

Light Commission September 10, 2024 meeting minutes

To: Light Commission: Commissioners
Light Department: J. Kowalik, General Manager
From: Jean-Jacques Yarmoff, Secretary
Date: September 9, 2024
Re: Light Commission Public Meeting, September 10, 2024

A quorum being present, Chair Wolf brought the meeting to order at 4:05 pm. The meeting was held in person and with remote internet access, both available to public participation. A recording of the meeting is made available to the public at the following [link](#).

Participated in meeting:

Commissioners: Commissioners Frechette, Hull, Smith, Wolf and Yarmoff participated in person.
Light Department: General Manager, J. Kowalik.
Invited: Zoe Eckert, Sustainable Energy Policy & Program Sr. Manager, Massachusetts Municipal Wholesale Electric Company (MMWEC).

Marblehead Land Acknowledgment declaration was read by Commissioner Frechette.

Approval of minutes

Vote #2024-14 Motion to approve the minutes of the August 8, 2024 pubic session was moved by Commissioner Frechette and seconded by Commissioner Hull.
All commissioners present on August 8: Yes, Smith abstained.

Vote #2024-15 Motion to approve the minutes of the August 8, 2024 executive session was moved by Commissioner Frechette and seconded by Commissioner Hull.
All commissioners present on August 8: Yes, Smith abstained.

Comments from the Public

There were no comments from the public, whether in person or from remote participants.

Outstanding items from previous meetings

ToU strategic working group. Commissioner Smith reported that the Kick-off meeting of this group has been scheduled for Monday, 9/23. Will participate in the meeting: the General Manager and Chris Dunbar, and Commissioners Smith and Yarmoff. This group intends to meet on a monthly basis. It will report to the full Commission at its next meeting on October 1st.

Wilkins generator. The General Manager presented options for the future operation of the Wilkins diesel plant (see slide bottom of page 9). Options include - Investment in remote start equipment, - Ending MMLD participation in the capacity market but using the plant to reduce transmission and

capacity charges by running at predicted peak times each month; - Ending MMLD participation in capacity market and using the plant as a back-up for emergency events. Commissioner Yarmoff remarked that these options should be compared to the option: - Continue as existing, without new investments.

Commissioner Yarmoff also requested that a baseline of operating costs, inclusive of all personnel time dedicated to Wilkins be presented at a future meeting, either with existing data if MMLD capture all the data (expenses and time sheets) or when such a system is in place as appropriate.

A decision on the future of Wilkins also needs to take into account the new rules for the ISO-NE capacity market, that will come into effect in 2028 but will become known earlier, probably in 2026.

MMWEC energy efficiency & efficiency program review

Zoe Eckert, Sustainable Energy Policy & Program Sr. Manager at MMWEC presented the Energy and Efficiency programs (regrouped under the Next Zero brand name) that are available to MMLD customers, both Residential and Commercial at the invitation of the Chair.

Among these programs are incentives for heat pump installation, whether air- or ground-source heat pumps, that may not be widely known of Marblehead residents. Interested readers are encouraged to review the slides detailing this information (pp 4 - 8) and/or to listen to the presentation [online](#).

As follow up:

- Commissioner Wolf requested a one-page document describing the battery rebate program, to either send to residents with the next billing cycle and/or to distribute at the Sustainability Fair that will take place on 9/28.
- Commissioner Smith mentioned that it will be useful to revamp the MMLD website with the pages concerning these programs pointing directly to the dedicated Marblehead page on MMWEC's NextZero web pages which are clearer than the existing MMLD pages.
- Ms Eckert will send the presentation slides.

General Manager Updates

Village 13 Update. The company manufacturing the switch gear is now telling us that shipment is anticipated to be arriving in Marblehead in late December. The bid documents should be published next week and we can expect to select an engineering firm for the construction of the base of the switchgear by early October.

Tioga Way update. A meeting between Bayside Engineering and LightShift took place last week to review possible siting. This will depend on precise layout of the 5 MW / 20 MWh BESS which LightShift will provide as a next step. The Holden MLP has invited us to visit their BESS installation.

IJA block grants, MassCEC administered program for utilities and focusing on disadvantaged communities is open for applications, which have to be filed by October 4. To meet this deadline, the General Manager is working with Beacon Climate Innovations to write a grant proposal.

Previous application to the DOE GRIP grant (organized by MMWEC on behalf of several municipal light plants) was rejected, we do not have a detailed application.

Existing Hydro Québec transmission line. MMLD participates (via MMWEC) in an investment on transmission lines from Québec to Massachusetts. Over the period 1985-2024, the previous investments of MMLD have returned a 16% IRR. As part of that agreement National Grid is asking for a new capital investment from the participants, of \$247K over 10 years. Returns over 2034 – 2065 period are expected to be \$472K, with net dividends of \$225K.

Power portfolio update As has been reported at the last Commission meeting, some hedging contracts have been changed from unspecified sources (at a fixed price for a certain period) to hydro-generated backed agreements with environmental attributes. MMWEC has checked that all these environmental attributes meet the definition of the state law regarding decarbonization targets. Each contract comes with RECs that MMLD will retire. This will bring the carbon-free part of our portfolio to 58% as described previously. Commissioner Yarmoff asked for two sets of information:

- The duration of these hedge contracts? Answer: they are laddered over various durations as previous hedges. The board would appreciate receiving that information, as we did previously.
- Would it be possible to update the carbon free portfolio over time (as presented in the May 30, 2023 Commission meeting)?

Executive Session

During the Light Commission Meeting of September 10, 2024, Chair Lisa Wolf proposed to vote on a motion to meet in Executive Session to discuss trade secrets or confidential, competitively-sensitive or other proprietary information when such disclosure will adversely affect our ability to conduct business in relation to other entities making, selling or distributing electric power and energy, with no intent to return to open session.

Motion was moved by Commissioner Frechette and seconded by Commissioner Smith.

Votes: Simon Frechette: Yes; Mike Hull: Yes; Adam Smith, Yes; Lisa Wolf: Yes; Jean-Jacques Yarmoff: Yes.

Executive Session started at 5:40 pm.

The Executive Session concluded at 6:01 pm at which point a motion to adjourn was proposed, seconded and, after a roll call of the commissioners voting unanimously in favor, adopted.

-----***-----

MMLD NextZero Overview

September 10, 2024



Residential Programs

Home Energy Audits & Gold Tier

AUDITS	Total	Qty 2024	Qty Q1	Qty Q2	Qty Q3	Qty Q4
Audits	29	21	8	0	0	0
LED Bulbs	87	63	24	0	0	0
PII Verification Visits	17	14	3	0	0	0
	133	98	35	0	0	0

Total \$ 2024	\$ Q1	\$ Q2	\$ Q3	\$ Q4
\$9,570	\$6,930	\$2,640	\$0	\$0
\$174	\$126	\$48	\$0	\$0
\$2,635	\$2,170	\$465	\$0	\$0
\$12,379	\$9,226	\$3,153	\$0	\$0

HEAT PUMP CONSULTS	Total	Qty 2024	Qty Q1	Qty Q2	Qty Q3	Qty Q4
# ASHP Consult	5	3	2	0	0	0
# Gold Manual J	2	2	0	0	0	0
# Gold Design Consult	0	0	0	0	0	0
# Gold Design Review	0	0	0	0	0	0
# Gold Verify	0	0	0	0	0	0
	7	5	2	0	0	0

Total \$ 2024	\$ Q1	\$ Q2	\$ Q3	\$ Q4
\$500	\$300	\$200	\$0	\$0
\$720	\$720	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,220	\$1,020	\$200	\$0	\$0

Gold Tier Element

- Preferred Contractor Lists & Contractor Training
- Community Outreach Webinar & Social Media Support
- Air Source Heat Pump Hotline & Consultations
- Expanded Home Energy Audit & Manual J Calculations
- ASHP Design Review & Consultation with Customers
- Approval of Contractor ASHP Design
- Post-Installation QA Verification



2

Energy Star Appliance Rebate Program

Qualifying Appliances		Total	Qty 2024	Qty Q1	Qty Q2	Total \$ 2024	\$ Q1	\$ Q2
ENERGY STAR Air Purifier/Room Air Cleaner	\$40	3	0	3		\$120	\$0	\$120
ENERGY STAR Clothes Washer	\$50	0	0	0		\$0	\$0	\$0
ENERGY STAR Clothes Dryer	\$50	15	11	4		\$750	\$550	\$200
ENERGY STAR Dehumidifier	\$30	9	5	4		\$450	\$250	\$200
ENERGY STAR Heat Pump Dryer (Electric)	\$500	1	0	1		\$500	\$0	\$500
ENERGY STAR Electric Heat Pump Water Heater	\$500	2	0	2		\$1,000	\$0	\$1,000
ENERGY STAR Pool Pump (Variable Speed)	\$100	6	4	2		\$600	\$120	\$480
Heat Pump Pool Heater	\$250	2	2	0		\$500	\$1,000	\$0
ENERGY STAR Refrigerator	\$50	3	3	0		\$150	\$120	\$30
ENERGY STAR Wifi Enabled Smart Thermostat/HVAC	50% up to \$125	0	0	0		\$0	\$0	\$0
Induction Range (Replacing Electric)	\$100	22	15	7		\$1,100	\$750	\$350
Induction Range (Replacing Gas/Propane)	\$500	0	0	0		\$0	\$0	\$0
		1	1	0		\$500	\$500	\$0
		8	7	1		\$800	\$700	\$100
		72	48	24		\$6,520	\$3,990	\$2,530



3

Rechargeable Battery Lawn Equipment Program

Qualifying Lawn Equipment	
Rechargeable Battery Operated Lawn Mower	\$100
Rechargeable Battery Operated Snow Blower	\$100
Rechargeable Battery Hedge Trimmer	\$40
Rechargeable Battery Pressure Washer	\$40
Rechargeable Battery Rototiller	\$40
Rechargeable Battery Chain or Pole Saw	\$40
Rechargeable Battery Leaf Blower	\$25
Rechargeable Battery String Trimmer	\$25

RESIDENTIAL BATTERY PROGRAM	# of Batteries	Total kWh Capacity	Total Incentives
Q1	0	0	\$0
Q2	0	0	\$0
Q3	0	0	\$0
Q4	0	0	\$0
2024 totals	0	0	\$0



4

Home Energy Efficiency

Qualifying Measures	
Blower Door Test & Air Sealing	50%, up to \$500
Insulation	50%, up to \$500
Duct Sealing	50%, up to \$500
ENERGY STAR Certified Heating System	50%, up to \$500

HEI	Total Qty 2024	Qty Q1	Qty Q2	Qty Q3	Qty Q4
Blower Door/Air Sealing	2	2	0	0	0
Heating System	2	2	0	0	0
Insulation	12	10	2	0	0
Duct Sealing	0	0	0	0	0
	16	14	2	0	0

Total \$ 2024	\$ Q1	\$ Q2	\$ Q3	\$ Q4
\$500	\$500	\$0	\$0	\$0
\$1,000	\$1,000	\$0	\$0	\$0
\$5,500	\$4,500	\$1,000	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$7,000	\$6,000	\$1,000	\$0	\$0



5

Heating and Cooling

Qualifying Measures	
Air Source Heat Pump	\$500/ton
Ground Source Heat Pump	\$750/ton

COOL HOMES	Total Qty 2024	Qty Q1	Qty Q2	Qty Q3	Qty Q4
Air Source Heat Pumps	6	3	3	0	0
Ductless Mini Splits (Single Zone)	2	1	1	0	0
Ductless Mini Splits (Multiple Zone)	9	6	3	0	0
Ground Source Heat Pumps	0	0	0	0	0
	17	10	7	0	0

Total \$ 2024	\$ Q1	\$ Q2	\$ Q3	\$ Q4
\$6,250	\$2,250	\$4,000	\$0	\$0
\$800	\$300	\$500	\$0	\$0
\$6,690	\$3,000	\$3,690	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$13,740	\$5,550	\$8,190	\$0	\$0



6

Connected Homes

Smart Devices	Qualifying Brands	Monthly Incentive
Battery	Duracell, Emporia, Sonnen	\$30
Electric Vehicle	Ford 2013+, Hyundai 2017+, Jaguar 2016+, Land Rover 2016+, Toyota 2017+, Tesla 2012+, Volkswagen 2014+	\$10
Electric Vehicle Charger	ChargePoint, Emporia, Enel X JuiceBox	\$10
Electric Hot Water Heater	GE, Rheem	\$5
Mini-Split Controller	Flair, Sensibo	\$5
Wi-Fi Thermostat	Amazon, Google Nest™, Honeywell/Resideo	\$5

CONNECTED HOMES ENROLLMENTS	Total Customers	Total Devices	Battery	EV Chargers	EV Telematics	Remote Minisplit Controls	RAC	Water Heaters	Thermostats	Nest Thermostats
M/LD as of 12/31/23	57	120	0	10	1	1		0	31	78
Delta Enrollments Q1	6	20	0	1	0	0		1	1	16
Delta Enrollments Q2	2	2	0	-1	0	0		0	0	3
Delta Enrollments Q3										
Delta Enrollments Q4										
Total Added Enrollments 2024	8	22	0	0	0	0		1	1	19
Total Enrollments YTD	65	142	0	10	1	1		1	32	97



7

Ev Scheduled Charging

Smart Devices	Qualifying Brands
Battery	Duracell, Emporia, Sonnen
Electric Vehicle	Ford 2013+, Hyundai 2017+, Jaguar 2016+, Land Rover 2016+, Toyota 2017+, Tesla 2012+, Volkswagen 2014+
Electric Vehicle Charger	ChargePoint, Emporia, Enel X JuiceBox
Electric Hot Water Heater	GE, Rheem
Mini-Split Controller	Flair, Sensibo
Wi-Fi Thermostat	Amazon, Google Nest™, Honeywell/Resideo

EV SCHEDULED CHARGING PROGRAM	# of Chargers Distributed	Total Incentives
Q1	8	\$3,794
Q2	1	\$300
Q3	0	\$0
Q4	0	\$0
2024 totals	9	\$4,094



8

Residential Battery Rebates

Smart Devices	Qualifying Brands
Battery	Duracell, Emporia, Sonnen
Electric Vehicle	Ford 2013+, Hyundai 2017+, Jaguar 2016+, Land Rover 2016+, Toyota 2017+, Tesla 2012+, Volkswagen 2014+
Electric Vehicle Charger	ChargePoint, Emporia, Enel X JuiceBox
Electric Hot Water Heater	GE, Rheem
Mini-Split Controller	Flair, Sensibo
Wi-Fi Thermostat	Amazon, Google Nest™, Honeywell/Resideo

RESIDENTIAL BATTERY PROGRAM	# of Batteries	Total kWh Capacity	Total Incentives
Q1	0	0	\$0
Q2	0	0	\$0
Q3	0	0	\$0
Q4	0	0	\$0
2024 totals	0	0	\$0



9

Commercial

Commercial Prescriptive Lighting Program

A [fast tracked](#) process for reviewing and implementing lighting projects. Incentives through the NextZero Prescriptive Lighting Program are based on incentives per unit and dictated by the municipality.

Rebate Cap per Business	\$5,000
Max Annual Rebate Budget	\$20,000



Commercial Prescriptive HVAC

A [fast tracked](#) process for reviewing and implementing lighting projects. Incentives through the NextZero Prescriptive Lighting Program are based on incentives per unit and dictated by the municipality.

Rebate Cap per Business	\$5,000
Max Annual Rebate Budget	\$20,000



Custom Retrofit Program & New Project Construction and Major Renovation Program

Customers submit an application to define project scope, provide recommendations and conduct thorough audits in order to help the customer create the most energy efficient plan for their project. Incentives available are based on the energy savings estimated to result from project implementation.

Rebate Cap per Business	\$5,000
Audit Co-Pay	\$100
Rebate per kWh saved	18 cents/kWh



2024 Project

Project Name	Contact	Vendor	Presapproval Letter Date	Presapproval amount	Final Approval Date	Incentive	Post Inspection	Total Payments	kWh savings	MMBTU savings
Carters Drycleaners	Louis Morelli	D'Alleva Mechanical Services, LLC	8/22/2024	\$291.25				\$0.00		





General Manager updates

- Village 13 update
- Tioga Way update
- Possible grant opportunity? – In Mass, the Mass CEC is administrating section 40101(d) of the U.S. Infrastructure Investments in Jobs Act (IIJA) grant funds for U.S. DOE.
- Hydro Québec transmission line asset ownership rights "cash call"
- New employee recruiting update
- MMLD 2024 power portfolio carbon free percentage



Project Updates

Village 13

- Switchgear vendor informed us our delivery is delayed to late December 2024...manufacturing moved to a new facility
- Construction bid docs to be sent out/advertised, as soon as this week.

Tioga Way

- First Bayside-LightShift meeting held to review site drawings; LightShift to layout 5 MW/20 MWh BESS
- Holden MLP has invited us to visit their completed site 5 MW/20 MWh site



Wilkins Plant - future path options

- Invest in remote start upgrades to minimize impact of ISO Pay for Performance penalties while in the ISO Forward Capacity market. Goal...30 minutes from start to full 5 MW capacity online (limits max penalty at \$25K/event)
- Exit the ISO market; actively operate BTM to shave capacity and transmission peaks (run 2-5 times/month for the full year); remote start upgrade investments tbd
- Exit the ISO market; operate only in emergencies, in conjunction with BTM battery; only run to shave capacity peaks in summer?



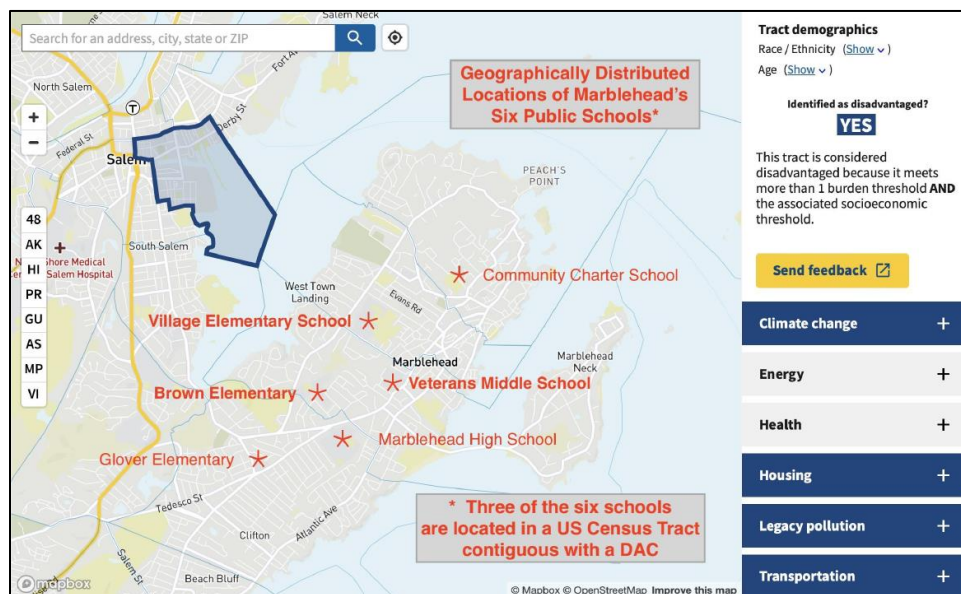
IJA 40401(d) Grant opportunity

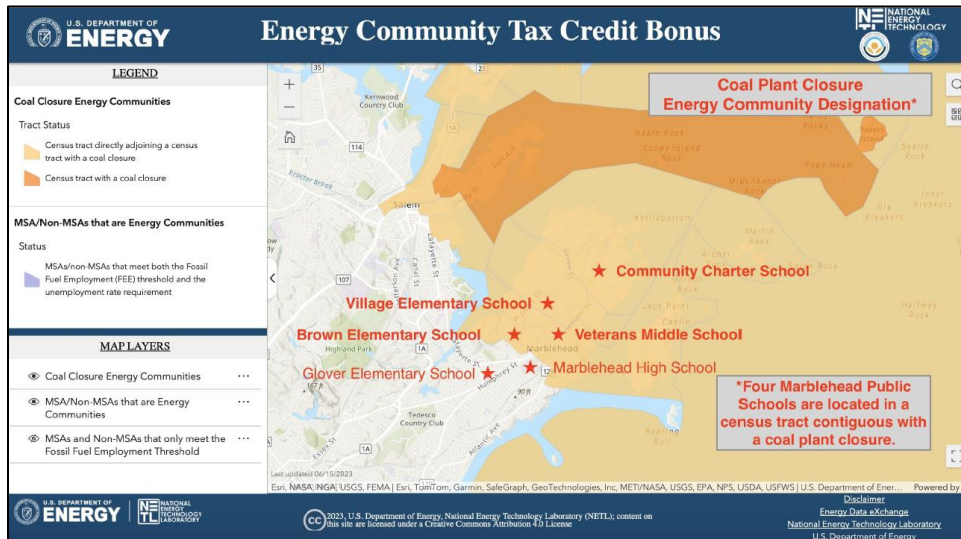
- “The funding aims to **enhance the resilience of the electric grid, prevent outages, and mitigate the impact of disruptive events** through eligible investments in activities, technologies, equipment and other hardening measures.”
- 5-year award period; first period \$9.2 million (2022 & 2023 combined)
- Includes a “Small Utilities Set-Aside” – retail utilities that sell less than 4 million MWh/year (MMLD is 100K MWh/yr.)
- Application deadline October 4, 2024



MMLD assessing our grant award potential

- Multiple options considered...
- Timeframe is short
- \$9 million statewide is not a significant amount...need to scale an MMLD grant appropriately?
- MMLD US DOE GRIP grant application for community resiliency centers at Mhd schools (solar PV + batteries) was rejected
- MassCEC stated program objectives include underserved populations as environmental justice communities and disadvantaged communities (EJC's and DAC's)





Current application strategy

- Narrower grant scope... \$750K to \$1M? Less?
- Focus on realizing a town-wide benefit, that includes Mass EJC areas and DOE coal plant closure energy community areas
- Bias toward “shovel ready” projects, with quantifiable costs and benefits
- Proposal writing support from Beacon Climate Innovations, a grant-writing team based at Greentown Labs.

About Us - Committed to Solutions



Moneer – Principal



- Serial Climate Techpreneur and founder – 5th venture
- 3+ decades in clean energy and climate-tech
- Developed a myriad of on and off-grid infrastructure projects.
- Served customers directly and through strategic partners of all types and sizes on 6 continents
- Part time professor at Tufts Derby Entrepreneurship Center
- Mechanical/Electrical Engineering

Rohit – Product Lead



- Serial entrepreneur and executive with 10+ years of demonstrated track record in social innovation and venture growth track record addressing systemic issues at the intersection of sustainability, technology and workforce development.
- Engineering and product management experience with AB Inbev, Forbes Marshall
- Climate Reality and UPG Sustainability Leader
 - Global Advisory Council of the World Economic Forum Global Shapers Community.
 - Forbes 30 Under 30.
 - Presenter at WEF Davos'16 and Horasis'16 in Liverpool, UK
- Engineer with MBA in Business Analytics and Machine Learning

Vanessa – Community Lead



- Principal & Founder of Sovations, dedicated to supporting mission-oriented organizations with focus on community and climate change
- Chair of MIT Enterprise Forum Climatetech Committee
- Strategic marketing consultant and advisor to for-profit and nonprofit organizations
- Volunteer to community organizations such as Food Link
- Marketing/MBA

Beacon Climate Innovations.
All Rights Reserved

1

THE TEAM

About Us - Continued



Sean Becker – BESS Project Management



- President/Founder Sparkplug Power. Energy storage and service company for commercial buildings and municipal utilities
- General Electric Energy – hydroelectric project due diligence and contracts
- Cambridge Energy Research Associates Associate Director overseeing Global Power Forum product.
- US Navy
- Fletcher School of Law & Diplomacy and Cornell University

Beacon Climate Innovations.
All Rights Reserved

2

THE TEAM



Existing Hydro Québec transmission line – cash call for required capital improvements

- MMLD (via MMWEC) participates in a long-term asset rights investment agreement with National Grid on existing transmission lines from Québec to Mass.
- The agreement 1985-2024 has provided MMLD positive 16% IRR (internal rate of return on capital investments)
- New National Grid “cash call” capital investment for MMLD 2024-33 totals \$247K;
- MMLD forecast dividends 2034-65 - \$472K; net dividends - \$225K



Evolving Power Portfolio & RECs in 2024

FY 2023 - 42% carbon free -40,426 RECs

FY 2024 Changes

- Move from unspecified bilateral agreements to hydro agreements with environmental attributes
 - FirstLight Hydro 2024 - estimate +7,567 RECs
 - (new) Brookfield Hydro 2024 - estimate +7,123 RECs
- Rebalance the RECs earned with Seabrook Nuclear i.e. swap CES-Es to EFECs - net increase +6,700 EFEC RECs

-----***-----