service	8.87%	3.90%	3.90%
General Service Demand	n/a	n/a	2.50%
Large Power	-0.33%	2.16%	2.01%
Large Industrial HLF	-4.86%	2.16%	2.01%
Gratis/Elec Dept	11.00%	5.00%	5.00%
Municipal Rates	11.08%	5.00%	5.00%
Lighting Rates	20.35%	5.85%	5.85%
TOTAL SYSTEM	7.81%	3.90%	3.90%

The goal is to gradually work *towards* equitable cost of service across all classes



Rate Design

Rate Design Basics

- Current rate design methods are based on concepts established in the 1880's.
 - Single fixed charge and \$/kWh energy rate
 - Hopkinson Demand Rate: Energy (kWh) charge with a Peak Demand (kW) charge
- Rate designs have endured over time because all customers were full requirements customers.

Cost Causation Principles in Rate Design

Customer

- Costs that vary based on the number of customers on system
- Billing, meter reading, onsite distribution facilities, and some distribution field equipment

Demand

- Cost caused by peak loads on system
- Non-variable generation, transmission, demand-related distribution

Energy

- Costs that vary with the number of kWh produced or consumed
- Fuel, variable generation costs, variable transmission charges

Issues with Typical Rate Design

Utility System Costs

Power Supply Energy

- Variable Energy Cost (\$/kWh)

Power Supply Capacity

- Fixed Demand Cost (\$/kW)

Transmission

- Fixed Demand Cost (\$/kW)

Distribution System

- Fixed Demand Cost (\$/kW)

Customer and Admin

- Fixed Cost (\$/customer)



(Typical) Utility Rates

Power Supply Energy

- Variable Energy Charge (\$/kWh)

Power Supply Capacity

- Variable Energy Charge (\$/kWh)

Transmission

- Variable Energy Charge (\$/kWh)

Distribution

- Variable Energy Charge (\$/kWh)

Customer Cost

- Fixed Charge (\$/customer)

FPB Rate Design Goals and Objectives

- Reduce inter-class subsidies based on the Cost of Service Study.
- Increase fixed cost recovery in fixed charges and reduce reliance on variable rates for non-variable costs.
- Creation of a new General Service Demand (GSD) class for customers with a peak demand between 50 and 500 kW to bridge the gap between the existing General Service and Large Power classes.
- Restructure the Large Industrial HLF class to have a higher demand charge and lower energy charge relative to the Large Power class.
- Eliminate the Gratis and Municipal classes and charge these customers based on the applicable rate class they would otherwise qualify for.
 - Or, if Gratis and Municipal rates remain, creation of a Municipal

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- Eliminate the Gratis and Municipal classes and charge these customers based on the applicable rate class they would otherwise qualify for.
 - Or, if Gratis and Municipal rates remain, creation of a Municipal Demand Class.



Recommended Rate Design

Proposed Rates for FY 2024 & FY 2025

Residential Rate Design

- Residential rate class is under-recovering and would require a 19.4% increase to match cost of service.
- Recommend implementing a 5.85% rate increase for FY 2024 and FY 2025.
- Rate Design includes a shift in the weighting of revenues towards the customer charge.
 - FY2024 cost based customer charge is \$17.93
- Remainder of target revenue recovered in energy charge.
- Comparison to existing bill excludes current PCA, so impact will be lower.

Rate Class:	Residential (Rate 10)		
Description	Present Rate	Recommended Rate	
		FY 2024	FY 2025

Residential (Rate 10)				
Customer Charge (\$/bill)	\$ 11.45	\$ 15.50	\$ 18.00	
Energy Charge (\$/kWh)	\$ 0.09400	\$ 0.09629	\$ 0.10041	

Typical Customer Bills Under Existing and Recommended Rates				
Rate Class	Energy kWh	Existing Bill \$	Recommended 2024 Rates	
			Bill \$	Change \$
Monthly				
Residential (Rate 10)	600	\$67.85	\$73.27	\$5.42
Residential (Rate 10)	800	\$86.65	\$92.53	\$5.88
Residential (Rate 10)	1,000	\$105.45	\$111.79	\$6.34
Residential (Rate 10)	1,500	\$152.45	\$159.94	\$7.49
Residential (Rate 10)	2,000	\$199.45	\$208.08	\$8.63

General Service Rate Design

- General Service rate class is under-recovering and would require an 8.9% increase to match cost of service.
- Recommend implementing a system average increase of 3.90% for FY 2024 and FY 2025.
- Rate Design includes a shift in the weighting of revenues towards the customer charge.
 - FY2024 cost based customer charge is \$26.90
- Remainder of target revenue recovered in energy charge (no FY24 change).
- Comparison to existing bill excludes current PCA, so impact will be lower.

Rate Class:	General Service (Rate 15 and 18)		
	Present Rate	Recommended Rate	
Description		FY 2024	FY 2025

<u>General Service (Rate 15 and 18)</u>			
Customer Charge (\$/bill)	\$ 18.50	\$ 24.00	\$ 27.00
Energy Charge (\$/kWh)	\$ 0.09665	\$ 0.09665	\$ 0.09879

Typical Customer Bills Under Existing and Recommended Rates				
Rate Class	Energy kWh	Existing Bill \$	Recommended 2024 Rates	
			Bill \$	Change \$
Monthly				

General Service (Rate 15 and 18)	1,000	\$115.15	\$120.65	\$5.50
General Service (Rate 15 and 18)	2,000	\$211.80	\$217.30	\$5.50
General Service (Rate 15 and 18)	4,000	\$405.10	\$410.60	\$5.50
General Service (Rate 15 and 18)	7,500	\$743.38	\$748.88	\$5.50
General Service (Rate 15 and 18)	10,000	\$985.00	\$990.50	\$5.50

Addition of a New Rate Class

- Creation of a new General Service Demand rate class.
- 1898 & Co. evaluated monthly customer billing data for each of the current GS and LP classes to determine the projected billing units for each rate class for the purposes of rate design.
- Customers were assigned to classes based on the following parameters:
 - Peak demand < 50 kW – stays in General Service class
 - Peak demand \geq 50 kW but < 500 kW – moves to new GSD class
 - Peak demand > 500 kW – stays in Large Power class

General Service Demand Rate Design

- Rate design for the GSD class reflects a lower demand charge than the LP class and an energy charge that is between the GS and LP classes.
- FY 2024 adjustment is a blend of GS and LP rate adjustments. Recommended a 2.50% rate increase in FY 2025.
- Rate design goal of easing the transition for customers between classes
- Rate design approach:
 - Customer charge between GS and LP
 - Lower demand charge vs. LP
 - Energy charge between GS and LP

Rate Class:	General Service Demand		
	Present Rate	Recommended Rate	
Description		FY 2024	FY 2025
General Service Demand			
Customer Charge (\$/bill)	n/a	\$ 75.00	\$ 80.00
Demand Charge (\$ kW)	n/a	\$ 7.50	\$ 7.75
Energy Charge (\$/kWh)	n/a	\$ 0.07403	\$ 0.07560

Typical Customer Bills Under Existing and Recommended Rates						
Rate Class	Energy kWh	Billed Demand kW	Bill Comp	Existing Bill \$	Recommended 2024 Rates	
					Bill \$	Change \$
Monthly						
General Service Demand	15,000	50	GS	\$1,468.25	\$1,560.45	\$92.20
General Service Demand	20,000	50	GS	\$1,951.50	\$1,930.60	(\$20.90)
General Service Demand	45,000	150	LP	\$4,536.75	\$4,531.35	(\$5.40)
General Service Demand	60,000	150	LP	\$5,418.00	\$5,641.80	\$223.80
General Service Demand	90,000	300	LP	\$8,998.50	\$8,987.70	(\$10.80)
General Service Demand	120,000	300	LP	\$10,761.00	\$11,208.60	\$447.60
General Service Demand	150,000	500	LP	\$14,947.50	\$14,929.50	(\$18.00)
General Service Demand	200,000	500	LP	\$17,885.00	\$18,631.00	\$746.00

Note there is an additional column in this table to clarify whether comparison to the existing GS or LP rates.

Large Power Rate Design

- Large Power rate class is over-recovering and would require a decrease of 0.3%.
- Recommend implementing lower than average rate increase of 2.16% for FY 2024 and 2.01% for FY 2025.
- Rate Design includes a shift in the weighting of revenues towards the fixed charges.
 - FY 2024 cost-based customer charge is \$179.35
 - FY 2024 cost-based demand charge is \$19.29/kW
- Comparison to existing bill excludes current PCA, so impact will be lower.

Rate Class:	Large Power (Rate 20)			
	Description	Present Rate	Recommended Rate	
			FY 2024	FY 2025
Large Power (Rate 20)				
Customer Charge (\$/bill)	\$ 75.00	\$ 150.00	\$ 175.00	
Demand Charge (\$ kW)	\$ 12.12	\$ 12.75	\$ 13.25	
Energy Charge (\$/kWh)	\$ 0.05875	\$ 0.05875	\$ 0.05920	

Typical Customer Bills Under Existing and Recommended Rates					
Rate Class	Energy kWh	Billed Demand kW	Existing Bill \$	Recommended 2024 Rates	
				Bill \$	Change \$
Monthly					
Large Power (Rate 20)	150,000	500	\$14,948	\$15,338	\$390
Large Power (Rate 20)	200,000	500	\$17,885	\$18,275	\$390
Large Power (Rate 20)	225,000	750	\$22,384	\$22,931	\$548
Large Power (Rate 20)	300,000	750	\$26,790	\$27,338	\$548
Large Power (Rate 20)	300,000	1,000	\$29,820	\$30,525	\$705
Large Power (Rate 20)	375,000	1,000	\$34,226	\$34,931	\$705
Large Power (Rate 20)	400,000	1,500	\$41,755	\$42,775	\$1,020
Large Power (Rate 20)	550,000	1,500	\$50,568	\$51,588	\$1,020

Large Industrial High Load Factor Rate Design

- Large Industrial HLF rate class is over-recovering and would indicate a decrease of 4.9%.
- Recommend implementing lower than average rate increase of 2.16% for FY 2024 and 2.01% for FY 2025.
- Rate Design restructuring with a higher demand charge and a lower energy charge, the average all-in rate paid by LI HLF customers will decrease as load factor increases.

Rate Class:	Large Industrial HLF (Rate 21)		
Description	Present Rate	Recommended Rate	
		FY 2024	FY 2025

Large Industrial HLF (Rate 21)

Customer Charge (\$/bill)	\$ 225.00	\$ 250.00	\$ 260.00
Demand Charge (\$/kW)	\$ 11.83	\$ 17.00	\$ 17.50
Energy Charge (\$/kWh)	\$ 0.05310	\$ 0.04408	\$ 0.04464

Typical Customer Bills Under Existing and Recommended Rates

Rate Class	Energy kWh	Billed Demand kW	Existing Bill \$	Recommended 2024 Rates	
				Bill \$	Change \$

Monthly					
Large Industrial HLF (Rate 21)	475,000	1,000	\$37,278	\$38,188	\$911
Large Industrial HLF (Rate 21)	550,000	1,000	\$41,260	\$41,494	\$234
Large Industrial HLF (Rate 21)	900,000	2,000	\$71,675	\$73,922	\$2,247
Large Industrial HLF (Rate 21)	1,100,000	2,000	\$82,295	\$82,738	\$443
Large Industrial HLF (Rate 21)	2,000,000	4,000	\$153,745	\$156,410	\$2,665
Large Industrial HLF (Rate 21)	2,200,000	4,000	\$164,365	\$165,226	\$861
Large Industrial HLF (Rate 21)	3,000,000	6,000	\$230,505	\$234,490	\$3,985
Large Industrial HLF (Rate 21)	3,300,000	6,000	\$246,435	\$247,714	\$1,279

Municipal and Gratis Electric/Water Department Rate Design

- While it is not uncommon for munis, fewer IOU and Coops have municipal rate classes
- 1898 & Co. recommends the elimination of rate class for interdepartmental usage (Gratis) and rate class for Municipal facilities.
- Should the Board decide to continue with the Gratis and Municipal rate classes we recommend creating a subclass with a demand charge
 - To recover service costs so that customers with peak demand greater than 50 kW are charged based on both peak demand (kW) and energy usage (kWh).
 - This is especially important if electric vehicle (EV) chargers are on Municipal rates
 - Designed as a discount to new GSD class

Rate Class:	Municipal Rates (Rate 2 and 19) Gratis/Elec Dept (Rate 17 and 3)		
	Present Rate	Recommended Rate	
Description		FY 2024	FY 2025
Municipal Rates (Rate 2 and 19) Gratis/Elec Dept (Rate 17 and 3)			
Customer Charge (\$/bill)	\$ 18.50	\$ 21.50	\$ 22.00
Energy Charge (\$/kWh)	\$ 0.08950	\$ 0.09383	\$ 0.09856
Municipal/Gratis Demand Rate			
Customer Charge (\$/bill)	n/a	\$ 21.50	\$ 22.00
Demand Charge (\$/kW)	n/a	\$ 7.13	\$ 7.36
Energy Charge (\$/kWh)	n/a	\$ 0.07033	\$ 0.07182

Lighting Rate Design

- Lighting rate class is under-recovering and would require a 20.3% increase to match cost of service.
- 1898 & Co. recommends implementing a 5.85% rate increase for FY 2024 and FY 2025.

Rate Class:	Area Lighting			
	Description	Present Rate	Recommended Rate	
			FY 2024	FY 2025
Area Lighting				
	53 Watt LED-Sec Light	\$ 9.40	\$ 9.95	\$ 10.53
	141 Watt LED Directional Fixture	\$ 14.21	\$ 15.04	\$ 15.92
	250 Watt (MH) - Direction Fixture Only	\$ 10.08	\$ 10.67	\$ 11.29
	250 Watt MH with 35' Metal Pole	\$ 15.15	\$ 16.04	\$ 16.98
	250 Watt MH with 35' Wood Pole	\$ 12.29	\$ 13.01	\$ 13.77
	320 Watt Directional Fixture	\$ 14.21	\$ 15.04	\$ 15.92
	320 Watt MH with 35' Metal Pole	\$ 19.27	\$ 20.40	\$ 21.59
	320 Watt MH with 35' Wood Pole	\$ 16.43	\$ 17.39	\$ 18.41
	371 Watt LED Directional Fixture	\$ 9.40	\$ 9.95	\$ 10.53
	400 Watt (HPS) Direction Fixture Only	\$ 14.21	\$ 15.04	\$ 15.92
	400 Watt Directional Fixture MH	\$ 14.21	\$ 15.04	\$ 15.92
	400 Watt HPS with 35' Metal Pole	\$ 19.27	\$ 20.40	\$ 21.59
	400 Watt HPS with 35' Wood Pole	\$ 16.43	\$ 17.39	\$ 18.41
	400 Watt MH with 35' Metal Pole	\$ 19.27	\$ 20.40	\$ 21.59
	400 Watt MH with 35' Wood Pole	\$ 16.43	\$ 17.39	\$ 18.41
	1000 Watt (MH) Direction Fixture Only	\$ 29.15	\$ 30.86	\$ 32.67
	1000 Watt MH with 35' Metal Pole	\$ 34.20	\$ 36.20	\$ 38.32
	1000 Watt MH with 35' Wood Pole	\$ 31.38	\$ 33.22	\$ 35.16
	1000 Watt MH with 45' Metal Pole	\$ 38.79	\$ 41.06	\$ 43.46

Lighting Rate Design Cont.

Rate Class:	Street/Signal Lights (Rate 1)		
Description	Present Rate	Recommended Rate	
		FY 2024	FY 2025

Street/Signal Lights (Rate 1)

Customer Charge (\$/bill)	\$ 18.50	\$ 19.58	\$ 20.73
Energy Charge (\$/kWh)	\$ 0.09364	\$ 0.09912	\$ 0.10492

Rate Class:	Security Lights		
Description	Present Rate	Recommended Rate	
		FY 2024	FY 2025

Security Lights

91 Watt LED-Sec Light	\$ 13.06	\$ 13.82	\$ 14.63
100 Watt Light (HPS)	\$ 9.40	\$ 9.95	\$ 10.53
129 Watt Light (LED)	\$ 13.06	\$ 13.82	\$ 14.63
175 Watt Light (HPS)	\$ 11.28	\$ 11.94	\$ 12.64
250 Watt Light (HPS)	\$ 13.06	\$ 13.82	\$ 14.63
400 Watt Light (HPS)	\$ 14.54	\$ 15.39	\$ 16.29



Rate Design Summary

Summary of FY 2024 & 2025 Rate Design

- Some classes may be slightly above or below the target revenue increase percentage due to rounding.
- Aggregate changes to rate design will produce an overall revenue increase of 3.90% both years.

Description	FY 2024 Revenue Under 2023 Rates	Revenues Under Proposed Rates	Revenue Change	Revenue % Change
Rate Design Summary				
Residential	\$ 22,335,957	\$ 23,644,138	\$ 1,308,181	5.86%
General Service	\$ 6,836,189	\$ 7,102,788	\$ 266,599	3.90%
General Service Demand	\$ 10,642,523	\$ 10,897,320	\$ 254,797	2.39%
Large Power	\$ 5,304,258	\$ 5,418,893	\$ 114,635	2.16%
Large Industrial HLF	\$ 13,164,816	\$ 13,450,309	\$ 285,494	2.17%
Gratis/Elec Dept	\$ 1,203,721	\$ 1,261,957	\$ 58,236	4.84%
Municipal Rates	\$ 2,072,193	\$ 2,177,771	\$ 105,578	5.09%
Lighting Rates	\$ 454,729	\$ 481,319	\$ 26,589	5.85%
Total	\$ 62,014,386	\$ 64,434,495	\$ 2,420,109	3.90%

Description	2025 Revenues Under 2024 Rates	Revenues Under Proposed Rates	Revenue Change	Revenue % Change
Rate Design Summary				
Residential	\$ 23,644,138	\$ 25,027,955	\$ 1,383,817	5.85%
General Service	\$ 7,102,788	\$ 7,379,715	\$ 276,927	3.90%
General Service Demand	\$ 10,897,320	\$ 11,170,373	\$ 273,053	2.51%
Large Power	\$ 5,418,893	\$ 5,528,360	\$ 109,467	2.02%
Large Industrial HLF	\$ 13,450,309	\$ 13,721,618	\$ 271,309	2.02%
Gratis/Elec Dept	\$ 1,261,957	\$ 1,325,613	\$ 63,656	5.04%
Municipal Rates	\$ 2,177,771	\$ 2,286,144	\$ 108,373	4.98%
Lighting Rates	\$ 481,319	\$ 509,475	\$ 28,156	5.85%
Total	\$ 64,434,495	\$ 66,949,253	\$ 2,514,758	3.90%



PURPA Standards

Changes to PURPA Standards

- The Public Utility Regulatory Policies Act (PURPA) of 1978 was established as part of the National Energy Act. PURPA has three overall purposes:
 - Conservation of energy supplied by electric utilities.
 - Optimization of the efficient use of facilities and resources by electric utilities.
 - Equitable rates for electric customers.
- The Infrastructure Investment and Jobs Act of 2021 (IIJA) added two new “standards” related to demand response practices and EV charging programs.
 - FPB is obligated to **consider and to determine whether or not** to adopt the two new proposed regulatory standards
- Obligation of the Board:
 - The due process required by PURPA includes the requirement that the determination as to the “appropriateness” of a particular standard take place “after public notice and hearing” and be (1) “in writing”; (2) “based upon findings included in such determination and upon evidence presented at the hearing”; and (3) be made “available to the public.” *Section 111(b) of PURPA*
 - **The Board has until November 15, 2023 to decide whether to adopt the regulatory standard.**

New Standards

- **Demand Response:** Section 111(d)(20) - Each electric utility shall promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.
- **EV Charging:** Section 111(d)(21) - Each State shall consider measures to promote greater electrification of the transportation sector, including the establishment of rates that—
 - (A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;
 - (B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;
 - (C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and
 - (D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

Options the Board Could Consider

- **Demand Response**
 - Residential load control program (A/C cycling)
 - Time-of-use (TOU) rates
 - Commercial/Industrial Demand Response program
 - Coincident Peak (CP) rate class
- **EV Charging**
 - TOU rates
 - Make ready infrastructure program
 - Cost based rate design



Next Steps

1. Document existing policies and programs related to demand response and EV charging.
2. Identify potential programs to be considered.
3. Make document with current and potential programs available to the public.
4. Hold a public hearing to allow customers to provide feedback.
5. Board formally documents any changes proposed or that no changes are recommended at the time.



Questions and Discussion

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