

**REGULAR MEETING
HINGHAM MUNICIPAL LIGHT BOARD
November 30, 2021**

Zoom Meeting

https://us02web.zoom.us/rec/share/2BAW07u5BBVcZ-2cJx1VZ6CdXPc5GlcbS6q8-hlbJ2qhnC7L7OOW7ykAKG9y_dgi.kgdTs7Pvn4tkfTcG?startTime=1638474760000

Meeting Called to Order

A regular meeting of the Board of Commissioners of the Hingham Municipal Light Plant (HMLP) was called to order at approximately 0730 on Tuesday, November 30, 2021, via Zoom.

Present:

Board Members: John P. Ryan, Chairman; Laura Burns, Secretary.

HMLP: Tom Morahan, General Manager; Mark Fahey, Assistant General Manager; and Steve Girardi, Engineering Manager.

ENE: John Tzimirangas; Ken Stambler; Jesse Fitzmaurice; Mark Scribner; Noel Chamber; and Marcos Santiago.

Members of the Public

Minutes from 11/4/2021

Mr. Ryan requested comments to the minutes of the previous meeting on November 4, 2021. There were no comments.

Motion: Ms. Burns moved to adopt the minutes for November 4, 2021. Mr. Ryan seconded the motion. Said minutes were unanimously approved.

Developing A Plan To Get To Net Zero – John Tzimirangas (ENE)

Mr. Ryan turned this topic over to John Tzimirangas, ENE’s President and CEO.

Mr. Tzimirangas advised the Board that ENE has been meeting with commissioners of municipal light plants (“MLPS”) to discuss, at a higher level, the renewable space, renewable resources and the Climate Bill. He noted that all MLPs are essentially in the same ballgame with regard to meeting net zero emissions requirements and goals. He also noted that ENE recently struck a deal with Vineyard Winds that will allow MLPs to purchase offshore wind power, which is the first time MLPs have been involved with a solicitation. The solicitation is known as Commonwealth Wind. The state’s selection process for this will be held December 17, 2021. If selected, MLPs will, have a space in large offshore wind solicitations.

Mr. Tzimirangas indicated that he was at the meeting to provide a 10 slide presentation to the Board about what all of this means to HMLP. He introduced Ken Stambler, ENE's Director of Energy Procurement, and his team, Jesse Fitzmaurice and Marcos Santiago. Mr. Stambler explained that the presentation would address (i) the renewable power outlook for Hingham, (ii) projects ENE is working on for Hingham, (iii) whether 100% carbon-free is a realistic goal and (iv) whether local solar makes sense.

Mr. Stambler shared a slide entitled "Non-Carbon Resource Analysis," showing HMLP's carbon-free resources until 2025 and beyond. By 2025, 81% of the resources for Hingham's load will be noncarbon. 50% of that consists of resources from Hingham's nuclear contracts with Seabrook and Millstone and the remainder is from wind and solar deals. He explained that ENE looks for and analyzes resources and makes recommendations whether a resource fits HMLP's portfolio.

Mr. Stambler provided another slide, showing the results of Senate Bill 9, which requires MLPs to be at 100% carbon free by 2050 and 50% by 2030. He also pointed out a graph showing where Hingham stands given this timeline and its contracts. He explained that several contracts, including nuclear, are coming up to negotiation or extensions. So, there are several things to do to maintain Hingham's current level of non-carbon resources. A pie chart showed the breakdown of Hingham's supply mix, including nuclear and solar. He mentioned that a solar contract is currently being negotiated.

Ms. Burns asked more about all of this and the assumptions behind the analysis. This was discussed in detail. Ms. Burns also asked about nuclear resources and the Senate Bill. This too was discussed in detail.

Mr. Stambler continued the presentation, showing a slide entitled "The New World of Power Supply." He explained that the focus of power supply is shifting. There is commodity risk now that needs to be properly balanced. Jesse Fitzmaurice of ENE added that volatility of markets is a growing concern.

Mr. Stambler next showed a slide entitled "Renewable Outlook." He stated that the New England market is dominated by natural gas (54%). Non-emitting resources make up about 40% of the mix, with nuclear comprising two-thirds of that. Hydro, wind and solar are smaller percentages (7.1%, 3.4% and 2.7% respectively). Offshore wind may bring 25-35 megawatts, but this is not much. New England is looking to add offshore wind by 2035, but there are issues to be resolved that could delay all of this, including issues associated with where the wind is coming from and transmission access.

With regard to offshore wind, Mr. Tzimirangas pointed out that there are infrastructure concerns. Efforts to build an offshore transmission line in Maine recently failed. Before that, efforts to build a transmission line in New Hampshire failed. Ms. Burns asked whether the infrastructure associated with the Pilgrim Nuclear Plant that is being decommissioned might be used. This was discussed. Mr. Fitzmaurice added that 6,000 megawatts could be

built on the existing Pilgrim infrastructure, but beyond that transmission upgrades would be needed.

ENE's presentation then turned to "Non Carbon Resources Under Evaluation." Mr. Stambler stated that ENE is currently reviewing 10 green and brownfield renewable resources totaling 1.3 GWh. This consists of: (i) hydropower at 296k MWh; (ii) wind at 386k MW; and (iii) solar at 665k MWh. ENE evaluates a number of factors with regard to these resources, such as the value of the resources, the location of the resources, how the resource fits into a particular portfolio, and the developer's expertise and financial position.

The next topic presented by ENE was entitled "Modeled Carbon Free Portfolio – Can We Get There." Mr. Fitzmaurice explained that ENE built out a hypothetical portfolio using 2050 as the goal. The model provides different resource mixes and indicates the costs to achieve the various goal(s). Nuclear was not included in the analysis. Mr. Tzimirangas added that ENE provided varying start dates because, unlike the past, there is much that is yet to start and must be projected out. The approach is difficult and requires a different mindset. ENE looks at things now and tries to lock things up, but there are also future opportunities to consider. He noted that there is zero risk associated with doing this, explaining that a contract does not start until a resource is up and running and approvals are obtained. Contracts for resources are generally for 20-25 years.

Ms. Burns asked if the model could be used to project-out nuclear. Mr. Stambler stated that this could probably be done. Mr. Tzimirangas asked Mr. Fitzmaurice to work on this for the Board.

Ms. Burns asked about the term "ownership" with regard to contracts as opposed to participation. This was discussed. Mr. Tzimirangas explained contracts could be either percentage of output or for a specified period. He added that the useful life of a plant is also a consideration.

Mr. Fitzmaurice then discussed the "Modeled Green Portfolio Results." He noted that this model shows how things are looking in the long term.

Mr. Stambler then discussed the topic: "As a Society, can we reach 100% Carbon Free." This is a question. What happens if the sun is not shining and/or the wind is not blowing? Right now, fossil fuel keeps things moving. Need to figure out what happens when you can no longer rely on that. There is a need to grow energy storage capacity or replace natural gas with carbon-free energy such as hydrogen. However, there is no infrastructure for hydrogen right now. Things are constantly changing, and ways of solving problems are evolving. Mr. Tzimirangas added that UMass Lowell has a renewable center and has conducted a study involving hydrogen. He discussed this study and its findings. He noted that, with regard to hydrogen, there are societal impacts to be considered such as changing appliances and the like. So, how a move to hydrogen might move forward is up in the air.

The discussion turned to solar. Mr. Fitzmaurice noted that solar energy is tied to the grid. However, battery storage is starting to be paired with solar. Mr. Tzimirangas noted that

the grid provides 20 MW of solar, with <5MW local. To generate 1 MW of solar, it takes 2.5 acres of land. Behind-the-meter solar comes with some benefits with regard to capacity and RMS value. Ms. Burns asked whether there might be other advantages to solar, such as reducing liability for large storms by installing microgrids around town. Mr. Tzimirangas explained that microgrids may play a part going forward, but that he is not sure this works with solar. There was further discussion about all of this and whether batteries would help. Mr. Tzimirangas added that, if looking at local resiliency planning, communities can look at all of this, but rotating machines may be required to make it all work. California is using rotating machines. Rotating machines are not carbon-free.

Ms. Burns noted that people in the community are asking why solar panels are not yet on school buildings in Town. Mr. Tzimirangas noted that ENE can assist HMLP with an RFP to move any such project forward. Mr. Ryan added that the economics of owning and developing rooftops needs to be considered given the substation project, and that a 3rd party may need to own the project. ENE noted that they could help with that. Mr. Stambler added that any PPA might be structured with an option to buy. Ms. Burns noted that the School Department and the Town are on board with the rooftop solar. She further noted that this might be a question that has to go to Town Meeting. Rate pay for net metering is also a consideration.

Ms. Burns asked if members of the public had any comments or questions for ENE. Mr. Borger introduced himself as a resident and asked questions regarding the contributions of residential solar units to achieve net zero goals. ENE staff responded to his questions.

Mr. Ryan indicated that there would be time at the end of the meeting for public comment.

ENE EV Program, and its benefit to HMLP – Mark Scribner (ENE)

Mark Scribner, ENE's Associate Director of Transportation Electrification, introduced himself. He discussed that ENE's has a website, hinghamdriveselectric.com, that seeks to educate residents and commercial entities about EVs.

HMLP launched its "Smart Charge" program in 2021. Participants have a drive and safe wizard. This informs drivers about emissions savings. People can also agree to charge their EVs during off-peak times and receive a rebate. To show compliance, participants had been taking a picture of their charging screens. However, ENE is now working with Canadian company, Geotab, to implement the program. The company tracks compliance using a data reading device linked to a car's data port. The data reader only collects information about charging times and whether a car is in Hingham territory during charging. So far, 20 folks are enrolled in the pilot program. Recent enrollments put that number closer to 40. There are 100 EVs in Hingham, but, in reality, this number might be more like 150. ENE is actively marketing the program.

Ms. Burns added that she asked for this topic to be on the Agenda. She indicated that, following last meeting, she talked to Mr. Scribner about the rebate program and to address concerns.

Ms. Burns then asked Mr. Scribner how ENE might expand the program. Mr. Scribner stated that the pilot program is for 2 years. The data collected will indicate the value of the program to the Utility and whether it is cost effective. Ms. Burns commented on the importance of (i) incentivizing off-peak charging (ii) incentivizing people to change to EVs. She mentioned that a time-of-use rate may eliminate the need to track, but that this is a separate issue. Mr. Tzimirangas offered that ENE could help with the rate side of this.

Mr. Tzimirangas introduced Noel Chamber, ENE's Director of Efficiency and Electrification, to the Board. Mr. Chambers will be looking at the offerings available to the MLP community, and how HMLP can meet its goals.

Vote to Approve Funding of Consultant to Look at Solar on Municipal Buildings

Mr. Ryan asked if this matter required a Board vote. Ms. Burns indicated that she and Mr. Morahan discussed this with the HMLP's attorney, Deirdre Lawrence, and that Ms. Lawrence suggested that it would be wise for the board to adopt a policy which provides the background for the decision to fund a solar consultant for town buildings, so that in future there would be a record of the reasons the board took this step. Ms. Lawrence and Ms. Burns drafted proposed language for a motion, as follows:

Motion:

HMLP is actively planning for the future on behalf of our ratepayers. Taking into consideration (a) the Commonwealth of Massachusetts' commitment to reach a goal of net zero carbon emissions by 2050, (b) the commitment made by 2021 Hingham Town Meeting to create a plan to reach net zero carbon emissions in the town by 2040, (c) the commitment to a carbon-free power supply reflected in HMLP's mission statement, (d) the inevitable changes to HMLP's power supply which will be created by efforts to move away from fossil fuels, (e) the centrality of HMLP to the Town's plans to reach net zero carbon emissions, given that widespread electrification will feature prominently in those plans, and (f) the need to protect the ratepayers and the future of HMLP from demand volatility and unforeseen changes in load.

1. It is in the best interests of HMLP and its ratepayers for HMLP, where feasible and consistent with the provisions of G.L. c. 164 governing municipal light plant operations and finances, to assist, financially and/or in the form of sharing its expertise, in the creation of a plan for the Town's transition away from fossil fuels and towards electrification.

Moved by Ms. Burns, seconded by Mr. Ryan and approved unanimously.

2. It is our understanding that the General Manager has proposed to expend funds in connection with the creation of a transition plan not to exceed \$80,000, and the Board finds that this expenditure is consistent with, and in furtherance of, HMLP's

policy on assisting Hingham's transition away from fossil fuels, as adopted today. The Board requests that the General Manager make this expenditure.

Moved by Ms. Burns, seconded by Mr. Ryan and approved unanimously.

Capital Budget

Mr. Morahan provided the Board with a Capital Budget for 2021 - 2026. Mr. Morahan pointed out legal and permitting fees for the transmission project. He also noted that the Capital Budget includes vehicle purchases and IT items.

Energy Efficiency/Sustainability/Communications Position

Mr. Morahan advised that he has selected a candidate and is in the process of extending an offer.

Financials: (a) 3 year summary and YTD; (b) 2021 budget update

For September 2021: (i) kwh sold was \$20.7 million; (ii) revenue was \$3.3 million; (iii) expenses were \$2.6 million; and (iv) net income was \$715K. The return estimate for 2021 is approximately 4%.

Updates: battery storage, additional transmission line and new substation, landfill, EV chargers, choice connect, municipal solar

Mr. Morahan provided the following updates:

Battery Storage. This is operational. Still working on contract amendments. There is an additional revenue stream associated with the battery in the regulation market.

Additional Transmission Line and New Substation. HMLP held a community meeting on November 18, 2021. It was not well attended. The presentation is available on HMLPs website for viewing. HMLP will hold another community meeting sometime in or after January.

Landfill. This project will start in the spring of 2022.

EV Chargers. Received some information from the State. No decision yet.

Choice Connect. Still waiting on equipment.

Municipal Solar. The Town is still working on the RFP, which will be reviewed by legal counsel.

Cyber Security. HMLP conducted a cyber security audit. The audit will indicate whether there is a need for improvements to HMLP’s cyber security system(s).

Ms. Burns asked for an update on the Hosting Study. Mr. Morahan stated that it would take place next year.

Other New Business; Other business

Mr. Ryan noted that there is no new or other business.

Executive Session

Mr. Ryan noted that there was no need for Executive Session.

Public Comment

Mr. Ryan stated that members of the public could remain on the Zoom meeting link to ask questions of ENE.

Motion to adjourn

Mr. Ryan asked for a motion to adjourn the meeting. Ms. Burns seconded the motion. The motion was unanimously approved. The meeting adjourned at approximately 0935.

List of Documents Provided to Board Members In Preparation for the Meeting:

Meeting Agenda

11/4/2021 Minutes

Financials: September 2021: 3-Year Summary and YTD

HMLP Capital Budget (2021-2026)

DRAFT of HMLP Policy on Planning for future on behalf of taxpayers

2022 HMLP Operating Budget

Documents Shared During Meeting

ENE Presentation re “Non-Carbon Resource Analysis.”