



HINGHAM MUNICIPAL LIGHTING PLANT

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General Manager

Chairman

Thomas Morahan
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Laura M. Burns,

Michael Reive, Vice-Chair
Tyler Herrald, Secretary

REGULAR MEETING HINGHAM MUNICIPAL LIGHT BOARD September 12, 2023

Meeting Called to Order

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

Members of the Public:

Sara Gordon
Richard Low

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.

Meter Charge for AMR Meter OPT-OUT

The Hingham Light staff conducted a comprehensive analysis of all expenses associated with the collection and recording of reads from non-AMR meters. Previously, the fee for this service stood at \$20, but it has now been adjusted to \$33.33. This new fee is considered adequate to cover all costs linked to the collection and recording of data from non-AMR meters. Additionally, the Board plans to perform a rate study every three years, during which this fee will be subject to re-evaluation. There was a motion on the floor to set the rate for Opt-out AMR- meter read to \$33.33.

Roll Call Vote:

Mr. Herrald: Aye

Mr. Reive: Aye

Ms. Burns: Aye

Income Adjusted Rate

The Board discussed offering a discounted rate for ratepayers who can provide Hingham Light with documentation confirming their participation in local, state or federal programs designed to assist individuals with limited incomes in covering their expenses. This new rate will be called the Income-Adjusted Rate (IA Rate). Customer Service will maintain a pre-established list of qualifying agencies, and applicants must meet the criteria of one of these agencies to be eligible for the IA Rate.

Ms. Burns proposed the IA Rate would entail a 10% discount applicable to specific components of the Hingham Light bill, including the Customer Charge, and the Transmission, Distribution, and Capacity Charge. Mr. Reive raised concerns that a 10% discount might not be sufficient for individuals facing financial difficulties, particularly those with an average usage of 500 kWh, as it may not provide a significant reduction in their bills. He recommended offering a higher discount rate. Ms. White reminded the Board to consider customer perception. She pointed out that currently, HMLP offers Electric Vehicle customers a \$10 credit per month for promising to charge their EVs during off-peak hours, a practice that cannot be easily verified. In contrast, with the proposed IA rate, customers, in great need of financial assistance, would receive on average only a credit of \$4-\$5 on their monthly bills.

Ms. Burns and Mr. Herrald believe the program should start with the discount at 10% which will enable Hingham Light to gauge the initial community interest in this program and assess its potential impact on its revenue streams. Starting with a modest discount at 10% offers the flexibility to make adjustments as needed in the future. Mr. Reive placed a motion on the floor to adopt the IA Rate at a 10% discount on the Customer charge, and the Cap. Dist. and Trans. charge. Mr. Herrald seconded the motion.

Roll Call Vote:

Mr. Reive: Aye

Mr. Herrald: Aye

Ms. Burns: Aye

Time of Use (TOU) Rate Update

Ms. Burns is seeking advice and direction from Utility Financial Services (UFS) to formulate a Time of Use Rate (TOU) for HMLP. Ms. Burns has compiled a list of questions and has requested Mr. Morahan to forward them to UFS. UFS's responses to these questions will be discussed during the next scheduled Board meeting.

Mr. Morahan conducted a presentation using a slideshow to discuss HMLP's Transition to TOU rates. Overview:

- **Time of Use (TOU) Rate Overview**

The cost of electricity varies for HMLP based on the time it is used. With TOU, HMLP offers real-time pricing to its customers. TOU includes lower rates during off-peak hours and higher rates during on-peak hours (i.e., 4PM-8PM)

Flexibility: The customer has more autonomy to lower the monthly electric bill by shifting behavior.

Actual Costs: Customers pay for the energy they consume with real-time pricing to avoid subsidization.

User Interaction: The customer may be able to see real-time data and be more engaged with their utility.

- **AMI vs. AMR Metering Infrastructure**

Automatic Meter Reading (AMR): Only certain AMR systems & software are capable of TOU. Collects basic consumption data on a monthly basis for billing. Customer awareness, control, and engagement may be limited.

Advanced Metering Infrastructure (AMI): All AMI systems can do TOU. Collects real-time data capable of dynamic rate structures. Customer-facing tools for people to monitor their own real-time energy consumption.

- **The Four TOU Pathways Identified for HMLP**

1. **Purchase an AMI System:** Replace the entire HMLP system, including hardware and software, with Advance Metering Infrastructure (AMI). HMLP's current system is Automated Meter Reading (AMR) and was purchased in 2014. Metering infrastructure can last approx. 15-20 years. Cost: Est. \$3 million +/- excluding labor costs.

2. **Install TOU AMR Meters:** There are AMR meters that are capable of TOU. The cost varies depending on the number of meters needed. HMLP or the customer could pay to replace the current AMR meter(s) with the TOU-capable AMR meter(s) that work in the existing system. Cost: \$280 - \$360 per meter based on volume.

3. **Transition to AMI-Ready:** An interim option for HMLP to begin TOU immediately and move towards an AMI system is replacing the Choice Connect System that was installed in 2022 with an AMI/TOU collection system and at least 20% of the existing meters with AMI. Cost: Est. \$800k +/- excluding labor costs.

4. **Cogsdale Programming:** HMLP could work with Cogsdale to create a custom program for TOU with the existing infrastructure. Cogsdale would do the programming to use HMLP's existing meter data to create virtual reads and feed those into the Cogsdale billing system. Cost: Est. \$50k. Mr. Jones addressed the existing infrastructure with Cogsdale's programming and explored the possibility of accumulating interval data independently for tracking consumption under specific rates. However, this approach encountered problems related to data integrity, and Cogsdale's current capabilities couldn't handle it. The estimated cost of mentioned \$50k is only for the Cogsdale aspect, and it would still necessitate significant IT work within their existing systems to make it functional, which may be quite challenging.

- The Pros and Cons of Each TOU Pathway

1. ***Path 1: Purchase an AMI System:***

- a. Pros: Able to implement dynamic TOU rates. Visibility, data and reliability enhance operations & cost-savings. Strengthens billing accuracy & less billing disputes. Customer empowerment and access.
- b. Cons: Cutting existing infrastructure lifespan short. High upfront cost & ratepayer burden. Overhauling operations, billing, and services. Staff bandwidth to address confusion or concerns.

2. ***Path 2: Install TOU AMR Meters:***

- a. Pros: Maintain compatibility with existing infrastructure. Faster TOU implementation with only meter upgrades. Minimal disruption to electric service. Cost-effective rollout of TOU without AMI.
- b. Cons: Limited future scalability & functionality compared to AMI. Requires upfront programming of the TOU rate structure. More expensive than new AMI meters and in the long run. Missed opportunities for customer engagement.

3. ***Path 3: Transition to AMI-Ready***

- a. Pros: Leveraging some existing infrastructure and investments. Scalable solution that can eventually be all AMI. Partial AMI benefits like data collection, meter accuracy, TOU. Customer engagement, accurate billing and usage patterns.
- b. Cons: Unknown long-term costs of delaying AMI deployment. Complexity of handling data from new and legacy meters. Incomplete benefits and missing AMI capabilities. Only one potential vendor and their TOU is still in field testing stage.

4. ***Path 4: Cogsdale Programming***

- a. Pros: Avoids the expenses of replacing infrastructure. Reprogramming may be quicker to implement. System continuity reduces the learning curve for staff. Fewer integration challenges without new technologies.
- b. Cons: Negative hourly reads, data gaps, or communication issues. Reputational harm from poor data accuracy and integrity. Lack of real-time data, data granularity, and customer features. Cogsdale cannot separate rates for weekends or holidays.

Mr. Jones delved into the details of Pathway 3, which involves upgrading the existing fixed network infrastructure. Currently, this network uses strategically placed fixed readers to collect data from all meters in town. The proposed hybrid approach suggests that by installing approximately 20% of AMI meters, they could establish a network capable of reading both the new AMI meters and the old AMR meters. However, this would require replacing the existing collectors with new memory collectors. The 20% estimate represents strategically located meters to create a mesh network. Any customers interested

in Time of Use (TOU) outside of this 20% could be accommodated as much as possible, combining strategically located meters with opt-in customers.

Mr. Jones emphasized that the ultimate goal is to transition to AMI, aligning with industry trends and offering modern metering services. Pathway 3 provides a gradual path to AMI adoption, rather than an immediate overhaul. He stated again that there is currently only one potential vendor for this transition, which is still in the field-testing stage.

- Discussion on the TOU pathway options:

Ms. Burns inquired whether the Board members were in agreement that HMLP should transition to AMI meters. She also posed the question of whether they should make a gradual shift to an AMI system or continue using the current system until its natural end, at which point they would transition to AMI. Ms. Burns expressed a preference for exploring alternative pathways to AMI. This query aimed to capture the Board's perspective on the matter.

Mr. Herrald expressed his belief that transitioning from AMR (Automatic Meter Reading) to AMI (Advanced Metering Infrastructure) is necessary, considering that AMR systems lack the capabilities needed for the future. He acknowledged the frustration of recently replacing infrastructure with AMR meters, only to find that they have limited long-term potential and lack desired features. Mr. Herrald also recognized the town's current challenges, including the costly Transmission Line Project and property tax increases. He emphasized the importance of balancing costs to avoid burdening ratepayers, which is the primary reason for his hesitation in fully embracing AMI. Nonetheless, he preferred an AMI system for its benefits to both the utility and customers.

Mr. Reive holds a contrasting view as he believes that many are ready to migrate to the AMI system now. He highlights the significant advancements in AMI technology, emphasizing the cost-saving benefits. Mr. Reive suggests exploring the possibility of engaging an external vendor for the transition. He has conducted research on several products and personally uses the Cambridge Company's Sense for monitoring electrical flows in his home. This company is now partnering with Itron to provide a consumer-based module via an app, which he finds cost-effective, with a total cost of less than a million dollars for the entire town.

Mr. Reive believes that providing consumers with the Itron Meters which Sense Lab program offers added value, enhancing safety by tracking issues like floating neutrals and large motor loads associated with HVAC systems. It also offers detailed data on electrical usage and appliance activity, which he considers valuable. He advocates for a close examination of the Itron Sense Lab smart meter, the AMI version, and deploy it to every customer. He mentions that at the NEPPA conference, he received a quote of \$100 for the basic smart meter plus \$30 for the Sense Lab application, a small cost to incentivize, and facilitate a smooth transition from AMR to AMI, as described in Path 1.

Ms. Burns expressed in a past decision to install AMR meters, which lacked forward-thinking, will have repercussions beyond the standard cost of transitioning to AMI. She suggests waiting until the AMR meters reach the end of their lifecycle before switching to AMI. However, she acknowledged that there would still be associated costs if they choose Path 1 or Path 3 for this transition. She suggested there

should be a “Pathway 5” - wait until the existing AMR meter life is up then replace the entire HMLP system with AMI.

Mr. Morahan emphasized that the central issue here pertains to TOU. He raised the question of when and how crucial it is for them to transition to TOU? He suggested they consider waiting until the AMR meters have reached the end of their operational lifespan.

Mr. Herrald expressed a desire for the UFS presentation to include data and analysis on the expected benefits to the Light Plant from transitioning to Time of Use (TOU) rates. He specifically mentioned the need for insights into how this change would affect the load shape, helping the decision-making process. He noted that having concrete evidence of potential yearly savings of one million dollars would make him more comfortable with a swift transition. Mr. Morahan agreed to pose this question to UFS.

Ms. Burns highlighted that both Path 1 & Path 3 would impact the Capital Projects, which currently lacks funding for either option over the next five years. She emphasized the absence of identified funds for these paths. Ms. Burns proposed considering a review of the Capital Projects Budget in January 2024, while factoring in the potential adoption of Path 1 or 3. This approach would assess the financial feasibility of these options; without secured funds, these paths cannot be pursued. The Board and the General Manager concurred with this approach.

Approve Meeting Minutes

a) Meeting Minutes 7/11/23

b) Meeting Minutes 8/9/23

Mr. Reive asked to correct his title listed in the Meeting Minutes of 8/9/23 from Vice-President to Vice Chairman. Additionally, Ms. Burns suggested we attach the Policy supporting Municipal Solar to the July 11th Meeting Minutes. Both changes will be made.

Ms. Burns made a motion to approve the minutes from July 11, 2023 and August 9, 2023, Mr. Reive, so moved, Mr. Herrald, second.

Roll Call Vote:

Mr. Reive: Aye

Mr. Herrald: Aye

Ms. Burns: Aye

Financials:

3-year Summary and YTD – July 2023

Mr. Morahan reported that kWh sales have decreased in July over the past few years, but revenues were higher due to the PCA increase. Expenses remained consistent with previous years, resulting in a July income of \$599,000. Looking at year-to-date income, it stands at \$2.4 million, indicating a strong financial position, largely attributed to PCA adjustments. The hope is to allocate some of these funds for the proposed transmission line project.

Updates: Transmission Line Project, EV chargers, HMLP Solar, Municipal Solar, Landfill Solar, Capital Projects:

- **Transmission Line:** Mr. Morahan discussed plans to submit an application to the siting board in the fourth quarter of the year and ongoing talks with the Town regarding zoning matters.
- **EV Chargers:** Mr. Morahan said infrastructure has been completed for the Level-3 EV charger at Lynch field and the two Level-3 EV chargers at station street. HMLP just got the OK for the Level-2 charger at Town Hall. They all should be installed by the end of October, 2023.
- **HMLP Solar:** Installation of the solar infrastructure has started on the garage roof of the Hingham Light Plant.
- **Municipal Solar:** Ms. Burns provided an update on the municipal solar project. The municipal solar working group proposed that the Light Plant cover engineering and studies for the high school, Middle School, and public safety building. The town is considering a bond proposal for construction at an upcoming town meeting. They are currently evaluating which projects to include and how much debt they are willing to bring to the meeting. Ms. Burns emphasized that these projects are expected to be self-sustaining and revenue-generating, which differs from other capital projects. However, the final decision is pending.
- **Landfill Solar:** There has been resistance from the True Green Solar Contractor, who expressed their inability to handle the design, management, and public bidding aspects of the landfill solar project. They believe they lack the qualifications for these tasks. HMLP is currently talking with other designers for this project.
- **Capital Projects:** No discussion on Capital Projects.

Motion to adjourn

Ms. Burns concluded the meeting and entertained a motion to adjourn.

Roll Call Vote:

Mr. Reive: Aye

Mr. Herrald: Aye

Ms. Burns: Aye

The meeting adjourned at approximately 8:46am.