



86 Bridge Street, P.O. Box 20, Baldwinville, MA 01436-0020

TEL: 978-939-5323

FAX: 978-939-4309

John M. Driscoll, *General Manager*

**Light Commissioners' Meeting
May 8, 2018**

Members present were: Chairman Dana Blais
Clerk/Secretary Chris Stewart

Employees present were: General Manager John Driscoll
Light Superintendent Thomas Berry
Business Manager Jennifer Belliveau

The meeting was called to order at 6:40 p.m. by Dana.

The agenda was approved on a motion from Chris, seconded by Dana, 2-0 in favor.

The minutes of April 3, 2018 were approved on a motion from Chris, seconded by Dana, 2-0 in favor.

Old Business:

The General Manager (GM) had a hand out for the Board on Annual Town Meeting (ATM) Article #39 along with the letters he had sent to customers on the petition list. He informed them that the people who were highlighted in red called the GM to let him know they had not fully understood just what they had signed on the citizens' petitioner list. The GM sent these letters to the rest of the residents in advance of the ATM hoping that they may change their mind once they knew about the additional opt out charges for electricity. Chris said he was glad that there was at least a form letter ready in case there ended up being more; the GM thought that there would be. Chris thought that in 2-4 months' time enough people would opt back in and save the \$125 for the special meter and more customer charges for 20 years.

The Light Superintendent (LS) updated the Board on the Eaton AMI System. The LS told the Board that we have billed twice now on the 50 SAT meters installed in Baldwinville. The communication on these 50 are all set and we will be handling some net metering solar customers AND some TOU customers next. Then we will add these additional meters into the billing cycle to test performance. The SAT testing is 75% complete. The billing system integration is good, whole house disconnects work, but some measurement values like power factor (PF) are not yet being recognized by Yukon. The LS has been in touch with Eaton over this and they say that they have firmware/software upgrades to push to our SAT meters that should solve our PF problem. The virtual private network (VPN) has been functioning properly so we have secure data flow going on, but PCS can't connect with Yukon yet. The LS said that this is likely an issue with our Sonic Wall firewall setup (most AMI systems utilize Cisco instead) but PCS, Verizon and Montalbano are all working together to resolve the issue. The LS said we currently have 1,400 residential Itron meters in-house now in addition to our 90 commercial Elster ones. The TMLP has

installed another desktop computer to act as a holding location for our billing files. This was done in lieu of having Jennifer's or Lindsay's computer act as the primary destination for billing data backup and restoration. This was done at both ASABSD's and Eaton's request

Mark Harkins and Adam Hassig from Eaton will both be here at TMLWP for training on the Yukon System on May 22 and 23. The GM had logged onto Yukon earlier in the week to check residential demand data for the first time and found the information quickly. He was surprised by how much higher customers' peak demands were as opposed to their average demands, e.g., a residential customer with an average demand of 1.5 KW could have a peak demand as high as 9.0 KW. The GM says that this data will be invaluable for him as far as maintaining logical retail electric rates in future years.

The GM had different style handouts for battery storage at tonight's meeting. These had both the Capacity and Transmission Peaks savings to be recognized with and without the GSS that had been the GM's preference to date, a 1.5-MVA/3.1-MWH lithium-ion system. The Board could see the effects that a battery storage system would have had on the TMLWP's loads coincident with NGRID and ISONE from Jan-17 thru and including Mar-18. The fact that there had been so much solar distributed generation put online in Massachusetts since 2010 had made solar now almost totally ineffective at reducing capacity and transmission costs (this phenomenon was known industry-wide as the "Duck Curve"). Both the summer and the winter capacity peaks would now be occurring between 6:00 and 8:00 p.m. now when the Massachusetts solar distributed generation was falling off due to sunset. The GM stated that this is where a battery storage system presents real savings to the MLP.

Dana commented on our use of Templeton Solar for 1 hour in Jun-17 and its savings to TMLWP of roughly \$250K, and the GM stated that with the added 1.5 MW of load reduction from batteries our savings would have been closer to \$415K. Dana asked if we would need to increase electric rates to fund such a battery system as this one. The GM said that our depreciation fund is covering the entire \$900K of costs for the AMI System and will still be showing a rough balance of \$500K by yearend. These funds combined with some or all the \$566K in our rate stabilization fund (established in 2010 and never used) could certainly cover the TMLWP's capital portion of the cost of this battery storage system; we would finance the remainder thru MMWEC's pooled loan program at 4% with a 10-year note.

Dana said that he was convinced about our savings with batteries, especially after the MMWEC Annual Conference seminar conducted by Doug Alderton of NEC he had attended. He also said that he thought the GM had presented the data better this time around and focused on more concrete ideas, a with or without scenario as opposed to another 15-year projection spreadsheet. The GM said, for simplicity, if we spend \$1M and finance \$1M we would be looking at a 6-year payback term, with roughly 40% of the project paid back year 1. The GM stated that the installed cost per DC KW continues to decrease on batteries like these, just as it has for solar array apparatus. He added that charging up the batteries overnight off-peak is almost free, and sometimes better than free when there are negative LMPs present due to decreased demand and surplus power resources. Dana commented that Gregg in April had wanted more information for project justification; Dana stated that he thought we had received it after tonight's discussion with the GM; the GM thanked him.

The GM told the Board that as of Jun-18 the market price for capacity within ISONE is increasing from \$7.03 to \$9.55 per Kilowatt-Month, a 36% increase in open position demand. He stated that with the addition of Templeton Solar and Hancock Wind, the TMLWP was barely 10% open to this capacity market

as it stood today, when combined with the rest of our hydroelectric, nuclear and wind resources. With the shift in the wholesale power market over the last 10 years, the TMLWP has been more and more each FCA getting invoiced on capacity (demand) rather than on fuel (usage). All our OATT costs are based on our network load coincident with NGRID and/or ISONE just 12-13 hours per year out of 8,766. Now that MMWEC and its members know what hours these peaks will occur our goal is to minimize our impact on the ISONE transmission system during those hours.

The GM compared the OATT system to the EZ Pass system, where many of our power resources aren't directly billed for transmission per KWH like our MMWEC projects are. Every month the transmission peak is determined by ISONE and our non-transmission-billed resources are billed thru the OATT at the Regional Network Service (RNS) rate. Transmission increases roughly 6% annually, and while we are currently paying about 1.8¢ per KWH for transmission we are in line to pay 3.0¢ per KWH by 2028. Chris suggested talking about battery storage again with Gregg present and then the Board could possibly vote to move forward with the project. Chris said that this was the best information that he had seen so far and made lots of sense; the GM thanked him.

The GM told the Board that Nick Houston and Joe Parker had gone to assist NHEC with storm restoration as part of a NEPPA Mutual Aid effort on May 5 and 6. He said that the NHEC line personnel have gone on strike and now Jim Bakas and others had been put in a position where they need to find quickly some non-union lineworkers and supervisors. The GM said that the union lineworkers at NHEC must not have any "no strike" clause in their collective bargaining agreement, which is unfortunate for any NHEC electric customer still out of power. Because of this union issue the TMLWP will not be sending any further assistance up to NHEC for this mutual aid event. On a related note, Dana asked about the additional money we were supposed to receive from the USVI St Thomas; the GM stated that we did get paid all that we were owed it just took a while.

The GM informed the Board that Chris Pera is still working on 11 ¾ Elm St. Dana said that he did see Chris Pera last week at a job and he is making progress on TMLP's property. The GM said that we should probably expect an invoice from Pera Surveying soon.

New Business:

The GM talked about the MMWEC Annual Conference the GM and Dana attended in Tyngsboro, MA. He thought that the subject matter was helpful and relevant to today's market issues. There was a presentation on the emergence of battery storage technology given by Doug Alderton of NEC that was of interest to Dana and the GM.

The GM informed the Board that he would be attending the 2018 MEAM Annual Conference in Plymouth, MA on May 16 and 17. They usually have 4-5 speakers for this event and this year Steve Doucette, the TMLWP's legal counsel, will be doing a presentation on electricity theft and how to locate it, obtain evidence and navigate the court system properly. The GM thought this to be especially relevant now given the newer state laws involving marijuana possession.

The Manager had five handouts tonight for distribution to the Board:

1. March 2018 Power Supply

2. April 2018 Wind Generation
3. April 2018 Kilowatt-Hour Sales/Revenue
4. May 2018 Retail Electric Rates (TMLP)
5. Q1 2018 Electric Rate Comparisons (MMWEC)

Other Business:

The GM discussed with the Board a survey that Jackie Prime from the Boynton Library would like us to mail out for them. The sample the GM had was 3 pages, and he asked the BM if this was something that Billtrust would do for us for a fee per page. The BM thought it would be a good idea to ask Jackie if the survey could be reduced to just 2 pages double-sided. Chris suggested that if they wanted TMLWP to mail out the survey pages we could cover the costs. The GM and BM thought that the estimated cost to do this was 5¢ per sheet, so it would be \$180 for 3,600 electric bills. Dana did not have an objection to covering this cost either. The GM would get back to Jackie and ask if the survey could be changed to just 2 pages and go from there.

The GM relayed to the Board some information regarding Melanson-Heath. In 2016 Goulet-Salvidio used a metric they called "wind revenues recoverable in the future"; basically, WREC revenues for 2016 that the TMLWP would not receive till 2017. Melanson-Heath had worked with both Peabody and Wakefield who were both in wind cooperatives like Templeton was, and they were going to have to speak with MMWEC to understand why this had been done by Goulet-Salvidio. The GM and BM were both relieved that another audit firm felt as we did about this practice regarding future revenues which almost overstated the TMLP's income for 2016. The staff from Melanson-Heath had been to our office for a few days and were courteous, polite and professional.

[Chris about the light union contract coming up to expire and if we should be starting the talks earlier this time. The GM said that YES, we absolutely should but that we should let them make the first move like last time around. He added that there would be more to discuss on this in an executive session once he had their union proposal in-hand].

There being no other Open Session business to discuss, on a motion by Chris, seconded by Dana, 2-0 in favor, the Light Commissioners' Meeting adjourned at 7:46 p.m.

Respectfully Submitted,



John M. Driscoll
General Manager