# Light Commission 8/30/22 meeting minutes

To:	Light Commission: Commissioners
	Light Department: J. Kowalik, General Manager, M. Barett, Business Manager
From:	Jean-Jacques Yarmoff, Secretary
Date:	September 23, 2022
Re:	Commission Meeting August 30, 2022

A quorum being present, Light Commission Chair Mike Hull opened the meeting at 4:30 pm, the meeting being held both in person and with remote access available to the public.

#### Participated in meeting:

Commissioners:	Hull, Wolf and Yarmoff in person, Frechette participating remotely.
Light Department:	General Manager Joe Kowalik.

Approval of 7/26 minutes to be deferred after questions from Chair Hull have been resolved.

#### Rate Structure Changes: UFS Update

UFS principals Dawn and Chris Lund reviewed the updated recommendation for rate changes across all classes of services, based on updated financial assumptions with recent major changes. The proposal aligns base rates with MMLD fixed costs structure in a revenue neutral change over a two year period starting January 2023, and proposes a first rate increase of energy costs of 1.5 c/kWh to come into effect January 2024.

The summary of the proposed combined changes to residential rates is shown in the table below, details of the proposal and proposed changes for other rate classes can be found in the discussion section and in the slides below.

Rate components	Current rates 2022	Proposed 2023 rates	Proposed 2024 rates
Base Rate: Monthly Facility Charge	\$ 4.25	\$ 11.25	\$ 18.50
Total Energy Charge: (power cost + power cost adjustment)	\$ 0.1985	\$ 0.1880	\$ 0.1800

The General Manager reviewed the impact of the rate structure changes for rate payers. The change is revenue neutral to MMLD, and will result in no change in the bill of the average rate payer consuming

663 kWh per year. Rate payers that consume more will see a slight decrease in their bills. Rate payers that consume less, will see a slight increase, insuring that they pay their fair share of the facilities to distribute power.

Responding to previous concerns raised by the Commission on the impact of the changes to low income rate payers, the General Manager gave details of the North Shore Community Action Program that MMLD works with (NSCAP, <u>www.nscap.org</u>) on an on-going basis. The program is funded by the Federal Government through grants to the State, which in turn provides funds to NSCAP, which covers several towns around Marblehead, including Peabody, Beverly and Salem. Two situations may arise:

- If low income households use electricity as heating source, they can benefit from a subsidy to their electric bills. These customers are going to use more than the average of 663kWh/yr and the changes considered will result in lower total electric bills.

- Low income households that do not heat with electricity, will on average consume less than 663 kWh/yr, and their bills may increase slightly. NSCAP provides MMLD with moneys to subsidize these specific customers, the number of which is currently 75 in Marblehead. When checking a sample of these accounts, MMLD has found that these households get on average a 30% discount on their electric bill, largely above any increases in their bills. Participants have to apply annually, NASCAP will help the applicants through the initial application process.

MMLD refers people who may be facing a hardship situation to this program and rate payers who are facing a difficult situation should contact MMLD.

#### Sustainability Working Group report

The Sustainability Working Group met twice since the previous Commission Meeting on alternate Tuesdays. Current group is composed of Commissioners Frechette and Wolf, and of General Manager Kowalik. Additional members of the community will be encouraged to participate. The group will work off-line and report back to the commission, focusing on 6 areas/goals:

- Sustainability coordinator
- Communication strategy
- Decarbonization policy and timeline
- Accelerate strategic electrification
- Sustainability fund
- Demand response capability

#### MMLD Residential Battery Policy change proposal

Enabling residential battery (Battery Energy Storage Systems or BESS) interconnection has many benefits to MMLD as battery storage is a way to reduce costs and increase reliability for community members.

- 1. **Cost Savings**: Batteries allow power to be deployed at the most strategic times, insulating MMLD against rising wholesale demand and energy costs. Batteries can store electricity from home PV and dispatch it when electricity is most expensive, reducing costs for MMLD and customers.
- 2. **Reliability**: Batteries improve the reliability of electricity by storing surplus power produced by solar energy and injecting it back onto the grid when there is a deficit or when energy prices are high.
- 3. **Capacity**: Battery storage increases the capacity by providing stored electricity to the grid at the times of highest demand.
- 4. **Deferral of Transmission Upgrades:** Energy storage can be used as a Non-Wires Alternative (NWA) to increase capacity and defer the need for costly capital transmission and infrastructure upgrades.
- 5. Backup Power during Outages: Provides residents emergency backup power when the grid fails.
- 6. **Carbon Reduction:** In addition, batteries paired directly with solar energy enable more renewable, carbon-free energy to be deployed on the grid.

The General Manager insisted on the strategic importance of the Connected Homes program. Electrification of transportation and heating will create a much higher load, but how much higher? Town-wide consumption has been basically flat making predictions difficult. The rebuilding of the Village 13 Substation will allow up to 50% more power to flow to the distribution grid of Marblehead, this project is underway. But load could double with strategic electrification and it is important to be both more energy efficient and to control devices so that load can be managed: this is where Connected Homes will help. An open question is whether participation should be voluntary or mandatory. Solar behind the meter has been a revolution, in both lowering the peak, and also shifting it later in the day. Batteries will help as well. Two residential battery makers participate in the Connected Home program: Sonnen and Generec, while Tesla has another demand-response program and does not yet participate in Connected Homes run by MMWEC: discussions are on-going.

Another important consideration is safety, and ensuring all the stakeholders in town are familiar with the technology: an installation needs to be inspected (wiring) and conform to fire regulations. Fire Chief Jason Gilliland proposes a number of recommendations for installation of BESS, as lithium-ion battery fires pose a unique set of challenges. He will come to present safety considerations from the Fire Department perspective at a later Commission meeting. Commissioner Yarmoff stated that each department had its own responsibility, and we are only responsible for the policy of the Light Department. Chair Hull stressed that while there is no issue with the Commission taking a vote to move ahead on this issue, it was important for all stakeholders from other departments in town to participate in this conversation.

Commissioner Wolf proposed the following motion, seconded by Commissioner Frechette:

**Motion #2022-29:** To promote residential battery storage, MMLD will discontinue its practice of denying interconnection permits, and allow batteries to connect, provided customers participate in a demand-response program allowing MMLD or its agent to control dispatch to and charging from the grid.

Vote #2022-29: Frechette: yes; Hull: no; Wolf: yes; Yarmoff: yes

#### Utility-scale battery update

Chair Mike Hull updated the Commission on his conversation with MMWEC about the utility scale 5 MW battery initially considered for the Village Street location. MMWEC is aggregating the interest of 14 MLPs which will help achieve economies of scale. Vendors proposals are expected by September 15. A location other than Village 13 would allow work to process in parallel rather than sequentially with the rebuilding of the substation, the Tioga Way site may be a possibility, the Beacon street substation is not.

**Vote #2022-30:** Chair Hull asked for a motion to go to an Executive Session of the Commission to discuss confidential, competitively-sensitive information provided by MMWEC, a municipal aggregator, to MMLD, an entity making, selling and distributing electric power and energy, regarding project 2021A, not to return to open session. Motion proposed by Commissioner Wolf, seconded by Yarmoff.

Frechette: Yes; Hull: Yes; Wolf: Yes; Yarmoff: Yes

Executive session started at 6:25 pm.

#### **Discussions of rate changes and Slides presented**

MMLD has been working with UFS for the last few months. As there have been some changes in the financial assumptions recently (Slide 4), this is an update on the projections and recommendations that were shared with the Light Commission at the beginning of the year and on July 12.

Dawn Lund presented the updates. UFS focuses on three critical financial targets to ensure the financial health of the utility: - Debt Coverage Ratios, - Minimum Cash Reserves, and Target Operating Income. Changed assumptions include the PPA charge, the capital investment plan and power supply forecast.

Financial projections without rate changes (Slide 5) show that adjusted income projections are lower than recommended, decreasing and projected to be negative by 2026, showing that the operating income needs to be stabilized. In addition, Cash balance should be around \$10.5M for MMLD to cover the risk of the business we are in, and we are below the recommended amount during the whole projected period if no rate changes are implemented. Slide 6 shows stabilization of the financial indicators with the rate increases projected from 2024.

Target operating income has changed from \$2M in an earlier recommendation to current \$1.5M: why? This is a function of interest expense and inflationary effect on assets: the result has changed since the level of investments changed. The Cash on hand column depends on 5 key items: operating expenses, power supply, historical investment in system, debt service payments and capital improvement program. Capital improvement changed, power supply changed, this is what affected the targets.

If capital improvement is higher than \$1M in '25 and '26, operating income will be affected by the extra depreciation, expenses will go up, adjusted income will deteriorate slightly, and the cash reserve will decrease accordingly: it is important to update this with the budget process.

Assuming that PPA changes are done appropriately when the cost of power purchased by MMLD increases, as they have been in the past, smoothing out the Operating Income means that it is only necessary to increase the rates in the outer years, from January 2024. **IF** PPA changes were **not** done in a timely manner, UFS would recommend higher rate increases. This would be the case for the many utilities which do not have the PPA mechanism used by Marblehead to adapt to energy costs changes. Cash balances are appropriate with these rate adjustments. These adjustments are very minimal compared to changes observed in other utilities in the country and in Massachusetts. They are lower than the increase in inflation.

As a result, UFS is recommending changes in two steps: a revenue neutral rate structure change in 2023, followed by rate adjustments. Given current environment, the projections show the necessity of three consecutive 1.5% rate adjustments. However, UFS recommends that MMLD initiate the process with one 1.5% rate increase in 2024, with further increases to be adjusted as conditions and budget warrant.

Looking at the various classes of service (Slide 8): both class A and B rates are very close to cost of service already. G, S and F are grandfathered in with a very small number of customers. Slides 9 and 11 give the details per class of service. Slide 10 shows studies UFS could do that are currently on hold.

The adjustment of the rates in a revenue neutral fashion to reflect true cost of service is given in slides showing the rate design, slides 13 through 18.

Street lighting rates are set by contract in a formula set by statute, and will not be affected by the proposed structure changes or rate increases.



- Additional Steps
- Proposed Rate Designs

UFS UTILITY FINANCIAL 3

### **Revised Assumptions**

Revised Assumptions

• PPA History

- Capital Improvements Plan
- Power Supply Forecast

MMLD		Capital			PPA History
Revised		provements	In	Prior 0.016	
Power Supply		Plan	cal Year	0.020	1/1/2018
Total \$	Fiscal Year	3,784,000	2022 \$	0.027	3/1/2018
\$12,448,244		5,935,000	2023	0.031	8/1/2020
12,492,683	2023	4,103,000	2024	0.041	4/1/2022
10,643,441	2024			0.056	8/1/2022
10,521,986	2025	1,078,000	2025		
10,757,796	2026	1,078,000	2026	0.010	Plan 1/1/2023

Financial Projection Projected Rate Track (without rate adjustments)

Fiscal Year	Projected Rate Adjustments	Projected Expenses	Projected Revenues	C Inc Pa	Adjusted perating ome (After ayment in u of Taxes)	Ρ	rojected Cash Balances	Debt Coverage Ratio	Im	Capital provements Plan	Annual Depreciation	MMLD Revised Power Supply Total \$
2022	0.0%	\$ 18,873,972	\$19,925,361	\$	721,389	\$	12,536,737	6.00	\$	3,784,000	\$1,443,687	\$12,448,244
2023	0.0%	19,847,302	20,968,728		791,426		9,460,587	7.68		5,935,000	2,102,500	12,492,683
2024	0.0%	18,318,390	19,113,787		465,397		7,902,528	6.95		4,103,000	2,130,000	10,643,441
2025	0.0%	18,565,335	18,976,473		81,138		9,027,419	6.15		1,078,000	2,180,000	10,521,986
2026	0.0%	19,184,276	19,214,894		(299,381)		9,827,416	5.39		1,078,000	2,230,000	10,757,796
Recommended	Minimum Target	2022		\$	1,344,262	\$	9,140,902	1.45				
Recommended	Minimum Target	2026		Ś	1,757,366	Ś	10,356,289	1.45				

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### Financial Projection Projected Rate Track (with rate adjustments)

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2023	0.0%	19,847,302	20,968,728		791,426		9,460,587	7.68		5,935,000	2,102,500	12,492,683
2024	1.5%	18,318,390	19,413,668		765,277		8,202,408	7.65		4,103,000	2,130,000	10,643,441
2025	1.5%	18,565,335	19,580,569		685,233		9,932,894	7.57		1,078,000	2,180,000	10,521,986
2026	1.5%	19,184,276	20,131,015		616,739		11,653,539	7.54		1,078,000	2,230,000	10,757,796
ecommended	Minimum Target	2022		\$	1,344,262	\$	9,140,902	1.45				
ecommended	Minimum Target	2026		Ś	1,757,366	Ś	10,356,289	1.45				

UFS UTILITY FINANCIAL 6



### Electric Cost of Service Results

Customer Class	Co	ost of Service	Projected Revenues	% Change
Residential (A)	\$	14,396,861	\$ 14,094,428	2.1%
Small Commercial (B)		2,348,191	2,329,887	0.8%
Off-Peak Water-Heating (G - Grandfathered)		55,651	45,487	22.3%
Domestic Storage Heating (S - Grandfathered)		22,827	17,598	29.7%
Private Area Lighting (F)		24,105	35,814	-32.7%
Street Lighting		151,220	184,444	-18.0%
Large Commercial (C)		3,472,035	3,140,359	10.6%
Total	\$	20,470,890	\$ 19,848,017	3.1%

#### UFS UTILITY FINANCIAL

## Monthly Customer Charge

- Designed to recover a portion of the fixed distribution costs of the utility such as:
  - Meter Costs
  - Meter Reading Costs
  - Billing Costs
  - Customer Service
  - Service Drop
  - Portion of Distribution System
- Movement toward cost-based customer charges to help stabilize revenues
- Helps to reduce subsidy between year-round customers and seasonal customers

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### Additional Steps

- 2023 Revenue neutral rate adjustment for the system
  Phase in customer charges over 2 years (2023 and 2024 rates)
  Balance PPA into rates with a target 1 cent PPA base for start of 2023
  2024 rates target an overall 1.5% increase in rates
- Additional studies (Chris Lund): Time of Use & Demand charges, customer solar and customer battery credits, EV charging, multi-meter for single family home review
  These studies will help us refine the rate structure over time
  Phase in mid-year 2023 or after 2024 rates implemented
- EV Charging Rates (typical TOU & Demand charges)

  - Residential (typical level 1 or level 2) 2 to 20 kW
    Commercial (typical level 2 or DCFC) 20 to 350 kW
    City or Utility Owned (station equipment, maintenance, transactions cost)



### Monthly Charge Movement toward COS over time

Customer Class	Cu	COS stomer harge	Ave Cust	rrent erage tomer arge
Residential (A)	\$	18.43	\$	4.25
Small Commercial (B)		32.10		5.00
Off-Peak Water-Heating (G - Grandfathered)		11.95		4.25
Domestic Storage Heating (S - Grandfathered)		17.65		4.25
Private Area Lighting (F)		1.32		-
Street Lighting		2.20		-
Large Commercial (C)		113.20		10.00

#### UFS UTILITY FINANCIAL 11



### **Proposed Rate Designs**

Two-year plan moving toward COS Customer Charge

## Residential Rate Design

Residential (A)		ents per kWh B ower Cost Adji from C	ustr	ment Change	Change	by M	onthly Energy	(kWh) Usage (%) Year 2
		\$ (1.1)		(1.9)	6.0%			
Energy Charge + Power Cost Adjustment	\$ 0.19850	\$ 0.18800	\$		4.0%			
Rates	Current	Year 1		Year 2	2.0%			
Monthly Facilities Charge:					0.0%	650	750 B	90 959 1.050 1.150 1.2
Monthly Charge	\$ 4.25	\$ 11.25	\$	18.50	-2.0% 330 450 550			
Energy Charge:					-6.0%			
All Energy	\$ 0.1425	\$ 0.1780	\$	0.1700	-8.0%			
Hydro Credit					-10.0%			
Annual Credit	\$ (360,787)	\$ (360,787)	\$	(360,787)			Energy (kW	h)
Power Cost Adjustment:								
All Energy	\$ 0.0560	\$ 0.0100	\$	0.0100				
Revenue from Rate	\$ 14,094,428	\$ 14,099,584	\$	14,307,729	Average Usage		662	
Change from Previous		0.0%		1.5%	Monthly Customers		8,879	
					Current Average Bill	\$	132.28	
					Year 1 Average Bill	\$	132.33	
					Average % Change		0.0%	
					Monthly Change	Ś	0.05	

UFS UTILITY FINANCIAL

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### Small Commercial Rate Design

Small Commercial (B)		nts per kWh E wer Cost Adju from C	ustr	
		\$ (1.8)	\$	(3.4)
Energy Charge + Power Cost Adjustment	\$ 0.20600	\$ 0.18810	\$	0.17200
Rates	Current	Year 1		Year 2
Monthly Facilities Charge:				
Monthly Charge	\$ 5.00	\$ 18.50	\$	32.25
Energy Charge:				
All Energy	\$ 0.1500	\$ 0.1781	\$	0.1620
Power Cost Adjustment:				
All Energy	\$ 0.05600	\$ 0.01000	\$	0.01000
Revenue from Rate	\$ 2,329,887	\$ 2,330,433	\$	2,354,343
Change from Previous		0.0%		1.0%
Revenue Goal		\$ 2,330,433	\$	2,354,343
Cumulative Change		0.0%		1.0%



### Large Commercial Rate Design

Large Commercial (C)		Pov	wer Cost Adju	ıstr	nent Change
		\$	(0.3)	\$	(0.3)
Energy Charge + Power Cost Adjustment	\$ 0.16600	\$	0.16300	\$	0.16260
Rates	Current		Year 1		Year 2
Monthly Facilities Charge:					
Monthly Charge	\$ 10.00	\$	61.75	\$	113.50
Energy Charge:					
All Energy	\$ 0.1100	\$	0.1530	\$	0.1526
Demand Charge					
All Demand	\$ 5.70	\$	6.00	\$	6.25
Power Cost Adjustment:					
All Energy	\$ 0.05600	\$	0.01000	\$	0.01000
Revenue from Rate	\$ 3,140,359	\$	3,148,395	\$	3,197,957
Change from Previous			0.3%		1.6%

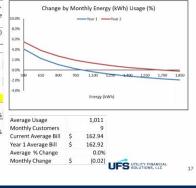
Chang	e by	Monthly E	nergy (k	Wh) Us	age (%	5)	
.0% .0% .0%		Year 1	Year	2			
.0% .0% .0% .0% .0% .0%	,000	17,500 20,00 Ener	0 22,500 gy (kWh)	25,000	27,500	30,000	32,500
erage Usage erage Demand		20,545 65.3					
erage LF onthly Customers irrent Average Bill	\$	43.1% 69 3,792.70					
ar 1 Average Bill erage % Change	\$	3,802.41 0.3%			ILITY FIN	ANCIAL	
onthly Change	Ś	9.71		- <b>D</b> so	LUTIONS	LLC	

### Water Heating Rate Design

			ver Cost Adju	ustn	rgy Charge + nent Change			thly Energ		Isage (%)		
Off-Peak Water-Heating (G - Grandfathered)												
		\$	(1.8)	\$	(3.2)							
\$	0.15700	\$	0.13920	\$	0.12540							
1	Current		Year 1		Year 2							
						0.0%						_
\$	4.25	\$	8.25	\$	12.00	-2.0% 200 250 300	350	400	450 500	550	600	65
						-4.0%						
\$	0.1010	\$	0.1292	\$	0.1154	-6.0%						_
\$	0.05600	\$	0.01000	\$	0.01000	-10.0%		Energy (k	Wh)			
\$	45,487	\$	45,493	\$	46,245							
			0.0%		1.7%							
		\$	45,493	\$	46,245	Average Usage		224				
			0.0%		1.7%	Monthly Customers		96				
						Current Average Bill	\$	39.49				
						Year 1 Average Bill	\$	39.49				
						Average % Change		0.0%				
						Monthly Change	Ś	0.01				
	\$ \$ \$ \$ \$	\$ 0.15700 Current \$ 4.25 \$ 0.1010 \$ 0.05600 \$ 45,487	\$      0.15700      \$        Current      \$      4.25      \$        \$      0.1010      \$      \$        \$      0.05600      \$      \$        \$      45,487      \$      \$	\$      0.15700      \$      0.13920        Current      Year 1        \$      4.25      8.25        \$      0.1010      \$      0.1292        \$      0.05600      \$      0.01000        \$      45,487      \$      45,493        0.0%      \$      0.0%      \$	\$      0.15700      \$      0.13920      \$        Current      Year 1      \$      \$      4.25      \$      8.25      \$        \$      4.25      \$      8.25      \$      \$      0.1020      \$        \$      0.05600      \$      0.01000      \$      \$      \$ 45,437      \$      45,433      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435      \$      45,435 <th< td=""><td>\$      0.15700      \$      0.13920      \$      0.12540        Current      Year 1      Year 2        \$      4.25      \$      8.25      \$      12.00        \$      0.1010      \$      0.1292      \$      0.1154        \$      0.05600      \$      0.01000      \$      0.01000        \$      45,487      \$      46,245      0.0%      1.7%        \$      45,483      \$      46,245      \$      46,245      \$</td><td>\$      0.13700      \$      0.13920      \$      0.12540        Current      Year 1      Year 2      \$      60%</td><td>S      1.0.8 / S      (3.2)      5      (3.2)      6.03        S      0.15700      \$      0.13920      \$      0.12540      5.03240</td><td>S      1.1.81      S      1.2.81      S      1.2.50        \$      0.15700      \$      0.13920      \$      0.12540        Current      Year1      Year2      \$      6.05      6.06        \$      4.25      \$      8.25      \$      12.00      5        \$      0.05600      \$      0.01000      \$      0.01000      \$      0.01000        \$      0.05600      \$      0.01000      \$      0.01000      \$      0.01000        \$      45,487      \$      45,493      \$      46,245      0.0%      1.7%        \$      45,487      \$      45,245      Monthly Customers      96        Current Average Bill      \$      39,49      Year1 Average Bill      \$      39,49        Year1 Average Bill      \$      39,49      Year1 Average Bill      \$      39,49</td><td>S      0.15700      S      0.13920      S      0.12540        Current      Year1      Year2      S      6.0%</td><td>S      0.15700      S      0.13920      S      0.12540        Current      Year 1      Year 2      S      6.0%      <t< td=""><td>S      1.8.1      S      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)<!--</td--></td></t<></td></th<>	\$      0.15700      \$      0.13920      \$      0.12540        Current      Year 1      Year 2        \$      4.25      \$      8.25      \$      12.00        \$      0.1010      \$      0.1292      \$      0.1154        \$      0.05600      \$      0.01000      \$      0.01000        \$      45,487      \$      46,245      0.0%      1.7%        \$      45,483      \$      46,245      \$      46,245      \$	\$      0.13700      \$      0.13920      \$      0.12540        Current      Year 1      Year 2      \$      60%	S      1.0.8 / S      (3.2)      5      (3.2)      6.03        S      0.15700      \$      0.13920      \$      0.12540      5.03240	S      1.1.81      S      1.2.81      S      1.2.50        \$      0.15700      \$      0.13920      \$      0.12540        Current      Year1      Year2      \$      6.05      6.06        \$      4.25      \$      8.25      \$      12.00      5        \$      0.05600      \$      0.01000      \$      0.01000      \$      0.01000        \$      0.05600      \$      0.01000      \$      0.01000      \$      0.01000        \$      45,487      \$      45,493      \$      46,245      0.0%      1.7%        \$      45,487      \$      45,245      Monthly Customers      96        Current Average Bill      \$      39,49      Year1 Average Bill      \$      39,49        Year1 Average Bill      \$      39,49      Year1 Average Bill      \$      39,49	S      0.15700      S      0.13920      S      0.12540        Current      Year1      Year2      S      6.0%	S      0.15700      S      0.13920      S      0.12540        Current      Year 1      Year 2      S      6.0% <t< td=""><td>S      1.8.1      S      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)<!--</td--></td></t<>	S      1.8.1      S      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1)      (1.8.1) </td

### Storage Heating Rate Design

Domestic Storage Heating (S - Grana	lfat	hered)	nts per kWh I wer Cost Adji from C	ustr	nent Change	10.0%
			\$ (0.7)	\$	(1.1)	8.0%
Energy Charge + Power Cost Adjustment	\$	0.15700	\$ 0.15030	\$	0.14630	6.0%
Rates		Current	Year 1		Year 2	4.0%
Monthly Facilities Charge:						2.0%
Monthly Charge	\$	4.25	\$ 11.00	\$	17.75	
Energy Charge:						0.0% 500 650
All Energy	\$	0.1010	\$ 0.1403	\$	0.1363	-2.0%
Power Cost Adjustment:						-4.0%
All Energy	\$	0.05600	\$ 0.01000	\$	0.01000	
Revenue from Rate	\$	17,598	\$ 17,596	\$	17,888	
Change from Previous			0.0%		1.7%	
Revenue Goal			\$ 17,596	\$	17,888	Average Usag
Cumulative Change			0.0%		1.6%	Monthly Cust
						Year 1 Averag



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### Lighting Rate Design

				Round to	o ne	arest
			\$	0.05	\$	0.05
Rates		Current	-	Year 1		Year 2
Monthly Facilities Charge:						
70W HPS	s	5.30	\$	6.55	\$	6.65
150W HPS	s	11.25	\$	13.95	\$	14.15
250W HPS	\$	18.60	\$	23.05	\$	23.40
400WHPS	\$	29.65	\$	36.75	\$	37.35
175WMH	\$	13.65	\$	16.90	\$	17.15
250W MH	\$	20.15	\$	24.95	\$	25.35
400W MH	s	31.65	\$	39.20	\$	39.85
500W Q (grandfathered)	\$	32.80	\$	40.65	\$	41.30
175W MV (grandfathered)	\$	12.00	\$	14.85	\$	15.10
400W MV (grandfathered)	\$	27.30	\$	33.80	\$	34.35
1000W MV (grandfathered)	\$	65.50	\$	81.15	\$	82.45
60W IN (grandfathered)	\$	4.00	\$	4.95	\$	5.05
75W IN (grandfathered)	\$	4.95	\$	6.15	\$	6.25
150W IN. (grandfathered)	\$	10.75	\$	13.30	\$	13.50
LED Smart Light	\$	78.00	\$	96.65	\$	98.20
Energy Charge:						
All Energy	\$		\$		\$	2
Power Cost Adjustment:						
All Energy	\$	0.05600	\$	0.01000	\$	0.01000
Revenue from Rate	\$	35,814	\$	35,839	\$	36,354
Change from Previous				0.1%		1.4%

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# Street Lighting Rate Design (Contract Rate Formula)

Street Lighting			
Contract Rate			
Rates	Current	Year 1	Year 2
Energy Charge:			
All Energy	\$ 0.15469	\$ 0.15469	\$ 0.15469
Power Cost Adjustment:			
All Energy	\$ -	\$ 12	\$ -
Revenue from Rate	\$ 135,419	\$ 135,419	\$ 135,419
Change from Previous		0.0%	0.0%



Slide presented by the General Manager



## Rate Change Schedule – updates from July 12

Date	Action
August 1, 2022 – Step 0	DONE- Implemented 1.5 cent increase to PPA; PPA is \$ 0.056. Forecast \$635K increase in net income
<i>Jan 1, 2023</i> – Step 1	Intent is to be revenue neutral <i>in first two years</i> ; begin residential base rate increase to \$18.50 on 2-year timetable: increase residential base rate to \$11.25 from \$4.25; New kwh rate calculated by reducing PPA from \$0.056 to \$0.01
April 1, 2023 – Step 2	If technically feasible - implement demand and/or TOU rates
Jan 1, 2024 – Step 3	Implement second year increase of residential base rate to \$18.50 from \$11.25