Minutes Green Marblehead Committee Net Zero Planning March 24, 2022

Approved as amended at 5/16/22 meeting

Present: Brooks Winner, MAPC, Chair; Alexa Singer, Board of Selectmen; Andrew Petty, BOH; Becky Curran Cutting, Town Planner; Joe Kowalik, MMLD; Mike Hull, MMLD; John Livermore, and Eileen Mathieu, Sustainable Marblehead; citizens: Mimi Hollister, Louise Yarmoff, Elaine Leahy

Absent: John Buckey, School Superintendent; John Albright, Building Commissioner

Minutes of March 3 GMC approved unanimously

Committee resumed review of Marblehead Net Zero Roadmap Action List spreadsheet.

Greenhouse Gas Emissions Reduction Potential Ranking: High/Medium/Low; Starting at Number 23 on excel spread sheet

#23: High "promote and incentivize Solar Electric systems for Marblehead residents with good roofs for solar, at rebate levels that will make the switch an easy decision". Joe Kowalik suggested that a link to the google app "Project Sunroof" would help people find if their roof orientation was likely suitable; there was a discussion of how to help people with the initial capital outlay to install solar (rebates)

##24: High "establish community solar installations for those who don't have good roofs for solar; Joe K pointed out that the roofs of Marblehead High School, Village Middle School, and Veterans Middle School would in total provide about 1 Megawatt and people could buy into that production. Question was raised if Municipal Light Plants would be allowed to subsidize rate at which people could buy in.

#25: High "Maximize installation of utility scale solar and battery storage at municipal level"; Joe K pointed out that MMLD is planning to upgrade Village 13 substation to allow for placement for utility scale batteries.

#26 High "MMLD achieve 100% clean energy"

#27 High "Explore renegotiating carbon emitting power supply agreements":

> Discussion re uncertainty in what lies ahead for sources of renewable energy, how soon will offshore wind be available, should goal be to reduce gradually how much MMLD buys from the spot market (ISO-NE) (because we can't control the emissions of the electricity that ISO-NE supplies on a given day) and instead purchase more renewable/carbon free power supply agreements through MMWEC; MMLD is currently buying into solar and battery storage through MMWEC.
>
> Discussion re MMLD align with state 2050 goal, or 2040 Town of Marblehead goal. It was pointed out that MMLD can't assume a fixed demand, as more end uses are electrified such as EV/ electric + induction stoves/ electric hot water heaters + dryers/ home heating and cooling via ASHP's. Demand for electricity will likely go up rapidly through 2040, due to increased

electrification of end uses as mentioned above, predicted to double by 2030 and triple by 2050. So unless MMLD quickly procures much more electricity from renewable energy sources, the current clean energy in MMLD's Wholesale energy supply portfolio will become a smaller percentage of MMLD's total portfolio. Thus although the state goal for utilities is 50% carbon free by 2030, 75% carbon free by 2040, and 100% carbon free by 2050, several members felt that MMLD should be setting goal of decarbonizing its grid more rapidly, ie by 2040, and the Town and the Selectmen had adopted this goal.

Several members pointed out 2 reasons for sticking to the Carbon Free 2040 goal for MMLD:

First reason for carbon free 2040 goal for MMLD: in anticipation of this expected rapid increase in demand for electricity, MMLD's current pace, which meets the 2030 50% carbon free target, assumes that electricity demand in 2030 stays similar to current demand. Planning to be 75% carbon free by 2040 using current demand scenario, will mean that, given widely predicted increases in electricity demand by 2040, (2.5-3x current demand) MMLD's portfolio will be even further behind the goal.

Second reason for carbon free 2040 goal for MMLD: if people electrify their cars and homes, but the electricity grid is not carbon free by 2040, it will not reduce emissions as significantly, compared with if the electricity is 100% carbon free.

#45 was discussed here as well; suggestion to change to "Analyze and Upgrade infrastructure to accommodate Load growth, and enable batteries to be integrated behind the meter"

#28 High "support pilot for geothermal thermal for neighborhoods"

#29 Medium "pilot microgrids powered by renewable energy" Joe K felt that this is similar to #25, pointed out that current distribution circuit is 4000 but if increase, next increment is 13000, this would allow batteries at substations, etc

#30 High/ (possibly change to an advocacy point of action): "Coordinate with utilities to address major gas leaks": Brooks updated us that there is new thinking about the effectiveness of repairing street gas leaks. Discussion: the suggestion was to add a point of action to advocate for "triage and transition" off gas entirely by transitioning homes to all electric end uses; to utilize the NG data on numbers of leaks in Marblehead: Andrew looked up and of 1800 leaks, 55 were repaired in 2021.

#31 High " Implement Public Housing Solar" Becky suggested working with the Housing Authority, and pointed out that it looks good if you are applying for a grant if you have put such an item in your Town's plan, noted that lots of the public housing in Marblehead is flat-roofed and that there might be funding for this. This also is high because it means equity for lower income folks.

#32/#42: No: Final decision: take these recommendations out of this Net Zero Plan:

"Utilize Battery Storage as alternative to Peaker Plant, Peabody Project" and "Divest from Project 2015A"

Long discussion re whether Marblehead could extricate itself from Project 2015A and whether batteries can be used currently for the project. Economics and reliability are reasons that MMLB has voted to stay with the plan for Project 2015A, but the concern was expressed about investing in a fossil-fuel based peaker plant that might become a stranded asset as the state Roadmap Bill is enforced and cleaner methods of generating electricity are required, although Joe K feels that there will be need for peaker plants past 2050, and that this is written into the Roadmap bill.

#33 Medium: "Switch Gas Infrastructure to Geothermal" Concern if we have the technology

#34 High "Encourage Residential Batteries"

#35 High: "Time of Use rates" but concerns about equity were expressed, and how to make the really large users of electricity pay more, not the average person who has to use electricity from 4-8 PM because they just go home from work

#36 Medium "Maximize Renewable Energy generation on Municipal Property"

#37 Medium "Advocate for equitable clean energy"

#38 Medium "Align zoning and permitting to support public and private…."

#39 Medium: roll into #29 about microgrids "Deploy energy storage at …"

#40 High: "Implement and advocate for Demand Management" Discussion: Time of use rates and Demand Management strategies need to be explored, and undoubtedly will reduce electricity demand, but with concerns about equity to make sure low income folks aren't penalized.

#41 No "Implement Peak Pricing…": Andrew felt strongly that unless you can develop some exemption/this can't be a blanket recommendation related to #35

#42 NO see discussion of #32

#43 High "Explore no cost solar financing model…"

#44 High "develop income based rates that reduce the energy burden on low income residents" (high because of equity concerns)

#45 Medium/High see discussion of #26/27

#46 No

#47 unclear: medium or high: "Smart Meters" Joe K stated "We already have smart meters" but discussion revealed interest in providing additional info to ratepayers to help people control their usage; Mike Hull recommended a device that attaches to the home meter and tells you what the energy use of each device in the home is. People thought that having people able to see which device is using the most electricity will empower people to reduce.

#48 High “Rebates for EV’s”: discussion: funds for rebates should come from MMLD, and state, federal

#49 High or Medium: “EV Car sharing”: Discussion re whether in a town like MHD, where some many people have multiple cars, car sharing would be utilized, Brooks talked about a current MAPC model that would is EV only car share, like “zip car” system, could be a goal to reduce vehicle ownership in MHD

#50 Medium: “Zero Emission Municipal Fleet Policy” goal is likely impractical, but need set goal for any vehicles that could be transitioned; technology is not there yet for many municipal vehicles like fire trucks/cherry picker tree and MMLD trucks

#51 High: “Procure Electric school and shuttle buses”

#52 onward: on hold for next meeting, Becky Curran Cutting’s in put needed on many of the next items

One last item; decided to include composting as an action item, in the category “ Nature-Based Solutions”

Next meeting: Thursday April 7, from 3-5 PM. Note: it will be a 2 hour meeting to finish the prioritization of actions.

Respectfully submitted by Eileen Mathieu on March 24, 2022