



HINGHAM MUNICIPAL LIGHTING PLANT

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Laura M. Burns, Chairman
Michael Reive, Vice-Chair
Tyler Herrald, Secretary

REGULAR MEETING HINGHAM MUNICIPAL LIGHT BOARD December 12, 2023

A regular meeting of the Board of Commissioners of the Hingham Municipal Light Plant (HMLP) was called to order by the Board's Chair, Laura Burns, at 7:30 am on Tuesday, September 12, 2023, via Zoom.

Present:

Board Members:

Laura Burns, Chair
Michael Reive, Vice-Chair
Tyler Herrald, Secretary

HMLP:

Thomas Morahan, General Manager
Mark Fahey, Assistant General Manager
Stephen Girardi, Engineer
Jeff Jones: Line Division Supervisor
Joan Griffin, Business Manager
Ellen McElroy, Customer Service
Christine White, Customer Service
Brianna Bennett, Sustainability Coordinator

Call meeting to Order

Ms. Burns read the following disclaimer into the record:

This meeting is being held remotely as an alternative means of public access pursuant to Chapter 107 of the Act of 2022 and all other applicable laws temporarily amending certain provisions of the Open Meeting Law. You're hereby advised that this meeting and all communications during this meeting may be recorded by the Town of Hingham in accordance with the Open Meeting Law. If any participant wishes to record this meeting, please notify the chair at the start of the meeting in accordance with M.G.L. c. 30A, § 20(f) so that the chair may inform all other participants of said recording.

Ms. Burns asked if anyone other than HMLP wished to record the meeting. No one responded affirmatively.

EV Credit

Ms. Bennet introduced various Electric Vehicle (EV) credit proposals, on how HMLP could proceed with the EV credit program. Currently, HMLP offers a \$5, \$10 or \$20 monthly bill credit for customers that promise to charge their EV's during off peak hours. This initiative, known as the Dollar a Gallon EV Awards Program, aims to incentivize EV drivers to charge their vehicles when electricity costs are at their lowest for HMLP. HMLP then credits a portion of those savings back to the customer.

HMLP aims to ensure ongoing verification of customer engagement in the program. To achieve this, HMLP needs a system capable of monitoring and overseeing EV charging data. In July, 2022, the device HMLP used to track EV charger usage was discontinued and charging times can no longer be verified. Between 2022 and 2023, HMLP engaged in discussions with Energy New England (ENE) regarding a demand response program, which would enhance visibility into customer participation and synchronize utility savings with incentives. However, due to delays in contracting, the implementation of the demand response program has not progressed.

Despite not having the ability to track EV charging times, HMLP has continued to offer EV bill credits to customers, including those on the program and those who sign-up. HMLP must decide the next course of action concerning this credit. The proposed options are detailed below.

1. Keep as-is: HMLP maintains the existing EV bill credit structure, encouraging customs to sign-up and charge their EVs- during off-peak hours. This path would sustain behavioral patterns until a comprehensive demand response program or time-based rate is secured.
2. Pause new sign-ups: HMLP places a temporary halt on enrolling new customs in the EV bill credit program until a new, more efficient program is established. By pausing new sign-ups, HMLP can manage the current participant base and un-pause the program when demand response or time-based rates are available.
3. Pause all customers/credits: HMLP puts a complete pause on the program for new sign-ups and all existing participants. This option suggests suspending credits for all customers until the program is revamped.
4. Start a new partnership: HMLP partners with Sagewell on a short-term (or long-term) basis to track EV data, providing visibility without a full-fledged demand response program. This option allows HMLP to verify off-peak charging behavior while awaiting other solutions.
5. Alternative demand response: HMLP joins an existing demand response program and scheduled charging incentive with MMWEC (Connected Homes). This option offers an alternative pathway to demand response if HMLP does not want to wait for the ENE program.
6. Cash-out: HMLP changes its incentive structure by increasing the upfront charger rebate from \$300 to \$650 and eliminating the credit altogether. Customers currently receiving the credit would be offered a cash-out option, receiving a check for any remaining balance.

HMLP currently has 143 customers receiving the monthly EV charging credit and has recently reached out to all of these customers asking for updated vehicle registrations. After reaching out several times, 13 of the 143 customers have not responded and their credit will be removed. Mr. Herrald remarked that at present, HMLP lacks the capability, through its metering system, to monitor behavior and is curious about the functionality of the Sagewell Program.

Ms. Bennett explained that Sagewell utilizes an algorithm within its software to analyze meter data of customers benefiting from the monthly EV credit. Their algorithm can deduce, from the data, the specific times when customers are charging their EVs. Sagewell's proposal extends to identifying additional EV customers in the town who are not yet enrolled in the EV credit program. By identifying their electricity usage/charging patterns, HMLP can reach out to these EV customers, encouraging them to join the EV program, with the aim of aligning their charging activities during off-peak hours.

Mr. Burns expressed concern over the perceived high cost of the Sagewell proposal at \$36,000 per year, excluding sign-up expenses. There is uncertainty about whether integrating the program into a more comprehensive demand response initiative would reduce costs. The Sagewell model claims potential savings of \$220,000-\$225,000 over three years for HMLP, but there is currently no method to evaluate this proposal. Ms. Bennett discussed the estimated costs, highlighting the fixed and variable expenses associated with the scheduled charging program and the Connected Homes program. She emphasized the potential benefits of participating, such as lowering costs through increased MLP participation. Ms. Burns noted the challenge of paying fixed costs for all programs while only utilizing the EV component. The Connected Homes program involves incentivizing customers to avoid charging during peak times.

Ms. Burns emphasized the need to track EV charging locations and times. Mr. Morahan previously highlighted the value of the monthly credit for planning transformer change-overs and other planning purposes. However, the current program only identifies one-fifth of EV customers, falling short of the overall goal. Ms. Burns expressed skepticism about the feasibility of achieving the claimed \$225,000 savings in three years by implementing the Sagewell program, considering the limited information HMLP has on EV customers' charging patterns and locations.

Ms. Burns asked for questions or comments from the public. Ms. Wetzel sought clarification on the number of EVs in Hingham, particularly whether they were owned or leased, and raised concerns about the public's willingness to commit to EV savings programs, especially for leased vehicles. Ms. Burns clarified that HMLP considers both owned and leased vehicles as "charging" vehicles, emphasizing the program's potential appeal to those looking to reduce charging fees.

Ms. Wetzel reported her research findings on EVs, noting challenges such as lower-than-expected sales, repair issues, and extended repair times. She urged the Board to share with the public their up-to-date research on EVs, considering the board's role in assessing future electricity needs. She raised questions about Board members' potential benefits or relationships with companies running such programs and suggested transparency about any personal gains or exemptions from board members. The public is seeking reassurance that the board is objectively assessing the future of EVs and making decisions in the best interest of the community.

Mr. Herrald said he believes the light plant is preparing for electric vehicles and thinks there are a lot of macroeconomic and political forces which are incentivizing the adoption of the vehicles. State and federal policy is clearly pointing in the direction that this is something that the public is incentivized to do, and HMLP is preparing for that.

Ms. Burns expressed certainty that the number of EVs will increase, although the pace is challenging to predict due to various factors. She emphasized the importance of being prepared for this growth.

Addressing Ms. Wetzel's second question, Ms. Burns explained the general rule regarding conflicts of interest. According to Ms. Burns' understanding, if a board member participates in a program, available

to a broad class of people served by the Board, it typically does not constitute a conflict of interest. However, if the program is limited to a small number of individuals, it may raise concerns. Ms. Burns acknowledged the ambiguity regarding how the Conflict of Interest Law would apply to the specific program eligibility criteria for electric vehicle owners.

Mr. McGill expressed concern during the discussion on EVs, noting that a significant amount of meeting time had been dedicated to the topic. He highlighted his observation that only a small portion of the overall population in Hingham seems to benefit from these EV programs, yet all ratepayers share the associated costs. Mr. McGill emphasized that, as someone without an electric vehicle and no intention of owning one, he questioned the fairness of distributing the financial burden among all ratepayers when only a fraction of the population opts for EVs. He drew a parallel with traditional vehicle expenses, where individuals bear the costs associated with their choices, such as fuel and insurance, and sought clarification on the rationale for the current approach.

Ms. Burns clarified that the discussed program aims to save money for ratepayers, not individual customers. Charging EVs during peak hours (5-7 pm) incurs higher electricity costs, affecting all ratepayers. Currently, HMLP cannot charge customers based on when they use electricity due to meter limitations. The goal is to encourage EV owners to charge during off-peak times, reducing costs for everyone.

Ms. Burns proposed that we leave the EV credit program as it is until we have the opportunity to wrap it into a larger demand response program that is hopefully going to offer people incentives to do all of their electric activities during off peak hours. However, Mr. Reive wanted to revisit Option 6, emphasizing the incentive for customers to install electric chargers at home. Ms. Burns questioned if this option aligns with the goals of identifying where and when charging occurs. Mr. Reive suggested an advertising campaign to increase registrations, acknowledging it may not guarantee off-peak charging. However, he envisions future implementation with smart meters and a demand response program for various systems. He suggested HMLP offer an amnesty to allow any customer who bought an electric vehicle charger to enter into the rebate program and receive a rebate on their charger. He thinks HMLP should treat all ratepayers the same and some people that have applied for the charger rebate outside of the rebate window were excluded for that rebate.

Mr. McGill inquired about HMLP's infrastructure capacity to support half the town having electric vehicles (EVs) and whether the necessary resources are available. Mr. Girardi explained that with the existing wire capacity and upcoming reliability projects, the system could handle increased demand, and transformers are being resized to accommodate multiple homes. Mr. McGill questioned whether the need to replace transformers would incur additional expenses. He expressed reservations about fairness, highlighting that not everyone may adopt electric vehicles willingly, and those without EVs might bear costs for infrastructure changes. Mr. McGill suggested studying whether the revenue from selling additional electricity to EVs would cover the associated expenses.

Ms. Burns echoed the interest in exploring this question, expressing a desire to understand the financial implications of promoting widespread adoption of electric vehicles in the town.

Solar Credit - Board

HMLP just completed an extensive rate study, reexamining all rates and then setting a new rate structure, except for solar credits. Ms. Burns presented a proposal to make adjustments to the solar credit. Her goal is to align the solar credit with the avoided costs incurred by HMLP when buying solar electricity from customers. The proposal involves incorporating the power cost adjustment and other factors into the solar credit to better reflect the actual avoided costs. Distribution charges would not affect the credit, as they are incurred by the customer receiving the electricity. The challenging aspect involves capacity and transmission fees, with her suggestion to create a model based on the percentage of time solar arrays generate during peak hours to reimburse for avoided costs. She emphasizes the need for equitable reimbursement until a time-of-use program is instituted to accurately track when solar energy is generated.

Mr. Herrald expressed appreciation for the proposed solar credit adjustments but noted a missing aspect. He highlighted the potential volatility and balancing challenges introduced by numerous distributed generation sources on the system. While wires are part of the infrastructure, he emphasized the need to address the added cost associated with managing the increased volatility and balancing issues. Mr. Herrald envisioned a future where widespread solar adoption might necessitate significant investments in batteries to handle the volatile generation, indicating that such added infrastructure costs should be taken into consideration. Ms. Burns asked, how do you quantify this because in the end, it's the credit we want to quantify.

Ms. Burns mentioned that Concord has 500 solar customers and they are experiencing solar saturation issues where at times they are generating more solar electricity than they can absorb. HMLP has just over 100 solar customers and this problem may not be so far off and an issue HMLP may have to deal with in the near future. Nevertheless, Ms. Burns holds the opinion that leveraging battery storage could enable the storing of energy for subsequent dispatch during peak hours. This strategy has the potential to yield substantial cost savings for HMLP, adding complexity to the determination of the appropriate solar credit amount.

Mr. Fahey expressed concern about HMLP's circuits nearing capacity, particularly Circuit 3. He worries that if we make the solar credit lucrative to sell back electricity, it could lead to limitations on some customers in certain circuits, such as 3, 9, and 5. Mr. Fahey questions whether HMLP will have to inform customers in these circuits that they can install solar but cannot sell back electricity due to capacity constraints, potentially incurring costs to address this issue.

Mr. Girardi said, when it comes to residential installations the thermal loading on the wire is not so much the issue, the concern is more the grid tie in front of the meter. For example, if there is a full injection of 90 amps flowing back into the system, this load adds to the existing wire. Mr. Reive expressed his opposition to investing in expanding the grid capacity to accommodate more solar connections. Instead, he favors encouraging more customers to install solar systems that align with the existing capacity.

In the final discussion, Mr. Reive made a proposal to simplify the solar credit system. The proposal involves a net metering approach, allowing solar customers to bank excess kilowatt hours generated annually and use them later. The suggestion was to encourage customers to invest in more renewable

energy sources and electrify their homes, as unused banked energy would be forfeited. The board agreed to further discuss and consider the proposal in upcoming meetings. Ms. Burns asked Mr. Reive to put his proposal in writing. Additionally, there was acknowledgment of the complexity of accurately reflecting avoided costs in the current system and a suggestion was made to wait until the implementation of a time-of-use rate structure for a clearer approach. Circuit capacity concerns were raised, emphasizing the need for grid studies before allowing new solar installations.

Mr. McGill inquired about the various incentives discussed by HMLP for residential solar installations and sought information from the Board regarding the currently available solar incentives. Ms. Burns said HMLP has a per kilowatt hour incentive for placing solar on your roof and if you generate excess electricity, the light plant will buy it from you. Additionally, based on the size of the solar array, HMLP pays 60 cents per watt up to a 10 kW system, so HMLP will pay each solar customer up to six \$6,000 to install solar on their roof. Mr. McGill asked, so if HMLP has 110 to 115 solar customers, and paid up to \$6,000 per customer, his concern and questions is, what is the Board's projection for a return on that kind of a capital outlay? Ms. Burns asked Mr. McGill if he was referring to the rate of return for the customer or the Light Plant. Mr. McGill replied, the Light Plant, and then expressed concerns about the significant expenditure and sought clarification on the return on investment for the Light Plant, as well as the timeframe for recovering such a capital outlay. Ms. Burns noted that the ongoing discussion is centered around creating incentives for customers and ratepayers to adopt a solar system..

Financing Options for Ratepayers (Solar, Heat Pumps, etc.) - Michael Reive (not discussed)

Approve Meeting Minutes (not discussed)

Financials: (not discussed)

Capital Projects:

Mr. Morahan reported the following:

- The construction for the footings for the HMLP Solar canopy has begun.
- The Level three EV chargers that HMLP recently installed were not State approved as handicap accessible so there will need to be alterations made to two of the three chargers.
- HMLP was working with Solar Design Associates in the landfill solar; however, they are no longer interested in continuing the project. HMLP is currently looking for a new vendor.
- There will be additional outreach with Eversource on the Transmission Line Project. Eversource has some concerns with the project concerning Weymouth's low income or elderly complexes. HMLP is still on track to file with the Electrical Citing Board during the first quarter of 2024.

Motion to Adjourn

Ms. Burns entertained a motion to adjourn the meeting.

Roll Call Vote:

Mr. Reive:	Aye
Mr. Herrald:	Aye
Ms. Burns:	Aye

The meeting adjourned at approximately 9:00 AM.