



## Town of Reading Meeting Posting with Agenda

### Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2021-07-19

Time: 5:45 PM

Building:

Location:

Address:

Agenda:

Purpose: General Business

Meeting Called By: Jason Small, Chair

Notices and agendas are to be posted 48 hours in advance of the meetings excluding Saturdays, Sundays and Legal Holidays. Please keep in mind the Town Clerk's hours of operation and make necessary arrangements to be sure your posting is made in an adequate amount of time. A listing of topics that the chair reasonably anticipates will be discussed at the meeting must be on the agenda.

**All Meeting Postings must be submitted in typed format; handwritten notices will not be accepted.**

### Topics of Discussion:

PER GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF THE OPEN MEETING LAW, G.L. c. 30A, §20 THIS MEETING WILL BE HELD REMOTELY VIA ZOOM.

FOR PUBLIC PARTICIPATION PLEASE EMAIL: KRYBAK@RMLD.COM. INCLUDE YOUR FULL NAME, ADDRESS, AND PHONE #

1. Call Meeting to Order – J. Small, Chair
2. Executive Session – J. Small, Chair  
Suggested Motion: Move that the Citizens' Advisory Board go into Executive Session pursuant to Massachusetts G.L. c.164 section 47D, exemption from public records and open meeting requirements in certain instances, to discuss competitively sensitive issues regarding options for power supply and return to regular session. Note: Roll call vote required.
3. Reconvene Regular Session – J. Small, Chair
4. Approval of Minutes – J. Small, Chair  
Suggested Motion: Move that the Citizens' Advisory Board approve the minutes of the October 22, 2020, and November 19, 2020, meetings as written.
5. General Manager's Report– C. O'Brien, General Manager
  - Annual Report Confirmation
  - Board Agenda Quarterly Guideline Review
  - MassEVIP Grant Update
  - Green Communities
  - Community Update

This Agenda has been prepared in advance and represents a listing of topics that the chair reasonably anticipates will be discussed at the meeting. However the agenda does not necessarily include all matters which may be taken up at this meeting.



## Town of Reading Meeting Posting with Agenda

6. IRD Report - G. Phipps, Director of Integrated Resources
  - Power Supply Updates
  - Cost of Service, Rates Choice(s) – Renewable/Non-Carbon
7. Appointment of CAB Secretary – J. Small, Chair
8. Scheduling – J. Small, Chair
  - Next CAB Meeting
  - BOC Meeting Coverage
9. Adjournment – J. Small, Chair  
Suggested Motion: Move that the Citizens' Advisory Board adjourn regular session.

## **Attachment 1 - Agenda Item 4: Approval of Minutes**

October 22, 2020, Minutes



## Town of Reading Meeting Minutes

### Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2020-10-22

Time: 5:30 PM

Building:

Location:

Address:

Session:

Purpose: General Business

Version:

Attendees: **Members - Present:**

Mr. Jason Small, Chair (North Reading); Mr. Vivek Soni, Vice Chair (Reading); Mr. George Hooper, Secretary (Wilmington)

**Members - Not Present:**

Mr. Dennis Kelley (Wilmington); Mr. Joseph Markey (Lynnfield)

**Others Present:**

Mr. John Stempeck, Board of Commissioners  
Staff: Ms. Coleen O'Brien, Mr. Hamid Jaffari, Ms. Wendy Markiewicz, Mr. Gregory Phipps, Ms. Kathleen Rybak, Mr. Charles Underhill  
Public: Ms. Lynne Champion, 8 Franklin Avenue, Wilmington; Mr. James Satterthwaite, 8 Hunt Street, Reading

**Minutes Respectfully Submitted By:** George Hooper, Secretary

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### Topics of Discussion:

PER GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF THE OPEN MEETING LAW, G.L. c. 30A, §20 THIS MEETING WAS HELD REMOTELY VIA ZOOM

1. Call Meeting to Order – J. Small, Chair

Chair Small called the meeting of the Citizens' Advisory Board to order at 5:30 PM and noted the meeting was being audio recorded.

2. General Manager's Update – C. O'Brien, General Manager

Ms. O'Brien introduced Mr. Gregory Phipps the new Assistant Director of Integrated Resources hired to succeed Mr. Bill Seldon, who will be retiring at the end of the year. Ms. O'Brien noted that Mr. Seldon along with the other retirees that will be leaving at the end of the year will be recognized during a virtual, company-wide employee appreciation event.

*Community Updates:* Ms. O'Brien provided the following program updates: The new Air Source Heat Pump Program was launched on October 1<sup>st</sup>. Adobe Energy has been hired to provide educational and technical resources to both customers and contractors; there are currently 35 rebates in the que. Ms. O'Brien reported that events for Public Power Week (October 4-10), were modified to a virtual format including activities such as, story time for the kids, a scavenger hunt, the RMLD line worker video. Activities are posted on the RMLD website. National Drive Electric Week was September 26 thru October 4. The Fourth Grade Art Contest, which is the annual electric safety contest, will be conducted in partnership with the schools. The 2020 historical calendars will be available around Thanksgiving and will be distributed via various locations/kiosk sites.

Chair Small asked if there were any questions or comments; there were none.

3. 2021 Budget – C. O'Brien, General Manager  
*Materials: 2021 Budget; CY21 Operating Budget Presentation Slides*

Mr. Jaffari presented the 2021 Capital Budget including a review of major changes that took place from what was budgeted in CY20. Looking at the "Planned Programs" spreadsheet (page 11-13), Mr. Jaffari highlighted the following:

Line #3 – Building Upgrades: The 2020 increase is due to the generator at Ash Street, which failed unexpectedly this year and was replaced for \$241,534. Mr. Jaffari then gave a brief review of the projects planned for CY21.

Line #6 – Rolling Stock Replacement: Mr. Jaffari noted that replacement of RMLD vehicles is scheduled using RMLD's 8-10-year cyclic vehicle replacement plan and Fuel Efficiency OP 19-07, which is based on electrification and follows DOER guidelines. In CY20, four hybrid SUVs and one pickup truck (with eco boost technology) were purchased.

As the technology advances towards electrification (from eco boost to hybrid, and from hybrid to electric vehicles) any vehicle due for replacement will utilize the available technology toward electric vehicle. In CY20 the underground truck (\$168,225), which was a carryover from CY19 was received. Carryover from 2020 to 2021 will be \$285k to include the digger derrick to be delivered in 2021.

Line #9 – Software and Licensing: In CY20 ~\$50k will be spent. Mr. Jaffari highlighted the software projects scheduled for CY21 (\$438K) including Yukon AMI Metering System, MDM (meter data management) system, IWMS (integrated workorder management system), and customer relations management (CRM) software.

Line #10 - Primary Metering Inspection and Upgrade Program: Mr. Jaffari reported that RMLD has hired a contractor to inspect and test 80-100 primary metering sites in the field. As a result of this inspection, RMLD will update some of the PTs and CTs on either overhead structures or in underground cabinets, and all associated electrical devices.

Line #11 – Relay Protection Upgrade: National Grid (per NERC NPCC) has asked RMLD to upgrade the relays at the Bulk Electric Supply (Substation 4) to make them faster for tripping due to a fault, and improve reliability of the 115Kv grid, and enhance response in case there is trouble at that substation.

Line #12 – Pad-mount Switchgear Replacement: This program started in 2017, and since then RMLD has replaced 10 of 29 units. Every year we schedule five units for replacement, however, delivery delays have impacted the implementation of this project; three units (from CY20) are going to be carried over to next year. Additionally, we will purchase five new units for installation in CY21. In CY20, two units were carried over (from 2019) to bring CY20 spending to ~\$528k. This program continues into CY24; five units are scheduled in CY22. Some units are scheduled for CY23 and CY24 (\$212k per year), which are special units that are not standard configuration.

Line #13 – New Wilmington Substation: Mr. Jaffari reported that we had anticipated the land purchase for \$570k in CY20. However, we now anticipate purchasing property in CY21 for \$599k. Building and commissioning the substation will start in CY22 and continue into CY23. The \$195k requested for CY21 is for engineering and permitting, and some design. Additional expenditures related to the substation are shown on lines 14 and 15. Once the substation is built, RMLD will need to build circuits out to tie the substation into the existing 13.8 kV system.

Line #16 – Grid Modernization & Optimization: Mr. Jaffari noted this is a fifteen-year program. For 2021 we also added ABB reclosers for \$225k to replace/upgrade

outdated ones; there are currently five reclosers system wide. In subsequent years, we will be adding more reclosers (out to CY25) to increase system protection against fault conditions as we make system improvements.

Mr. Jaffari noted that OMS and IVR modules are installed and being tested. The Malware attack (earlier in the year) unfortunately put us behind the schedule for the full implementation. Crew management software is scheduled for CY21. Using this software during storms will allow us to see the movement of the trucks on the maps and assign trouble tickets to them more easily during system troubles.

Line # 17 – AMI Mesh Network Expansion & Meter Replacement: Mr. Jaffari noted the Itron AMR is outdated and due for replacement. Five years ago, RMLD decided to migrate to the Eaton System, and there are ~13,000 meters in our territory working on the Eaton system – this is the latest technology, which is in line with our smart grid program and road map that was presented in 2014-15. Staff estimates ~\$228k in spending by CY20 year-end, for three to four hundred more of the Eaton meters. Meters for commercial/industrial use will not be delivered until 2021 due to production delays.

Mr. Jaffari reported that RMLD has hired a consultant to do a study to explore options (stay with Eaton or migrate to another AMI system) and see what would be the best moving forward to provide RMLD with all the capabilities for the future demand response programs and demand side management. The study will provide recommendations this year so we can start moving toward that direction next year. The meter replacement project will be a three-year project starting CY21 and ending by CY23. The \$100K in CY24 is for the meters that are going to have to be replaced or added for future.

Mr. Soni asked if we are seeing prices coming down. Mr. Jaffari responded yes and no - the meter manufacturers are bringing prices down, but as the technology advances and more and more features are being added to the meters – those meters, depending on the class of the customer, especially commercial and industrial – are going to go up. Mr. Soni noted, sometimes they provide services, and they may charge it as an operating expense versus capital. Mr. Jaffari respond that meter manufacturers bid low on the meters, but are increasing the cost of the network, software upgrades, and maintenance. Mr. Soni asked if those costs were capitalized. Mr. Jaffari responded that the project will be capitalized.

Line #18 – Meters and Primary Meters (for stock) are annual usage (replacement).

Lines # 21-29 – Getaway Upgrades: We are following the Reliability Study that was done in 2015 by Booth and Associates. In 2021 we are planning to upgrade getaway feeder 3W18 at Station 3.

Line #30 – Transformers and Capacitors Purchase (for stock and projects): All transformers and capacitor devices are budgeted here. The transformers used for the reliability projects (lines 31-34) are drawn from this bucket. Mr. Jaffari noted CY20 estimated spending will be more than what we asked for due to the increased number of storms compared to previous years (unfortunately, some transformers got damaged) and increased costs of underground construction upgrades that we are trying to catch up with more toward the end of the year and delayed due to COVID 19.

Mr. Hooper asked if all of the older transformers had been replaced. Mr. Jaffari responded that it is a moving target – every year we have transformers that are reaching the 25-year mark. As transformers reach 25-years of age, they will be scheduled for replacement based on the age priority. There are transformers 35-40 years old on the list, and those get replaced first. Mr. Jaffari noted that we have replaced many transformers in the system since 2014 and upgraded many areas. As a result, the equipment failure has been going down, which is seen in the reliability report.

Line #31 thru 34 – Long-Term Upgrade Reliability Projects: Mr. Jaffari reminded the CAB that these projects do not include the cost of the transformers used in these projects; the transformer cost is captured in Project #116. Mr. Jaffari noted that some projects (Lines #31 and 32) have gone over budget for CY20, which is attributed to the increased cost of labor and materials. For example, the construction upgrades on North Main Street and Lowell Street (in Lynnfield) were complicated and very labor intensive. We are using contractors for this job, which is why the numbers have gone from \$221k, to \$490k (Line 31), and \$390k to \$526K (Line 32). Mr. Jaffari noted RMLD has completed 13.8kV conversion areas at Thomas Lane (Lynnfield), McDonald Avenue (Reading), and continuing on North Main Street and Lowell Street which is a massive project. Once completed, this will reduce losses of the system further due to conversion from 4.16 kV to 13.8 kV. Mr. Jaffari noted, in 2015 our losses were more than 5% - 5.5% and since then it has come down to 4.5% as a result of all the upgrades and system step down conversions. As we are doing more and more of these (conversions), the losses are coming down even further. The goal is to continue to bring losses down further. Typical utility losses are anywhere between 5-7%. The more system improvements done lower losses will be achieved.

Line 36 – Substation Equipment Upgrade: This item is higher than budgeted due to some unexpected failures of some PTs and CCVTs at Station 4. In CY20, we replaced three (of seven) 35kv PTs, and the rest will be replaced in 2021. We have purchased all the units, and they are scheduled for replacement in CY21.

Line 40 – Routine Construction: Mr. Jaffari reported there was a big jump in Routine Construction. The Routine Construction category includes miscellaneous unplanned overhead and underground system upgrades, new construction, hazmat, pole hits, underground failure, etc. Mr. Jaffari noted there was an unexpected underground cable failure which was replaced at Station 4. Some projects such as customer in aid to construction (~\$293k) and pole hits (~\$67k) are reimbursable.

Mr. Jaffari noted the total estimated expenditure for CY20 is expected to be \$8.2m, and the CY21 request is \$11.648m for capital improvements. Mr. Jaffari asked if there were any questions.

Mr. Soni noted that it seems that we underspent on the meters because we did not get those supplied, and all of that has shifted by one year effectively. If you compare with number projections for future years, the capital for 2023 was supposed to be less – it is all shifted by the meters going forward. Mr. Jaffari added, the meters plus the substation purchase of the land (\$600k).

Mr. Hooper asked about the failure rate on the meters. Mr. Jaffari responded that we do not have many meter failures; most failures are at the meter sockets (not meters), which can corrode due to rain getting in them. However, the technology of the meter itself is fast moving. Life of the meters, with the technology, is usually anywhere between 10-15 years; meters are going to be depreciated between 10-15 years.

Mr. Soni asked about the process to get Board approval if there is a budget number which you need to go above? Ms. Markiewicz responded that anything that goes through the bid process is brought to the Board and they are told if it is part of the Budget or not. Ms. Markiewicz noted some items (i.e., the roof repairs or the generator failure) were not planned for. However, through the bid process, we brought it to the Board's attention and let them know it was not part of the Budget. Things like the pandemic is not something that we plan for, but we bring to the Boards what we were seeing (for the load forecast/revenue, etc.). We try to prepare as best we can. Mr. Stempeck added, RMLD does have a number of contingency funds as well. If we need to draw from them for any major issue, we have the ability to do that with Board approval.

Ms. Markiewicz noted as an example, if more computers are needed than what we planned for - not necessarily a high-level cost - we would purchase the computers

because it is a necessary item. We would then explain why we are going over budget and that we really did not have a choice because we had failing computers. Very large costs, we would have to bring that to the attention of the Board. Mr. Soni noted part of the broader context (for his question discussed above) is that there have been a lot of discussions around the Green Communities, and he is trying to anticipate how something (with the Town or State) could be accommodated if something needs to be done in the next calendar year that is not in this plan.

There were no additional questions on Mr. Jaffari's presentation. CAB members thanked Mr. Jaffari. Chair Small stated that motions will be considered after both parts of the Budget (Capital and Operating) have been presented so the CAB can see how they fit together.

Ms. Markiewicz began the presentation of the Operating Budget (using slide presentation) by noting that CAB members, in reviewing the line items of the Budget, may have noticed quite a few discrepancies. Ms. Markiewicz noted 2020 was a very difficult and odd year as a whole and there were some areas where RMLD's hands were tied. Even though we had planned and strategized, things such as the ransomware and COVID, resulted in missed opportunities.

Ms. Markiewicz then reviewed the Budget to Actual Discrepancies (Slide 2). Vacancies is a very large portion of why the Budget is ~\$1m under in operating and maintenance expenses. Vacancies exist in multiple areas, due to talent pool, retirees, sudden resignations, etc. Ms. Markiewicz then continued with a review of Slide 2 noting the impact COVID had on spending, as well as unforeseen events which caused an increase in spending.

Ms. Markiewicz reviewed the Financial Strategy (Slide3) that goes behind trying to balance everything when making decisions for the Budget. The number one fact is what the impact of the rate increase to RMLD customers is going to be. We have to tow the line with the rate of return between 4% to 8%; we have to fund the below-the-line Town of Reading obligation; we have to fund capital projects outside of the depreciation reserve; we have to add money from the operating fund in order to fund everything especially when you are building a substation or replacing meters which are very large expenses; maintain the operating fund at 2-3 months of monthly operating expenses; balance the rate stabilization fund fluctuation and limits - we had a \$6.5m cap with a half a million plus or minus that we really need to stay around; and of course the impact of the Power Supply fluctuations is a huge impact to the RMLD customers.

Ms. Markiewicz then reviewed the CY21 Operating Budget Fixed Costs (Slide 4) which are 79.10% of the overall Budget noting there really is not much leeway here. RMLD is pinned down by power supply contracts about 68.95% of the power supply, which is a 6.55% decrease from the previous budget. Depreciation expense of 5.45% continues to increase due to necessary capital investments. The voluntary payment to the Town of Reading of 2.75% remains constant until 2022 when the formula changes to 3.875/mil for the three-year average of kilowatt hour sales. The towns' payment (2% of net plant) of 1.83% continues to increase also due to necessary capital investments - as we increase the capital, the 2% net plant goes up. It is a win-win - for the RMLD we continue to keep our infrastructure solid, and the towns continue to gain extra funds.

Ms. Markiewicz then reviewed the CY21 Operating Budget Semi-Variable Costs (Slide 5) which is only ~21% of the Budget. RMLD really does not have a lot of play with the "semi-variable" costs. Labor of 9.26% includes the three unions (contracts) and is set in stone. Of the 9.26%, 1.35% is going for capital projects. Overtime is at less than one and a quarter percent, of which less than a quarter percent is going for capital projects. Employee benefits and pension are less than 5% of which 1% is going on the capital side for projects. Operating and maintenance expenses represent about 2.4% of the Budget; conservation expenses 1.35%; tree trimming 1%; contract services, legal expenses, property insurance, software and hardware maintenance, and



vehicle expense, all represent by themselves each a half a percent of the Budget. Training and tuition, transformer maintenance, rent expense at approximately a quarter percent of the Budget. Ms. Markiewicz noted, when you look at that as a whole (outside of the labor, over-time, and employee benefits) you are looking at maybe 10% leeway if that. So of course, we are very diligent in making sure our insurance costs are being monitored to make sure that we are getting the best. We are very careful with spending; everything goes through an approval process - between the direct supervisor, Coleen, and myself, we look at everything.

Ms. Markiewicz then showed CY21 Actual and Projected Fixed and Semi-Variable Costs (Slide 6) which shows \$90.2m of Operating and Maintenance Expenses for the Budget. This includes power supply, which has decreased as well. Outside of power supply, we are talking about a \$1m decrease in the Budget (under budget). Ms. Markiewicz went on to review the Projected Rate Increase (Slide 7), noting staff had done a reforecast in June and then sent an email out to the CAB, the BOC, the Towns, saying what we believe the rate increase is going to be - we had committed to doing an 18-month projection so that the towns have time to put it in their budget, and we know that goes through 6/30/22, for towns. In CY2021, an approximate 2% to 2.5% overall rate increase for CY21 will be entirely supplemented by the Rate Stabilization Fund, of approximately \$1,750,000 - \$2,000,000. An approximate 3% to 3.5% overall rate increase for calendar year 2022 will be partially supplemented by the Rate Stabilization Fund of approximately 1% or that of \$800,000. Ms. Markiewicz noted, that pending any catastrophic event, the RMLD is prepared to honor these rate increase assumptions because once we pass this off to the towns, we understand that the towns have a budget to answer to as well.

Ms. Markiewicz finished with a review of the Six Year Plan (slide 8). Ms. Markiewicz noted that this is a good picture to see where we think we are going to be - of course these are just assumptions - we do the best we can. We think we are coming in flat with kilowatt hour sales; we thought we were going to have an increase this year - it did not happen. So, we are projecting flat kilowatt hour sales. There are some imbedded rate increases in there in order to carry the expenses. As you can see with that rate of return, we are trying balance that out. We were up around 7% - we came in too high last year and that is why we transferred over \$1m to the rate stabilization, and that is why we are giving it back to our customers. And then we are coming down to 7% for projected for the end of CY20 and CY21 we are at 6%, and then downward into the 5% for the rest of the six-year budget. We are trying to fund all of the capital projects in house, which prevents extra cost to our customers. Of course, we tried to stay around the \$8m, as the study recommended, but with the Wilmington substation and the replacement of the meters, it is very difficult to stay at that number, but we are getting there. Ms. Markiewicz noted that concluded her presentation.

Mr. Hooper stated, you said for FY21 there is no anticipated increase. And FY22 it is 3% to 3.5%, but the towns can expect 2% to 2.5%, because 1% is being picked up by the Rate Stabilization Fund. Ms. Markiewicz replied that is correct. When we say the 3% to 3.5%, that is all different classes, which is why we are doing the gap there. Yes, we are going to pick up 1% in 2022. For 2021 there is no effect to the bill, so we are going to pick that up, with the Rate Stabilization. For 2022 - we are looking at right about 2% to 2.5%, exactly. Mr. Hooper noted this is important for the communities to know while they are going into their fiscal budget year trying to get ready.

Mr. Soni asked why NYPA shows up as a negative line. On the home bill also, it shows up as a negative 0.005 cents. Mr. Underhill responded that NYPA power that RMLD receives comes to us at below our average or imbedded cost of power, and so we are required, as recipients of the power, to show that as a credit because it is lowering the power cost for all of our residential rate payers. We are able to show the negative value or credit adjustment for the below market preference power costs from those federal projects. Mr. Underhill noted NYPA is an expense (to RMLD), but it is below the

incurred expense of our purchase power portfolio, and we are supposed to show that as a credit or as a reduction to residential rate payers. It is usually between about 4.5 and 5 mills per kWh.

Mr. Underhill reviewed the Power Supply Budget (page 99 of the CY21 Budget). RMLD gets a budget each year that is a projection of the cost of our various contracts, the other power resources that we have, and whatever market power that we need to purchase. Transmission costs from the RTO are reflected in there, and capacity costs that are billed by ISO New England as forward fixed costs responsibility that tries to stabilize the wholesale market.

The Budget is projected to be what it was or a little bit lower for the coming year. We have a small component of ISO market power in the RMLD portfolio at this point, and that power is anticipated to be extremely inexpensive for calendar year 2021. Page 99 is a breakdown of the resource entitlements and how we expect that to play out for the year. We address that number quarterly so that we can set our purchase power and fuel expense charge to be zero at the end of the year. We try to keep as much of the volatility out as possible.

Mr. Underhill noted 2020 was a difficult year (with regard to load). It was the warmest winter on record, and as a result, through March sales were down about 3%. We then went into the COVID period. At this point, we are still running at around 3%-3.5%, which means that the COVID impacts have been minimal. The bulk of the impacts on our power supply budget have been decreases in anticipated load from the warmer than anticipated winter, and that translates directly to an impact on sales. Mr. Underhill noted his presentation was complete.

Chair Small asked if there were any motions.

Mr. Hooper made a motion, seconded by Mr. Soni, that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2021 Operating Budget with a Net Income of \$3,548,598, as presented. **Motion carried 3:0:2** (3 in favor, 0 opposed, 2 absent) by a roll call vote of those present: George Hooper, aye; Vivek Soni, aye; Jason Small, aye.

Mr. Hooper made a motion, seconded by Mr. Soni, that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2021 Capital Budget in the amount of \$11,648,047 as presented. Any significant changes are to be submitted to the CAB for review and recommendation. **Motion carried 3:0:2** (three in favor, 0 opposed, 2 absent) by a roll call vote of those present: George Hooper, aye; Vivek Soni, aye; Jason Small, aye.

4. Scheduling: CAB Meetings & Coverage for Commissioners Meetings – J. Small, Chair

The next meeting was scheduled for November 19<sup>th</sup>; Mr. Soni will cover the BOC meeting.

Chair Small asked if any members of the public had any comment. They did not.

5. Motion to adjourn – J. Small, Chair

Mr. Hooper made a motion to adjourn, seconded by Mr. Soni. Motion carried 3:0:2 (3 in favor, 0 opposed, 2 absent) by a roll call vote of those present: George Hooper, aye; Vivek Soni, aye; Jason Small, aye.

The CAB meeting adjourned at 6:46 PM

As approved on \_\_\_\_\_

November 19, 2020, Minutes



# Town of Reading Meeting Minutes

## Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2020-11-19

Time: 6:30 PM

Building:

Location:

Address:

Session:

Purpose: General Business

Version:

Attendees: **Members - Present:**

Mr. Jason Small, Chair (North Reading); Mr. Vivek Soni, Vice Chair (Reading); Mr. George Hooper, Secretary (Wilmington)

**Members - Not Present:**

Mr. Dennis Kelley (Wilmington); Mr. Joseph Markey (Lynnfield)

**Others Present:**

Mr. David Hennessy and Mr. Philip Pacino, Board of Commissioners  
Staff: Ms. Coleen O'Brien, Mr. Hamid Jaffari, Ms. Wendy Markiewicz, Mr. John McDonagh, Mr. Gregory Phipps, Ms. Kathleen Rybak, Mr. Charles Underhill

Public: Mr. James Satterthwaite, 8 Hunt Street, Reading

**Minutes Respectfully Submitted By:** George Hooper, Secretary

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## Topics of Discussion:

PER GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF THE OPEN MEETING LAW, G.L. c. 30A, §20 THIS MEETING WAS HELD REMOTELY VIA ZOOM

1. Call Meeting to Order – J. Small, Chair

Chair Small called the meeting of the Citizens' Advisory Board to order at 6:31 PM and noted the meeting was being audio recorded.

2. General Manager's Update – C. O'Brien, General Manager

*Community Updates* - Ms. O'Brien reported that a press release regarding the upcoming customer satisfaction survey will be issued. This is one of the last (action) items from the Organization Study that was completed in 2014. GreatBlue Research has been hired to conduct the survey between November 30<sup>th</sup> and December 11<sup>th</sup> with a goal of completing 400 residential and 100 commercial surveys (on-line and via phone). The survey will seek input in the areas of service reliability, rates, customer service, energy efficiency programs, power supply, and other topics. Ms. O'Brien also provided an update on the Fourth Grade Art Contest, and the RMLD 2021 historical calendar distribution.

*Budget Process* - Ms. O'Brien reported that the 2021 Budget (as presented to the CAB) is scheduled for presentation to the Board of Commissioners (at this evening's BOC meeting).

*Renewable Power Supply (Materials: FirstLight Press Release)* - Ms. O'Brien reported that RMLD will be doing a press release regarding a new hydro renewable project referenced in the FirstLight press release included with the meeting materials. This is a significant historical purchased by many municipal light plants that worked together to get another renewable plant built. If anyone from the CAB is interested in making a quote for the RMLD press release, please let us know.

3. Integrated Resources Report – C. Underhill, Director of Integrated Resources  
Materials: Presentation Slides – Revised (presented out of order)

Mr. Underhill reviewed the 2020 RMLD Total System Loads (Slide 2) noting RMLD is tracking very well into the final quarter of the year. Loads have been at or slightly above forecast. Year-to-date is about 4% below what was projected and the bulk of that is in the first four months of the year.

Mr. Underhill then reviewed the Purchase Power Expense (Slide 3), Energy Costs (Slide 4), and Capacity Costs (Slide 5). The load tracks against our Power Supply cost. A cumulative differential is run so that we know how far ahead or behind we are running for the year. We are ~\$4.5 million to the good right now on a \$65m Power Supply portfolio (~7% better than budget). Mr. Underhill noted the purchase power and fuel adjustment charges, and the capacity and transmission costs are recalculated every month so that we can hit our end of year target; these have been reflected in retail rates as we go. Energy Costs account for ~\$800,000 of the \$4.5 million. Energy (costs) has been tracking well, although in September the price was much lower than anticipated. Capacity Costs are billed and amount to ~45% of the savings to date. There is an August blip (from budget) which may be due to a Watson payment reflected there for fuel adjustment that we should correct for.

Mr. Underhill then reviewed the Actual Kwh Purchases by Resources (Slide 6) which shows the monthly energy requirements (by available resources) against the budgeted load (the black line). Mr. Underhill noted in April Seabrook took its eight-week shutdown and we acquired sources to fill that, and then Seabrook comes back online and continues through the year.

Mr. Underhill reviewed RMLD Power Supply: Outlook Through 2040 (Slide 7) which shows the contracts that we have committed to, including (in light blue) our share of Cabot Turner Hydro production over the next 10 years. RMLD does not have a first refusal yet, but we will be going to FirstLight and asking them to give RMLD the opportunity to extend our share of that contract for another ten years as we get to the end of the contract piece that we have. Mr. Underhill noted Cabot Turner makes a significant contribution into the portfolio and comes with RECs.

Mr. Underhill then reviewed First Light Hydro – Cabot and Turner Falls (Slide 8) which shows in a little more detail our resource portfolio. The Cabot Turner Falls project (light blue-grey line) is in Massachusetts. It was begun in the early 1900's, believed to be part of an industrial manufacturing activity. With the ponding capability behind it, it can produce 67 megawatts. Mr. Underhill noted a correction on the slide – RMLD will be buying 32,000 MWh annually. This (project) was put together by Energy New England and includes 21 of the municipal light plants in Massachusetts. Our deliveries will begin next year and will then ramp up a little bit according to what our identified need was going forward. RMLD has a fixed schedule each year from that.

Mr. Underhill reviewed the RMLD Demand-Side Programs (Slides 9-10) noting RMLD has grown its portfolio rather significantly this year. Under "Efficiency" the appliance rebate program has been restructured, and a very successful yard equipment rebate program has been added. The Electrification programs began about a year and half ago. RMLD expanded the EV charger rebate program to include an EV fleet program; we are running chargers on some of our commercial customers'

sites. RMLD has a heat pump program and has engaged a specialist in heat pump technology to review applicants' systems to make sure that they are designed for optimal performance and that the customer understands exactly what to expect when that system is turned on. Mr. Underhill noted this is a unique component to the program. Mr. Underhill reported that as part of the heat pump programs and some of the other Electrification activities, RMLD offers incentives for electric panel upgrades - both ampacity and putting in smart panels. This suggestion came to us from the Climate Action Committee in Reading. We have been growing our program activity and it seems that that has been successful.

Mr. Underhill reported that for the distribution system, RMLD has several programs. We are participating in a joint effort between RMLD and the Massachusetts Department of Energy Resources (DOER) for solar rebates. We have spent our initial allocation and are looking to extend the program through the end of the year, and then DEOR is looking to extend the program through next year (May/June). We are also working to come up with the post-DEOR programs so that we can carry through some of the program impacts. One of the requirements for the DEOR program is that renewable energy certificates associated with solar behind the customer's meter need to be turned over to RMLD and must be retired by RMLD. So, we are going to carry the RECs capture and retire component into our program post-DOER. For the Solar Choice Program, we sent out an RFP and have received some interest from a couple of entities that would like to help manage activity. We are looking at Solar Choice 3, and that involves going back to the communities - finding out if there are suitable ground or rooftop locations under control of the municipalities themselves - looking for other large potential sites (landfills, etc.) that might work. We are also looking at adjunct issues; batteries to convert the not-matchable renewable energy into something a little more controllable - see if we can get some additional benefit - either extending the energy production into more useful periods internally or capturing some capacity and transmission offset saving.

Mr. Underhill noted that with the passage of the House bill, it looks like we are going to be required to comply with Roadmap 2050. That will have some RECs capture and retire components, and we are going to be evaluating what we need to do to comply with that. We are also working on a green pricing tariff. We have had a number of our large commercial and industrial customers come to us indicating that their customers (of their products) are requiring them to demonstrate commitment to carbon mitigation, green resourcing in the production of their materials, and so we have been working to develop a green pricing tariff. It will initially target the largest customers because those will be the easiest ones for us to work the mechanics out with, and then we will open that up so that customers who want to be more aggressive than what we are doing will have an opportunity to step up and do that.

Mr. Underhill then reviewed RCS Filing (Slide 11) noting this past year we came under a commitment to file our efficiency plans with DOER. We filed a status report in June. We had an October 1st filing that was due and that has been postponed. DOER is reformatting the report so that it has a degree of consistency to it that they can do comparative analysis from MLP to MLP. When that is available, we will work with Energy New England to pull that together. DOER is also developing a quarterly measuring program tracking report.

Mr. Underhill reviewed Roadmap 2050 (Slide 12) noting House Bill 4933 sits in conference committee. There is an off-setting Senate Bill that does not quite match, so the conference committee's job is to go through and take the two bills, pull out what they can all agree to, and present something out of the conference committee that the Governor would be willing to sign. When that comes out, we should have direction on how Roadmap 2050 is going to proceed. That is the commitment to a carbon-free environment for energy production in Massachusetts. We will not know until it comes out what we are going to have to do. We did not know what to expect for the latter part of the year; it is unlikely that we will have to make any RECs

retirement in 2020. We are positioned to be able to do that - we have more than enough resources - we have a balanced portfolio that will allow us to retire whatever RECs we are mandated to retire. We believe that we are in pretty good shape for a least 10 years, in terms of the resource pool that we have, to meet that obligation. We are in the process of reviewing Policy 30. Once we get direction, we will pass that along. We will have impact assessments and will come up with some compliance strategies.

Mr. Hooper asked about the service panel upgrades – is that triggered because of the heat pumps being put into homes and to handle the ampacity of that. Mr. Underhill responded that that is a part of it. EVs also contribute to that, but it covers a broader range than just getting the smaller panels upgraded. We also have smart panel upgrades and all are eligible for incentives. The incentives are posted on the website.

Mr. Soni asked about (Slide 6) the ISO-NE Spot Market that was below the line. Mr. Underhill responded that above the line (yellow) represents what we purchased net from ISO. If the load is below the line, it means we were net sellers to ISO. Mr. Soni noted in March the demand was higher than budget, but you also sold into the market – that does not seem intuitive. Mr. Underhill confirmed that we did, also, sell into the pool for March.

Mr. Soni asked about the FirstLight agreement noting they have multiple facilities. You are showing this agreement coming from the Cabot facility, which is a 62-megawatt facility. Does it matter whether that comes from any of their facilities? Mr. Phipps responded, this particular contract (signed at the end of last month) is for just the Cabot Turner hydro facilities. RMLD already has in place several contracts with FirstLight for some of their other generation assets. Mr. Soni noted Cabot is 62 megawatts and Northfield is almost 1,200 megawatts - is there potential to get more from them? Mr. Underhill responded – no, not under this contract. When we have a unit specific contract, we are buying output from that unit as it happens. Most of our hydro's are run-to-the-river and we are buying a percentage of whatever is produced, i.e., if it produces 50,000 kilowatt hours that month and we get 20%, we get 10,000. There is another type of contract called a bilateral where the company agrees to sell us a fixed amount and it is not generator specific – they are obligated to sell us that amount each month.

Mr. Soni asked about NYPA - it is not a single unit. Mr. Underhill responded that NYPA is not our contract – it is a contract that belongs to the Commonwealth, who uses MWEC to administer the contract. RMLD gets a share of what comes in from NYPA based on what we have reported as our residential load. That is a function of what NYPA sends. They send three different types of power; a base load power, a peaking power, and interruptible, which is a balancing unit of power. We have no control over what comes. Mr. Soni noted NYPA goes to residential only; does the Cabot go to everyone? Mr. Underhill responded that the Cabot does go to everyone.

Mr. Soni then asked about the heat pumps; are those primarily for air source heat pumps or are they also for forced hot water systems. Mr. Underhill responded that we do offer incentives for heat pumps for hot water, but primarily the heat pump program is for air source heat pumps. Mr. Underhill provided an overview of the various types of equipment and the incentives that RMLD offers. Mr. Soni asked if commercial customers were using heat pump systems. Mr. Underhill responded that most of them are residential; the commercial application would come in under the commercial rebate program.

Chair Small asked if there were any other questions. Mr. Hooper asked how things were going with COVID for RMLD. Ms. O'Brien responded that RMLD is still following our emergency operating procedure (EOP 20-03 HR). We still have the operations crews in physical separation (Teams A and B). We remobilized, so everybody is on-

site. Our business continuity remains intact. The building remains closed to the general public.

Mr. Soni asked how the FirstLight contract compares (cost-wise) with the rest of the system. Mr. Underhill replied that it is extremely competitive - it fits well into our portfolio. RMLD has been striving to keep our average energy costs across our portfolio at around \$43 to \$45 a megawatt hour, and all of the contracts are coming in within that range. Ms. O'Brien asked if Mr. Soni was asking whether there is a significant premium with renewables. RMLD has worked hard to purchase lower risk and pricing that will still fit into the RMLD portfolio competitively. Mr. Soni noted it was just a general question to see how RMLD is sourcing renewables.

4. Financial Update: 2020 YTD through September – W. Markiewicz Director of Business, Finance & Technology

Materials: Financial Review Ending September 30, 2020, Presentation Slides

Ms. Markiewicz reviewed the Business, Finance Highlights (slide 2), which outline the status of various initiatives. All of the town payments will be scheduled to be mailed on December 29<sup>th</sup>. Ms. Markiewicz noted that we are currently ~\$1.5m under budget due to the unique circumstances of the year. Ms. Markiewicz reviewed the reasons we are under Budget (Budget to Actual Discrepancies – Slide 4), noting there have been slight changes since last month's budget presentation. Ms. Markiewicz noted the increase spending for sick buyback payouts (FERC 926) is a good thing for the RMLD liability situation.

Ms. Markiewicz then reviewed Accounts Receivable Aging by Months (30 Days Current and 90 Days Current) January – September (Slides 5-6). Sales are flat, but we are seeing a cumulative 6% difference (in receivables for 30 days) from 2018, 2019, and 2020. It typically trends down in September, so it is nice to see that the trend is the same as we head into moratorium season. Ms. Markiewicz noted we do not want (receivables) to come under 80%, so we are using our resources and working hard to get the money in the door in the 30-day period. Ms. Markiewicz noted customers are losing their prompt payment discount; we are not bringing the money in as quickly, but we are not giving it out either (they are losing that discount). Looking at the 90-day current, Ms. Markiewicz noted it evens itself out; still about a 6% difference, but we are at 94% which is not a bad place to be.

Hearing no questions, Chair Small moved to the next Agenda item.

5. CAB Policies Review – J. Small, Chair  
Materials: CAB Policy No. 1 and CAB Policy No. 2

Chair Small noted that every few years the CAB policies need to be reviewed and voted on to approve as is, or we can have discussion if we need to make any changes. Chair Small asked if there were any comments or suggestion for Policy #1 (RMLD Citizens' Advisory Board); there were none. Chair Small asked if there were any comments or suggestions to Policy 2 (Release of Executive Session Minutes); there were none.

Mr. Hooper made a motion to accept as read, seconded by Mr. Soni. Motion carried 3:0:2 (3 in favor, 0 opposed, 2 absent).

6. Scheduling: CAB Meetings and Coverage for Commissioners Meetings – J. Small, Chair

The group discussed scheduling for an EV Workshop (tentatively scheduled for January). Once the December Board of Commissioners meeting is confirmed (either



December 16<sup>th</sup> or 17<sup>th</sup>) the CAB meeting will be scheduled. Mr. Soni agreed to cover the December Commissioners meeting.

7. Mr. Hooper made a motion to adjourn, seconded by Chair Small. Motion carried 3:0:2 (3 in favor, 0 oppose, 2 absent)

The CAB meeting adjourned at 7:31 PM.

As approved on \_\_\_\_\_

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**Attachment 2 - Agenda Item 5: Annual Report Confirmation**

# RESILIENCE



Audrey LaConte - High School Art Contest, First Place Winner

## ANNUAL REPORT 2020

RMLD



Reading Municipal Light Department  
RELIABLE POWER

# PICTURED ON COVER: "WORKING THROUGH THE STORM"

High School Art Contest - First Place Winner

**Audrey LaConte**

Wilmington High School, Grade 10

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## "TOUCH OF LIGHT"

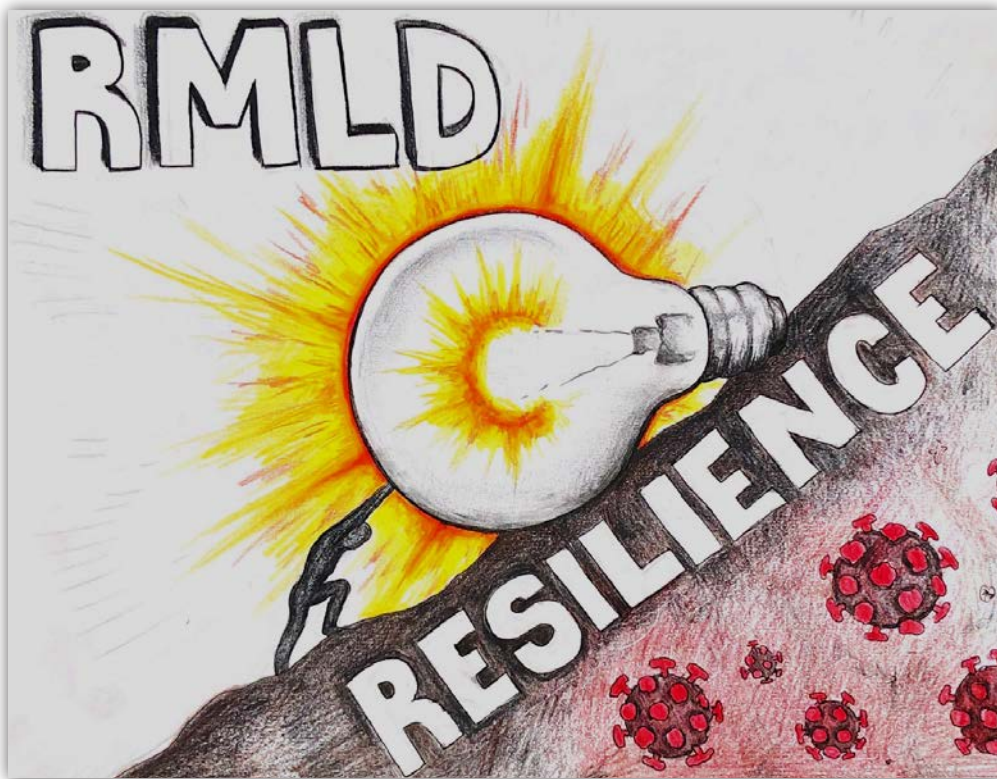


High School Art Contest  
Second Place Winner

**Julia Kane**

Wilmington High School  
Grade 10

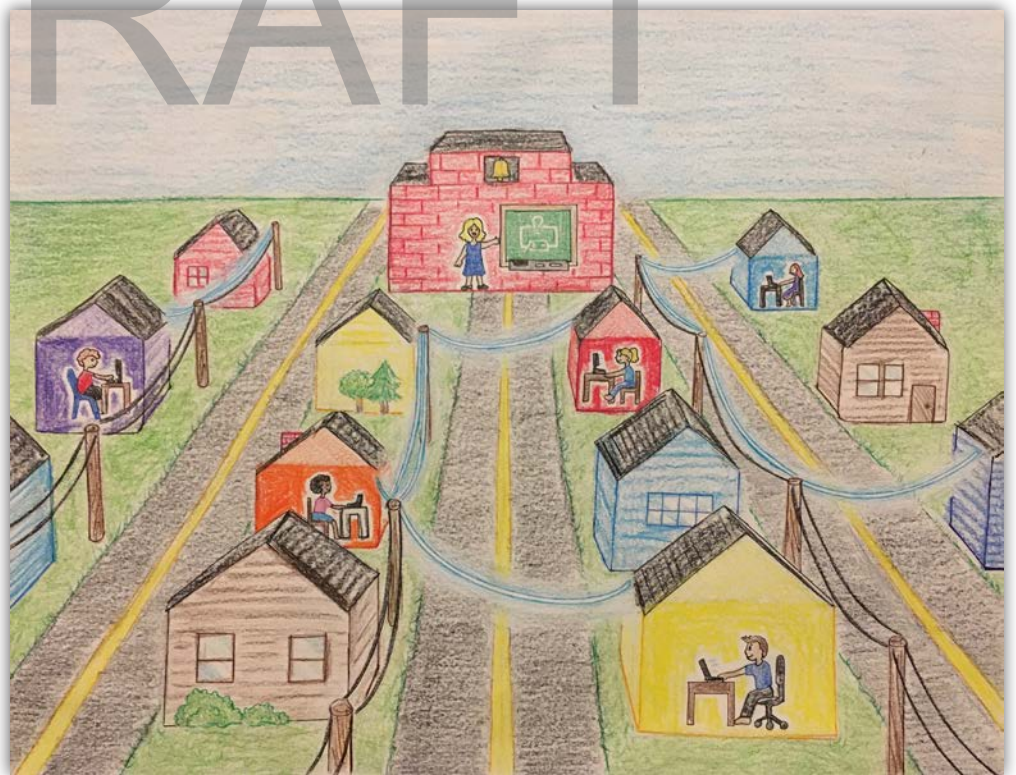
"RISE UP WITH RESILIENCE"



High School Art Contest  
Third Place Winner  
**Jesse Ding**  
Wilmington High School  
Grade 12

DRAFT  
"WIRED FOR LEARNING"

High School Art Contest  
Fourth Place Winner  
**Abigail LeBovidge**  
Reading Memorial  
High School  
Grade 10



All submissions and student write-ups are posted on [www.rmld.com](http://www.rmld.com). Thanks to the students who participated for submitting their beautiful artwork!

# READING MUNICIPAL LIGHT DEPARTMENT

Founded in 1894, Reading Municipal Light Department (RMLD) is a municipal electric utility serving over 70,000 residents in the towns of Reading, North Reading, Wilmington, and Lynnfield Center. RMLD has over 30,000 meter connections within its 51 square mile service territory. Residential customers account for approximately one-third of RMLD's electricity sales while commercial, industrial, and municipal customers account for about two-thirds of sales. There are over 3,000 commercial and/or industrial customers in the communities RMLD serves.

RMLD is the largest (in terms of electrical load) of 41 Massachusetts municipal light utilities and is not-for-profit, locally owned, and locally controlled.

A five-member Board of Light Commissioners, elected by Reading voters, governs the utility. A Citizens' Advisory Board, appointed by the four communities RMLD serves, makes recommendations to the Board of Commissioners.

Residents Served

**70K+**

Service Towns

**4**

Meters

**30K+**

Service Area

**51** sq. miles

**RMLD**



Reading Municipal Light Department

RELIABLE POWER

[www.rmld.com](http://www.rmld.com) | 781-942-6598 | Twitter: [@ReadingLight](https://twitter.com/ReadingLight)

# BOARD OF COMMISSIONERS



**John Stempeck**  
Chair



**David Hennessy**  
Vice-Chair



**Philip Pacino**  
Commissioner

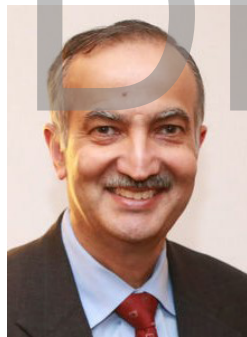


**David Talbot**  
Commissioner



**Robert Coulter**  
Commissioner

# CITIZENS' ADVISORY BOARD

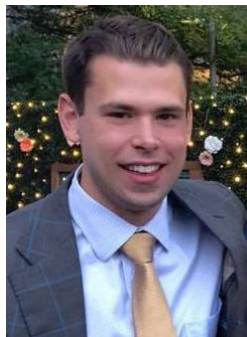


*Top Row (left to right):*

**Jason Small, Chair**  
North Reading

**Vivek Soni, Vice-Chair**  
Reading

**George Hooper, Secretary**  
Wilmington



*Bottom Row (left to right):*

**Dennis Kelley**  
Wilmington Representative

**Joseph Markey**  
Lynnfield Representative

# To Our Customers

In 2020, the world was subjected to a crisis event in the form of a pandemic that quickly swept through each continent, affecting every person, every economy, and the very nature of our normal existence. As we all came to full awareness of our ability as individuals and as One, what did we learn about our resiliency?

Resiliency can be described as the capacity to recover quickly from difficult events. To succeed at being resilient, whether it be a person, a business, a community, or the world, inner strength and outer resources are required to inspire the necessary flexibility, adaptability, and perseverance. To be successful, we must emerge stronger and embrace and implement lessons learned, to become even more resilient.

Crisis planning can be complex, but is critical. It establishes priorities, calls for diligent procedure implementation, and verifies for the essentials: essential food and water, essential infrastructure, essential personnel, essential health care, and essential skills. The American Academy of Pediatrics describes the 7 C's of building essential resiliency skills as Competence, Confidence, Connection, Character, Contribution, Coping, and Control.

The RMLD provides essential electric service to four communities. Within our Emergency Operating Procedures (EOP), we cover all best utility practices to ensure resiliency for prompt recovery from unplanned events. These unplanned events that threaten the loss of electrical service, risk worker/public safety, or jeopardize assets are modeled for contingency failures with procedure resolutions always on the ready. Typically, these contingency models have life spans; storm damage can call for essential personnel response, emergency equipment replacement, and restoration efforts that can sometimes last several weeks or more. The RMLD relies on the 7 C's of its employees, 24/7, to ensure electric service, safety of the workforce and the public, and protection of the assets of the electric system; all meet the standards of best utility resiliency.

In the case of the pandemic however, the life span of the public health emergency has rounded the corner

of a year. At the end of February 2020, the RMLD immediately implemented its EOP HR 20-03, entitled, "Infectious Disease Outbreak Plan." With daily virtual meetings since, the RMLD continues to successfully manage seamless business continuity to all four communities with daily virtual meetings, ensure compliance with all CDC, Governor, and local BOH safety orders, ensure socially distanced essential worker teams for required healthy staffing levels and OSHA/NESC compliance, adapt to all necessary remote processes, and remain aware each day of every aspect of RMLD's required resiliency as the crisis continues to unfold.

Like all people, this tragedy tested our individual and overall resiliency as employees. The employees of the RMLD understand the role of providing the essential service of electricity to keep water running, food cold, healthcare operating, etc. It is with tremendous gratitude that each and every RMLD employee, through their individual ability to be resilient, are the reasons why the RMLD resiliency remains strong.

There was some shifting from capital projects to more maintenance-focused work in 2020 due to material availability and safe work practices. The RMLD teams, despite where they may have been physically located whether remote or at other temporary locations within the service territory, accomplished a significant amount of work. Therefore, it is with great pride that the RMLD provides its 2020 accomplishments on the following pages. We also offer great praise to the High School Art Contest Participants, whose artwork dons the cover of this annual report, and demonstrates such profound awareness of the meaning of true resiliency.

Be well,

**Coleen O'Brien**  
General Manager

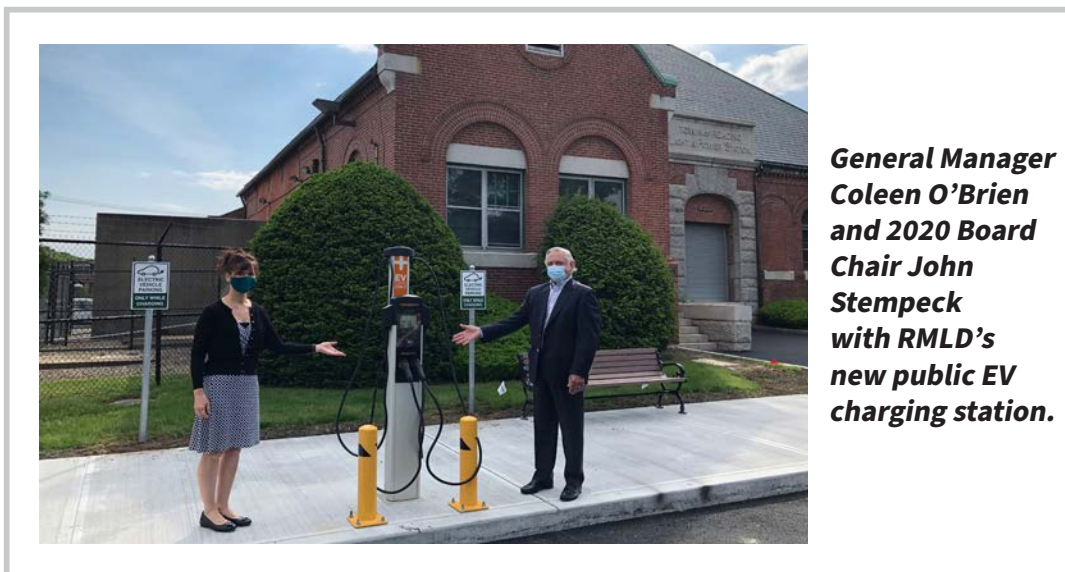




# HIGHLIGHTS

RMLD continued to advance its programs and initiatives to improve overall electric system performance and increase organizational efficiency and productivity despite challenges from the COVID-19 pandemic. Highlights from 2020 include:

- Developed and implemented operating procedures to ensure service/business continuity despite lobby closure and other operational changes required to maintain safety during the COVID-19 pandemic.
- Successfully implemented electronic signatures as well as paperless accounts payable and payroll processes.
- Achieved clean financial audit with no management letter.
- Executed non-carbon power supply contracts for 25.3% of RMLD's resource portfolio, positioning the RMLD for compliance with pending legislation that will require power supply be net-zero carbon emissions by 2050.
- Launched enrollment campaign for alerts as part of the upcoming rollout of the Customer Notification System (CNS). Once launched, the CNS will provide automated unplanned outage communications via phone, text, and email with additional alert categories planned for Phase 2. Continued implementation of the Integrated Voice Response (IVR) System and Outage Management System (OMS), which are necessary components to sending outage and restoration information to customers.
- Launched a Customer Satisfaction Survey to obtain input and feedback from residential and commercial customers on a variety of topics. Results are available at [www.rml.com](http://www.rml.com).
- Helped fund over 40 new solar installations in RMLD's service area through participation in the Commonwealth's Municipal Light Plant (MLP) Solar Rebate program. RMLD designated half of the available \$750,000 in funding for solar projects. The program has been extended into 2021.
- Expanded programs to increase efficient electrification within the service area including:
  - Updated the Air Source Heat Pump Rebate Program to offer a larger financial incentive and partnered with a vendor to provide educational and technical support to customers and contractors.
  - Launched Cordless Electric Yard Equipment Rebate.
  - Launched Residential Electrical Panel Upgrade Rebate.
  - Installed an additional dual-port public electric vehicle (EV) charging station in the newly renovated customer parking lot.



**General Manager Coleen O'Brien and 2020 Board Chair John Stempeck with RMLD's new public EV charging station.**

# HIGHLIGHTS (CONT.)

- Continued strategic planning to address revenue generating opportunities through economic development and programs.
- Continued to safeguard IT infrastructure.
- Completed significant system reliability upgrades throughout RMLD's service territory.
- Continued implementation of meter mesh network program.
- Continued planning and design for new Wilmington substation to address existing capacity.
- Continued implementation of Organizational Study recommendations.
- Successfully continued public education and outreach efforts during COVID-19 restrictions by transitioning community events from in-person to virtual.

Staff's 2020 accomplishments are detailed on the following pages.



# 2020 STATISTICS

**Retail Sales** - 651,179,904 kWh

**System Peak Demand** - 163,970 kW occurring on July 28, 2020, at 2:00 pm. This was 5% lower than the highest peak demand of 172,493 kW set in August 2006.

**Peak Demand Reduction** - Peak demand reduction programs and activities offset wholesale power supply (capacity and transmission) costs by approximately \$900,000; these savings are passed directly to RMLD customers.

**Pole Installations and Replacements** - 95

**Meter Replacements** - 460

**DigSafe Calls** - 4,232

## New Services

Reading:

- 111 residential
- 11 commercial/industrial

Wilmington:

- 27 residential
- 25 commercial/industrial

North Reading:

- 10 residential
- 1 commercial/industrial

Lynnfield:

- 4 residential
- 2 commercial/industrial

Total:

- 152 new residential services represent a 56% decrease from those installed in 2019.
- 39 new commercial/industrial services represent a 5% increase from those installed in 2019.



**RMLD earned the American Public Power Association's Certificate of Excellence in Reliability again in 2020.**

# LEADERSHIP

- Successfully ensured continuity of service through the COVID-19 pandemic with daily virtual meetings and the implementation of an infectious disease emergency operating procedure and remote work processes while maintaining compliance with CDC, state, and local safety orders.
- Participated in Town of Reading Incident Command team for crisis management.
- Resolved the Town of Reading payment issue through diligence of communication between the RMLD Board of Commissioners, each of the town's governance boards, the RMLD Citizens' Advisory Board, and solid financial impact analysis utilizing all operational and power supply projections.
- Generated under FCC order, a Small Cell Master Agreement template and all technical specifications; coordinated and provided samples to each town on aesthetic policies.
- Actively involved in the development of power supply portfolio standards for Massachusetts Municipal Light Plants (MLPs) which were included in a pending comprehensive climate bill that will bring the state to net-zero carbon emissions by 2050.
- Actively involved in industry changes at federal and state levels to mitigate impacts to the RMLD and other not-for-profit municipal utilities.
- Continued to manage, delegate, monitor, mentor, and support the impact of the crisis in addition to transitional culture change.
- Continued to educate the reactive and proactive nature of the electric utility model through the development of emergency/non-emergency procedures and short- and long-term planning.
- Continued cyclic policy review for Board of Commissioner approval and legal compliance.
- Continued implementation of Organizational Study recommendations: Phase II complete; Phase III underway.
- Completed annual implementation of long-term Reliability Study recommendations.
- Communicated effectively, frequently, and with transparency, to educate and inform the RMLD Board of Commissioners and the Citizens' Advisory Board on the general information pertaining to the health and operations of RMLD, along with any issues relating to governance or unusual situations.
- Continued development of internal efficiency and automation measures within the electric and business continuity processes including SharePoint documentation organization, Division Dashboards, and electronic signature implementation.
- Continued strategic planning efforts within each division and holistically as the RMLD.
- Continued succession planning to ensure seamless transition upon employee retirements and attritions.
- Utilized Storm Liaison phone to inform key public officials of specifics on storm related activities.
- Provided significant input and support of public power in legislative acts.
- Continued six-year transparent budget, financial plan, capital plan, and long-range technology roadmaps.
- Held two virtual all-hands company meetings to facilitate internal communication.
- Held virtual Public Power Week employee recognition event.
- Continued to develop and enhance communication between the Town Select Boards, the RMLD Board of Commissioners, and the RMLD Citizens' Advisory Board.



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# COMMUNICATIONS AND COMMUNITY RELATIONS

- Successfully communicated lobby closure and other operational changes resulting from the pandemic to customers and stakeholders.
- Transitioned annual 4th grade art contest to a voluntary/remote contest to accommodate schools conducting remote learning.
- Shifted from an in-person to a virtual Homeowner Info Session event to continue customer education and engagement in new remote environment.
- Published virtual electric vehicle test drive videos during National Drive Electric Week to continue to educate customers on the benefits of plug-in electric vehicles.
- Created virtual activities and videos to recognize and celebrate Public Power Week 2020 including:
  - Virtual story time video about electricity for young children in collaboration with local libraries.
  - RMLD lineworker video to highlight the work of operations and line crews.
  - Public power in Massachusetts video to highlight the benefits of public power in Massachusetts in collaboration with other Massachusetts Municipal Light Plants (MLPs).
  - Energy Efficiency Photo Scavenger Hunt.
  - Kids Experiment Activity.
- Launched a Customer Satisfaction Survey to obtain input and feedback from residential and commercial customers on a variety of topics. Results are available at [www.rml.com](http://www.rml.com).
- Launched enrollment campaign for text, phone, and email alerts as part of the upcoming rollout of the Customer Notification System.
- Continued use and promotion of Twitter to communicate area outage information and Shred the Peak alerts, expanding followers to approximately 3,800.
- Continued monthly welcome email to educate new RMLD customers on available programs and services.
- Continued residential Shred the Peak program, expanding the opt-in email list for alerts to approximately 2,600 customers.
- Continued working relationships with state and national utility associations.
- Communicated effectively with community and business interests in the four towns.
- Highlighted benefits of receiving electric service from the RMLD in order to foster economic development to attract new customers and retain existing customers.
- Communications Manager recognized with utility industry award for excellence in utility public relations from the Municipal Electric Association of Massachusetts Communications and Energy Services Committee.



# BUSINESS/FINANCE AND INFORMATION TECHNOLOGY

## BUSINESS/FINANCE

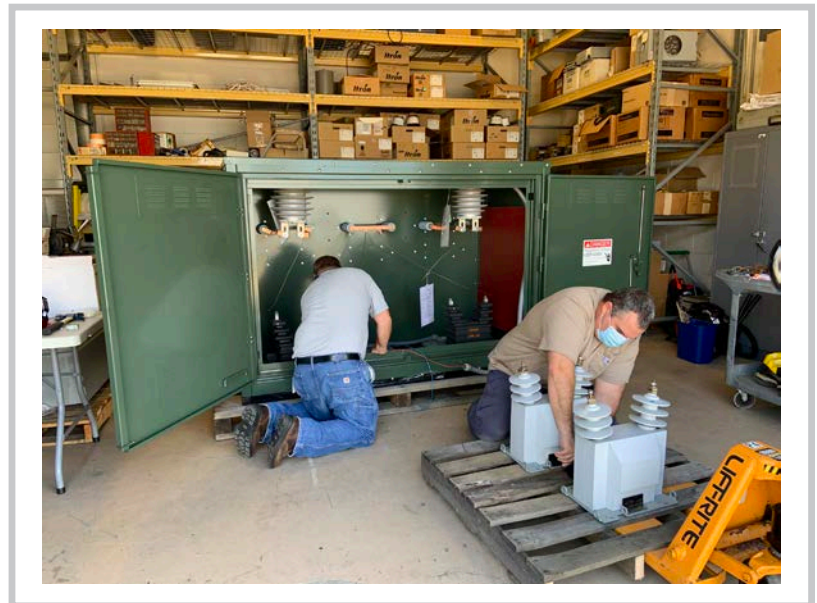
- Achieved clean financial audit with no management letter.
- Completed audit activities virtually over a five-week period.
- Successfully led the initiative for electronic signature and accounts payable paperless processes.
- Successfully led the initiative for electronic timesheets and payroll paperless processes.
- Initiated and maintained successful quarterly communication meetings with the Town of Reading Finance Department.
- Initiated integrated processes and procedures across divisions.
- Developed a cohesive relationship between Payroll and Human Resources for employee benefits.
- Filed the CY2019 Department of Public Utilities Annual Return on time.
- Presented and obtained approval on the CY2021 Capital and Operating Budgets.
- Worked diligently and successfully with overdue customers to provide payment plans for continued payments.
- Successfully completed transition from fiscal to calendar year.
- Compiled Budget, Capital Expense, Expense, and six-year plan.
- Successfully managed Operating Budget.
- Provided monthly Board updates with budget to actuals on Capital Expense and Expense.
- Provided monthly updates on six-year financials.
- Provided monthly updates on Retirement Trust, Other Post Employment Benefits (OPEB), and Town cash reconciliation.
- Provided a fund balance detailed synopsis beyond audit report to the Town.
- Provided financials on rate of returns based on Capital Expenses and Town Payments.
- Continued E-paystubs, E-stock sheets and developed Sprypoint mobile work order system.

## TECHNOLOGY

- Identified and isolated cyber intrusion; successfully restored all systems.
- Hired independent consultant for IT investigation.
- Commenced restructuring of IT Division.
- Incorporated all report recommendations and lessons learned after recovery from cyber intrusion; updated IT systems defined roadmap.
- Upgraded or phased out machines with outdated operating systems.
- Conducted a full inventory of IT assets.
- Consolidated and upgraded servers to virtual.
- Completed migration of Utility Authorization Number (UAN) process from in-house form to cloud-based work order system.
- Completed SharePoint Online to Office 365 company-wide update and redesigned internal home page – paperless transition ongoing.

# EMPLOYEE SAFETY AND RELATIONS

- Constructed the RMLD Infectious Disease Outbreak Plan to:
  - Interpret and implement accordingly all Governor, CDC, and local Board of Health orders for the electric utility.
  - Generate all new COVID-related federal and state employee benefits and administration and coordinate with accounting and the Town.
  - Administer and/or coordinate all employee requests related to COVID-19 including remote work locations, quarantine, and doctors' certificates.
  - Organize daily senior management team meetings focused on COVID-19 updates, resiliency and emergency operating plans, physical separation, remote physical locations, IT coordination, and employee concerns.
  - Issue weekly employee updates on the unfolding of COVID-19 including laws, rules, limitations, and updates from the Town of Reading Incident Command.
- Implemented reorganizational changes for Technical Services (to Grid Assets and Communications) and Control Room; all union negotiations, job descriptions, postings, etc., completed.
- Implemented Career Development Plan training for skill proficiency resulting in progression steps, promotions, and evaluations.
- Continued reorganizational recommendations; union negotiations on reorganization are ongoing with final phasing to commence end of 2020 into 2021.
- Provided senior management training on leadership, project management, writing of strategic plans, cross-divisional communications, risk mitigation, and teamwork.
- Continued upgrading, updating, and customizing all job descriptions for reorganization.
- Continued Human Resources paperless objective and HRIS software system evaluations.
- Promoted Employee Wellness Program including:
  - Self-managed walking and nutrition challenges
  - MIIA exercise videos available to all members
  - Promoted healthy holistic habits for crisis management
  - Offered Employee Assistance Program (EAP) assistance
- Successfully acquired talent to fill six vacancies.
- Administered Employee Drug and Alcohol and DOT Program.
- Completed annual and bi-annual requirements for First Aid/CPR and defibrillator training.



# INTEGRATED RESOURCES

## RETAIL - ELECTRIFICATION/ENERGY EFFICIENCY/REBATE PROGRAMS

- Processed over 1,200 rebate applications and issued over \$559,400 in residential and commercial rebates.
- Expanded energy efficiency and electrification rebate programs: added cordless electric yard equipment and residential electrical panel upgrades; updated air source heat pump rebate.
- Increased rebate processing efficiency by moving internal processing to digital only (minimizing paper and reducing time to process).
- Added yard tools and electrical panel upgrades to online rebate application submission process.
- Added load analysis to rebate process (forecasting network load additions helps maintain system reliability as electrification grows).
- Added Abode Energy Management's education/technical support service to the Air Source Heat Pump (ASHP) Rebate program to help ensure proper system sizing and provide additional customer support. Abode also recruited and trained HVAC installers on ASHP HVAC systems.
- Transitioned from in-person to virtual home energy assessments to accommodate safety concerns from COVID-19 pandemic.
- Completed inaugural Residential Conservation Services (RCS) filing.
- Facilitated the installation of two large solar arrays at Analog Devices' new global headquarters in Wilmington and installed an additional seven dual-port electric vehicle charging stations on site.

# DRAFT

## PROGRAM PARTICIPATION

ENERGY AND LIGHTING REBATES (COMMERCIAL)	46 rebates processed
SOLAR MLP REBATES	40 rebates processed
ENERGY STAR APPLIANCE REBATES (RESIDENTIAL)	590 applications processed consisting of 799 items
ELECTRIC VEHICLE CHARGER REBATES	41 rebates processed
AIR SOURCE HEAT PUMP REBATES	88 rebates processed
CORDLESS ELECTRIC YARD EQUIPMENT REBATES	244 applications processed consisting of 326 items
ELECTRICAL PANEL UPGRADE REBATES (RESIDENTIAL)	30 rebates processed
ONLINE ENERGY EFFICIENCY STORE (RESIDENTIAL)	267 transactions for 517 items
VIRTUAL HOME ENERGY ASSESSMENTS (RESIDENTIAL)	176 audits completed
TOTAL ANNUAL ESTIMATED ENERGY SAVED (KWH)	6,248,619 kWh
TOTAL ANNUAL ESTIMATED CARBON REDUCTION (LBS)	3,345,600 lbs - Equivalent to 25,000 tree seedlings grown for 10 years, or the carbon sequestered by 1,800 acres of forest in one year



# INTEGRATED RESOURCES (CONT.)

## RETAIL - RATES

- Maintained competitive electric rates with no rate increase in 2020 and none planned in 2021.
- Explored green tariff options with key customers setting the stage for the Renewable/Non-Carbon Choice Program anticipated to roll out in 2021.

## RETAIL - PEAK DEMAND REDUCTION PROGRAMS

Continued efforts to offset wholesale power supply (capacity and transmission) costs related to peak demand. The following efforts produced a net savings of approximately \$900,000; these savings are passed directly to RMLD customers:

- Continued to optimally dispatch RMLD's 5 MW, 10 MWh lithium-ion Battery Energy Storage System (BESS) and 2.5 MW Distributed Generator located at Substation 3 to offset peak wholesale market costs resulting in savings of approximately \$800,000.
- Promoted residential Shred the Peak program and continued to enroll customers for email alerts (over 2,600 currently). An estimated 1,040 customers participated and reduced their load by an estimated 0.5 kW per home. This resulted in a total estimated reduction of approximately 0.52 MW and savings of approximately \$10,000.
- Continued pilot Peak Demand Reduction (PDR) Program for our largest commercial, industrial, and municipal customers to effectively promote demand management and reward key accounts who achieve load shed during events. Twelve of our customers enrolled in the PDR Program achieved a total load-shedding of about 8.4 MW for 2020, resulting in approximately \$93,000 in earned credits.
- Solar Choice 1, with a rating of 1 MW, produced 1,635,993 kWh. Solar Choice 2, with a rating of 1.7 MW, produced 2,462,935 kWh. The output from these two community Solar Choice projects during peak demand hours saved a combined total of about \$18,000 in 2020; these savings were distributed amongst program participants.

## INSTALLED SOLAR

CLASS	INSTALLATIONS	CAPACITY
RESIDENTIAL	152 arrays	1,107 kW
COMMERCIAL	17 arrays	2,135 kW
WHOLESALE	3 arrays (including two community Solar Choice projects)	4,709 kW
<b>TOTAL:</b>		<b>7,951 kW</b>

## WHOLESALE - POWER SUPPLY

- Executed non-carbon supply contracts for 25.3% of RMLD's resource portfolio, positioning the RMLD for compliance with pending legislation that will require power supply be net-zero carbon emissions by 2050
- Surpassed 2025 goals for renewable energy sourcing.
- Conducted power supply training sessions for the Citizens' Advisory Board and the Board of Commissioners.
- Moved power supply payment process to be fully online to improve efficiency.
- Completed on-time reporting submissions to ISO-NE, Massachusetts agencies, and federal agencies.
- Continued Risk Management Strategy for power supply procurement utilizing price and time triggers.
- Implemented Renewable Energy Credit (REC) sales operating procedure to offset rates.

# INTEGRATED RESOURCES (CONT.)

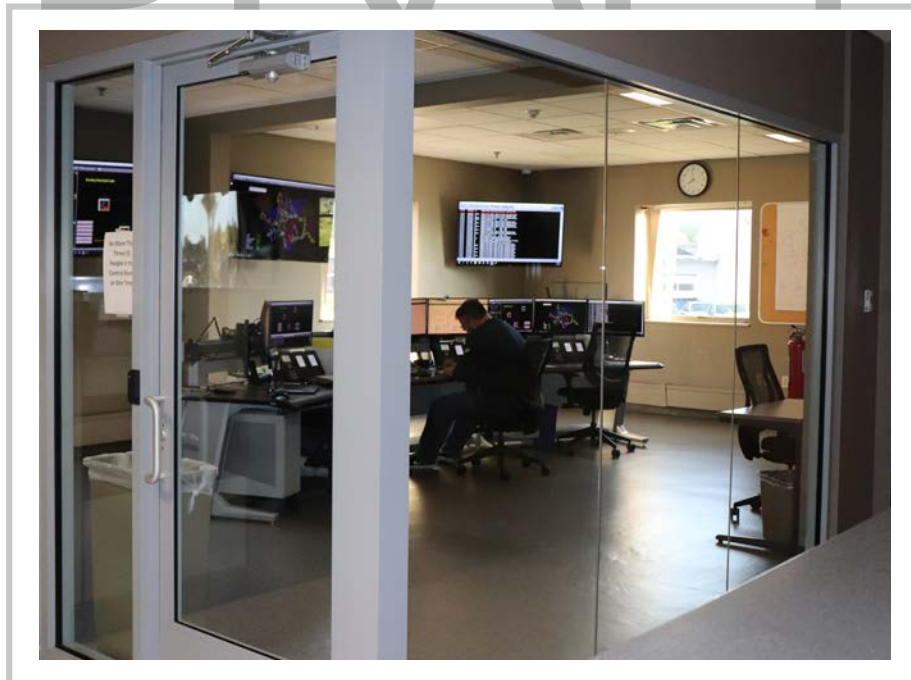
- Continued power supply strategic planning with the goal of stabilizing wholesale power supply costs and mitigating various portfolio risks.
- Enhanced tools for tracking performance and evaluating economics of power supply portfolio resources.
- Developed or augmented templates to improve in-house support functions for data analysis and forecasting; this effort will enhance planning and operating efforts throughout RMLD.

## TEAM - STAFFING/TRAINING

- Successfully acquired talent, including Assistant Director, as part of the leadership succession plan.
- Attended technical webinars on energy storage, electric vehicles, heat pumps, and electrification for the utility industry.

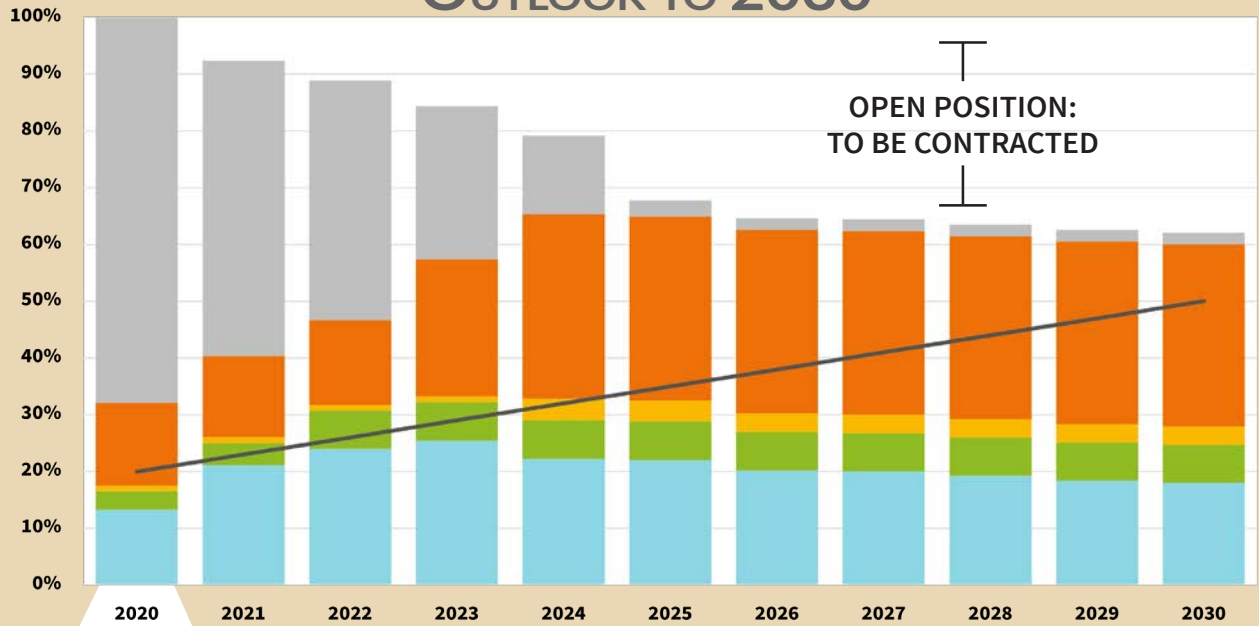
## TEAM - CUSTOMER SERVICE

- Provided needed resources and support to enable customer service to operate remotely during COVID-19.
- Provided uninterrupted and high-quality support to customers despite unusual working conditions resulting from the pandemic.
- Remotely managed rebate processing and billing responsibilities.
- Expanded rebate processing to accommodate new rebate programs with more complex requirements.

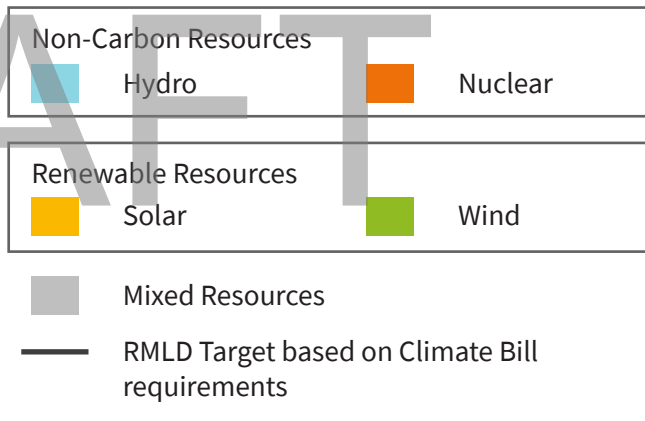
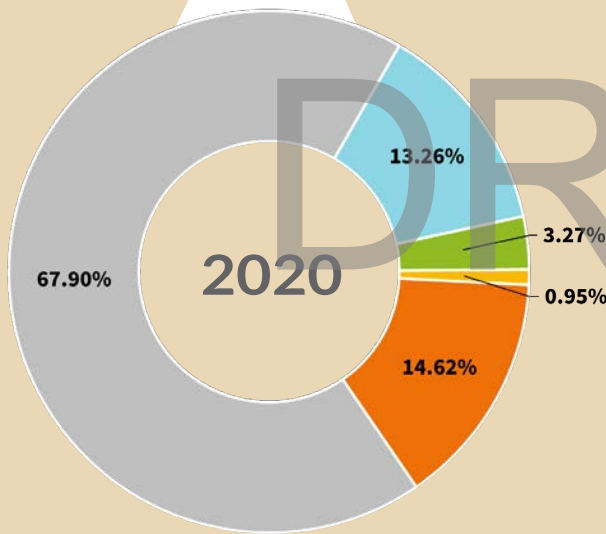


# POWER SUPPLY

## OUTLOOK TO 2030



OPEN POSITION:  
TO BE CONTRACTED



### DEFINITIONS

**Mixed Resources** – RMLD power supply comprised of contracts for non-specific resources and real-time spot market purchases. Mixed power supply reflects the fuel mix of resources from the New England grid and is assumed to be primarily carbon-emitting, such as natural gas.

**Renewable Resources** – RMLD power supply resources that do not produce carbon emissions and are eligible for Renewable Energy Certificates (RECs); primarily wind and solar.

**Non-Carbon Resources** – RMLD power supply resources that do not produce carbon emissions; primarily nuclear and hydro.

**Climate Bill** – Pending (as of December 2020) Massachusetts climate legislation which, for the first time, will establish retail sales standards for Municipal Light Plants (MLPs). This legislation will require that the power sold by MLPs be sourced from resources that are 50% non-carbon by 2030, 75% non-carbon by 2040, and net-zero carbon by 2050. In anticipation of the legislation, the RMLD is planning to retire renewable/non-carbon certificates annually to incrementally reach decade targets while avoiding future rate shock.

# POWER SUPPLY BY CONTRACT 2020

## NON-CARBON RESOURCES

### NUCLEAR

NAME	DURATION	MWH	%
MILLSTONE	1986-2045	36,458	5.38%
SEABROOK	1990-2050	62,651	9.24%

### HYDRO

NAME	DURATION	MWH	%
PIONEER	2013-2028	4,910	0.72%
QUINEBAUG	2020-2030	1,122	0.17%

### HYDRO

NAME	DURATION	MWH	%
NYPA	2002-2025	32,747	4.83%
FIRST LIGHT	2019-2023	16,699	2.46%
ASPINOOK	2016-2022	9,827	1.45%
COLLINS	2013-2028	3,640	0.54%
HOSIERY MILLS	2014-2024	3,645	0.54%
INDIAN RIVER	2011-2026	2,322	0.34%
PEPPERELL	2011-2026	4,671	0.69%
TURNERS FALLS	2011-2026	1,809	0.27%
WORONOCO	2011-2026	8,504	1.25%

## RENEWABLE RESOURCES

### WIND

NAME	DURATION	MWH	%
JERICHO	2015-2035	7,598	1.12%
SADDLEBACK	2015-2035	14,539	2.15%

### SOLAR

NAME	DURATION	MWH	%
KEARSAGE	2017-2037	2,463	0.36%
ALTUS POWER	2017-2037	1,636	0.24%
MARINA ENERGY (ONE BURLINGTON)	2015-2025	2,317	0.34%

## MIXED RESOURCES

### BILATERAL, MIXED

NAME	DURATION	MWH	%
EXELON	2016-2020	96,754	14.28%
NEXTERA	2016-2023	344,797	50.88%
ISO-NE SPOT	Ongoing	-2,212	-0.33%

### GAS/OIL PEAKER

NAME	DURATION	MWH	%
STONY BROOK INTERMEDIATE	Life of Unit Beyond 2040	13,737	2.03%
STONY BROOK PEAKING	Life of Unit Beyond 2040	296	0.04%
BRAINTREE WATSON	2009-2029	6,756	1.00%

# SYSTEM RELIABILITY

- Performed Solar/Battery System Impact Study to determine the amount of distributed energy resources (DER) power generation that can be interconnected and operated in parallel with RMLD's electric distribution system without causing any adverse system impacts to safety and reliability.
- CY20 Capital Budget relating to reliability was on time and on budget.
- Completed application and compiled comprehensive documentation (procedures, safety, cyber security, physical security, maintenance, etc.) for consideration for APPA's RP3 Reliability Award.
- Completed annual implementation of long-term Reliability Study recommendations.
- Hired consultant to evaluate meter purchase options and integration of Meter Data Management (MDM) system.
- Continued installation of mesh network and meter conversion.
- Implementing Technology Roadmap for Smart Grid distribution automation.
- Continued feeder automation, switch installation, and programming of smart grid devices to communicate with SCADA/Outage Management System (OMS).
- Successful OMS/Integrated Voice Response (IVR) testing and integration in preparation for communication of outage/restoration information to customers.
- Implemented NERC compliance requirements for successful self-audit.
- Trained employees on applicable NERC requirements.
- Held quarterly Electrical Safety Committee meetings.
- Reviewed and updated employee job descriptions.
- Negotiated successfully to remove RMLD from NERC's Transmission Operators (TO) status at Bulk Electric Supply (BES) at Substation 4.
- Designed a comprehensive cyber security plan for substations, corporate network, and DMZ perimeter network.
- Implemented Asset Management System (AMS) with ten cyclic maintenance programs to complete CY20 goals.
- Updated Milsoft modeling and integration with Geographic Information System (GIS).
- Performed single and double contingency analysis for Substation 5.
- Performed Milsoft system modeling for load transfer from Substation 5 and load relief for Substation 3 and 4.
- Continued search for land for new Wilmington substation.
- Managed seven major storms with excellent reliability recovery.
- Completed several Emergency Operating Procedures (EOPs) and standard Operating Procedures (OPs) including Disaster Recovery Plan (DRP).
- Installed fiber at Substation 4 and merged with RMLD's fiber at Substation 3 to improve communication between Eversource RTUs at Substation 3 and 4, to accurately receive substation metering data from Substation 4.
- Completed seventeen staff training sessions in the areas of engineering, operational safety, and testing.



# SYSTEM RELIABILITY (CONT.)

- Performed primary metering inspections at 85 sites to verify metering accuracy and perform maintenance on equipment.
- Completed large area step-down conversions in Lynnfield, North Reading, and Wilmington to improve system reliability and lower system losses.
- Completed three overhead area upgrades in Reading and Wilmington.
- Completed two underground subdivision upgrades in North Reading and Lynnfield.
- Continued proactive maintenance programs.
- Replaced 99 transformers (15 pad mount and 84 pole mount) as part of the Aged Transformer Replacement Program.
- Replaced 28 manholes system wide.
- Continued pad mount switchgear upgrades at industrial parks; three units were replaced in 2020, bringing the total number replaced under this program to eleven.
- Replaced 35kV PTs at Substation 4.
- Replaced 115kV CCVT at Substation 4 to bring accurate metering data back to SCADA and avoid unnecessary 115kV bus outages.
- Completed 5G Small Cell Master Agreement template and all associated technical specifications and drawings.
- Reviewed and updated Services Requirements Handbook, including Customer Terms and Conditions.

## SYSTEM UPGRADES

### Reading:

- Parkview Road – RMLD replaced seven poles, and reconductored 950 feet of primary cable, 950 feet of secondary cable, upgraded two transformers and 17 services.
- Deborah Drive/Applegate Lane/Covey Hill Road – RMLD replaced 14 poles, four transformers and upgraded approximately 2,200 feet of primary cable and approximately 2,374 feet of secondary cable.
- Notable examples of new service additions or upgrades:
  - Postmark Square – 136 Haven Street
  - Birch Meadow Elementary School (Modular Classrooms) – 27 Arthur B. Lord Drive
  - Austin Preparatory School – 101 Willow Street
  - Rise 475 Luxury Apartments – 467 Main Street

### Wilmington:

- Kenwood Road - Verizon replaced 22 poles. RMLD reconductored 2,250 feet of primary cable, 2,750 feet of secondary cable, and upgraded six transformers and 15 services.
- Marion Street: Phase 2 - Verizon replaced 29 poles. RMLD installed approximately 2,300 circuit feet of primary cable, and replaced five overhead pole mounted transformers. RMLD is now in the process of replacing approximately 3,300 feet of secondary main cable and 1,700 feet of service cable.
- Carson Avenue – Removed stepdown and converted two transformers.
- Notable examples of new service additions or upgrades:
  - Analog Devices, 804 Woburn Street (3-phase service for EV charging stations)
  - Physical Sciences Inc. - 200 Research Drive

# SYSTEM RELIABILITY (CONT.)

- PPF Industrial, 613 Main Street
- Mapvale LLC, 196 Ballardvale Street
- Golden Nozzle Car Wash, 220 Main Street
- Azurity Pharmaceuticals - 841 Woburn Street

## North Reading:

- 3W15 Getaway Improvements – Completed conduit system from Station 3 to new riser pole. Installed new riser pole and approximately 1,000 feet of cable.
- Greenbriar Drive – Replaced approximately 1,400 feet of primary underground cable, upgraded a damaged riser pole, and replaced three pole mount transformers in enclosers with three pad mount transformers.
- Dogwood/Swan Pond – Replaced three transformers on Adams/Dogwood and converted the step-down area.
- Notable examples of new service additions or upgrades:
  - Commercial Space Providers – 73 Concord Street

## Lynnfield:

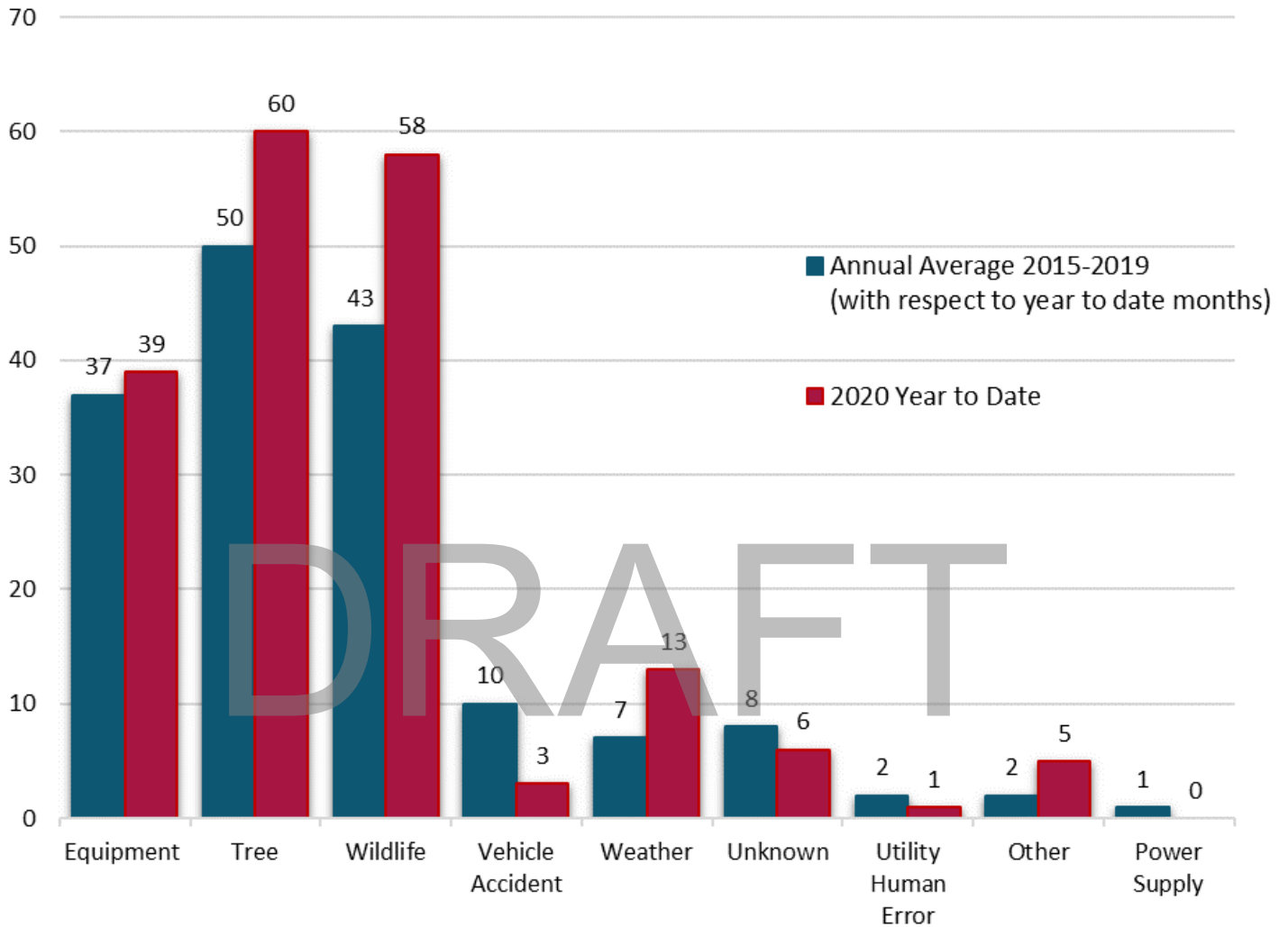
- Westover Drive - Replaced three transformers and approximately 4,000 feet of primary cable.
- Parsons Avenue – Verizon replaced five poles and RMLD transferred and upgraded their facilities, which included two transformers and associated equipment.
- North Main Street/Lowell Street – Verizon set 46 poles. RMLD set two poles and reconducted 4,500 circuit feet of three-phase spacer cable, 2,200 feet of single-phase primary, 2,800 feet of secondary cable, upgraded 18 transformers and 26 services.
- Thomas, Putney, Bancroft, Atherton Area – Verizon replaced 36 Poles. RMLD reconducted 4,400 circuit feet of single phase overhead primary cable, 8,400 circuit feet of overhead secondary cable, upgraded nine transformers and 93 services.
- Notable examples of new service additions or upgrades:
  - Verizon Cell Site – 4 Knoll Road

## FACILITIES AND FLEET

- Replaced emergency generator at 230 Ash Street.
- Completed parking lot upgrades at Ash Street campus which included the installation of an additional dual-port public EV charging station.
- Repaired roof at 230 Ash Street.
- Replaced aged fleet SUVs and trucks with four hybrid SUVs and one eco-boost truck.
- Implemented OSHA air quality testing in all buildings; changes to operations to reflect findings implemented.
- Completed replacement of deck at rear of 230 Ash Street.

# OUTAGE CAUSES

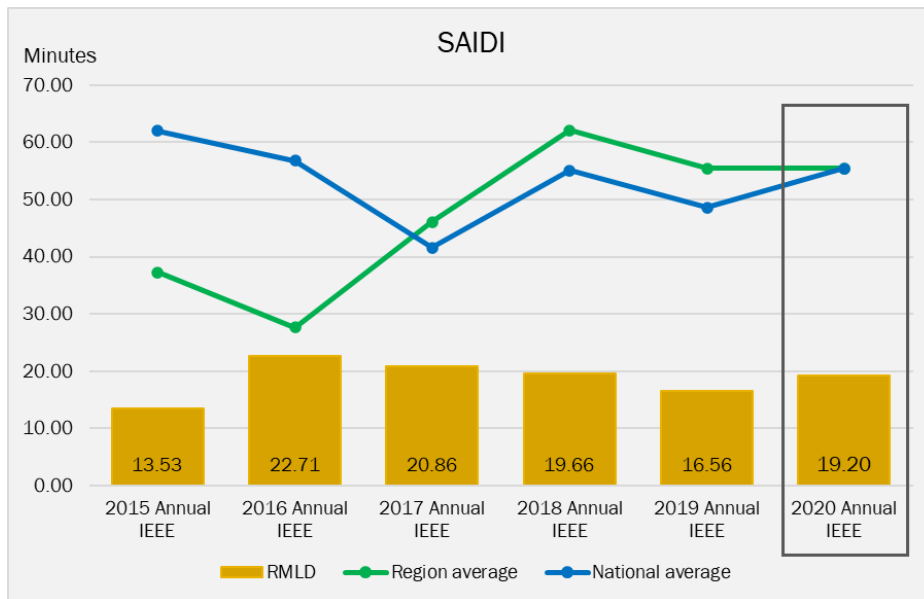
## Causes of Outages as of December 2020





# SYSTEM RELIABILITY INDICES

In 2020, RMLD earned the American Public Power Association's Certificate of Excellence in Reliability. Key industry-standard metrics enable the RMLD to measure and track system reliability:

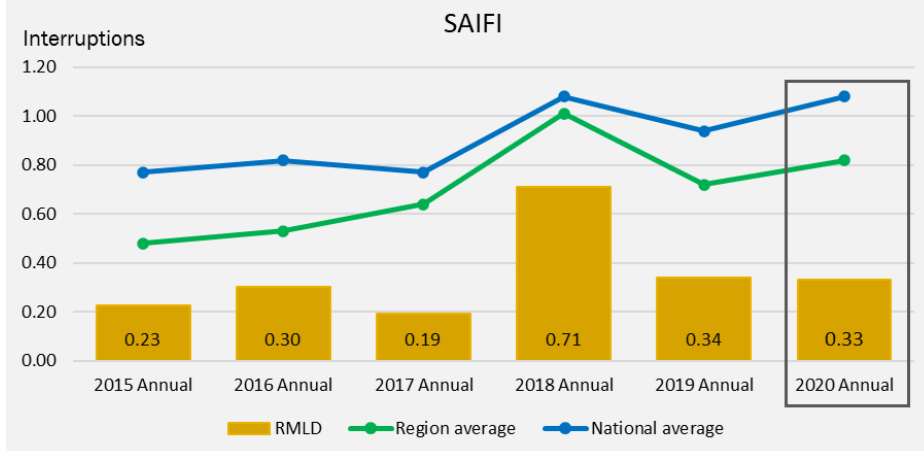
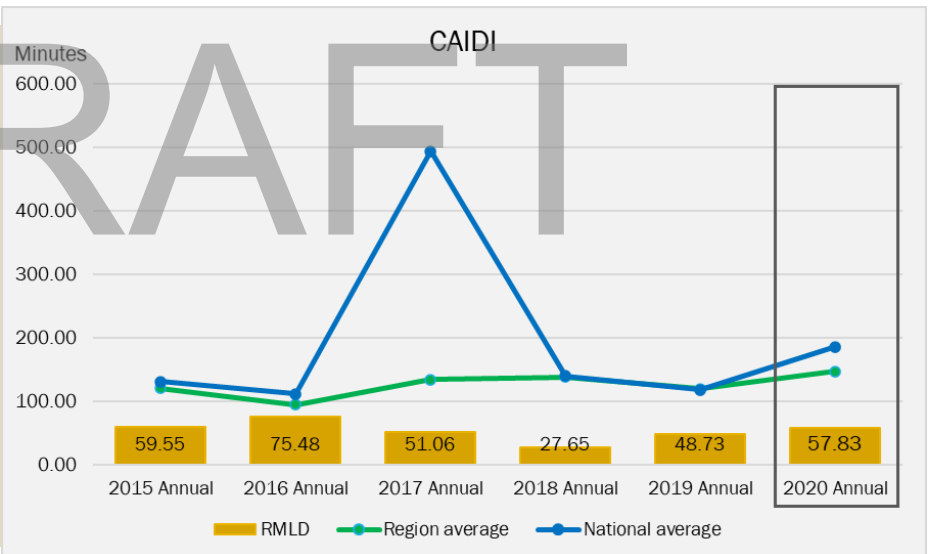


**SAIDI (System Average Interruption Duration Index)** is defined as the average interruption duration (in minutes) for customers served by the utility system during a specific time period.

SAIDI = the sum of all customer interruption durations within the specified timeframe ÷ average number of customers served during that period.

**CAIDI (Customer Average Interruption Duration Index)** is defined as the average duration (in minutes) of an interruption experienced by customers during a specific timeframe.

CAIDI = the sum of all customer interruption durations during that time period ÷ the number of customers that experienced one or more interruptions during that time period.



**SAIFI (System Average Interruption Frequency)** is defined as the average number of instances a customer on the utility system will experience an interruption during a specific time period.

SAIFI = the total number of customer interruptions ÷ average number of customers served during that period.

**Attachment 3 - Agenda Item 6: IRD Report**



# Integrated Resources Report

**BOC / CAB Discussion**

19 July 2021

# Outline

Load Snapshot

Power Supply Update

1Q21 Certificates

Cost of Service, Rates, Choice(s)

# Load Snapshot – transition to growth

## Three primary rate classes

- residential (40%)
- industrial (30%)
- commercial (26%)

## Residential

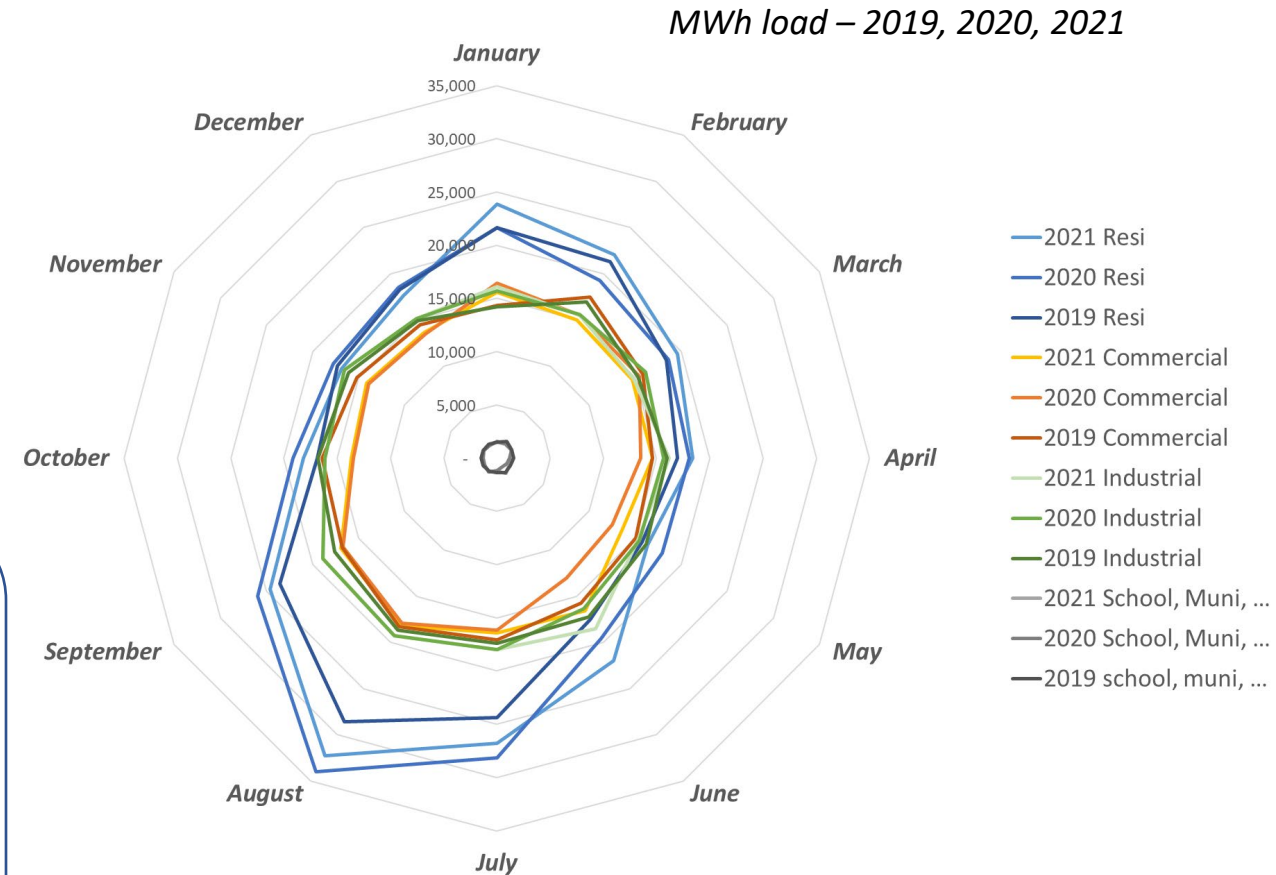
- largest – meters, geography, load
- most seasonally dynamic
- most hourly dynamic

*Context* - past decade saw 1% annual load **decline**

*Change* - 2020 beginning annual **growth (~0.8%)**

*Why* - efficiency gains slowing; electrification commencing; business growing

*Implications* – load growth **reduces** upward \$/kWh rate pressure (**all rate payers benefit**); RMLD network build-out timing; ...



# Power Supply Update

TfAs – three executed YTD, driven by time and price triggers

Transaction ID	Executed	2021	2022	2023	2024	2025
3113543	4-May-2021	43,429	1,728	0	8,774	5,363
3084589	22-Mar-2021	36,346	4,008	11,578	29,726	0
3028962	4-Jan-2021	48,056	13,150	0	0	0
<b>subtotal</b>		<b>127,831</b>	<b>18,886</b>	<b>11,578</b>	<b>38,500</b>	<b>5,363</b>
% total power		19%	3%	2%	6%	1%

Contracted

Processing

Searching

First of three new hydro contract in signature – Dahowa

Second hydro likely to sign in Sep 2021

Third hydro likely to sign Nov 2021

Actively searching for utility scale solar; updating resi solar incentives

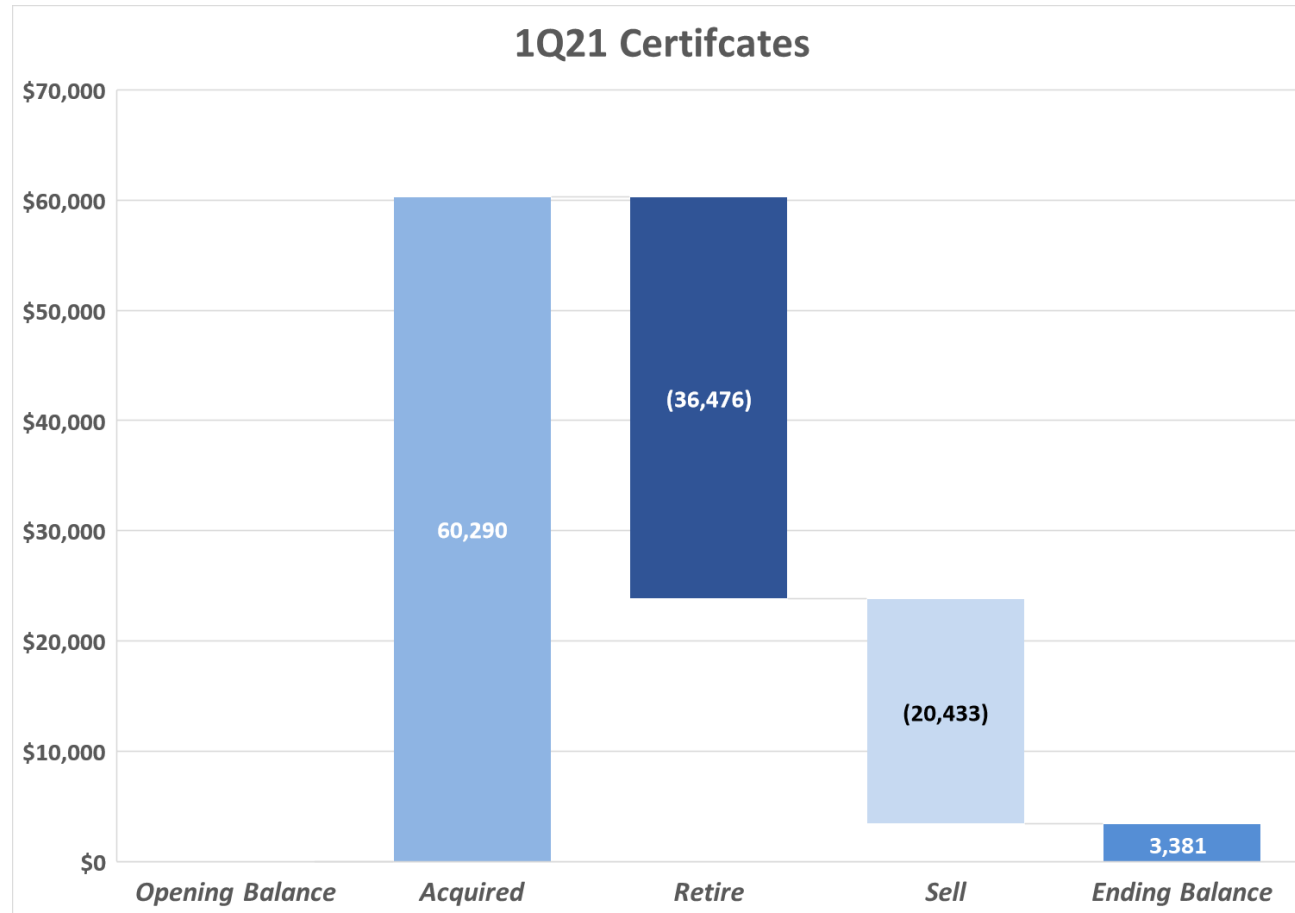
Plan to purchase offshore wind as contracting formalizes

Storage helps match load with renewable generation (time shift)

Dahowa in winter



# 1Q21 Certificates – quarterly report



60,000 certificates acquired in 1Q21

- minted July 15<sup>th</sup>
- all associated with power purchases
- 1 certificate per MWH
- 43% of total power purchased

Retiring 23% of retail sales

- all EFECs plus a few “others”

Selling 80% of certificates above 23%

- consistent quarterly sales dampens cost volatility for rate payers
- ~\$440,000 from 1Q21 certificate sales

Banking balance in NEPOOL GIS account

- flexibility to accommodate certificate price and RMLD power purchase seasonal variability

# Rates - cost of service, incentives, choice(s), ...

## *Understandable, Fair, Motivating*

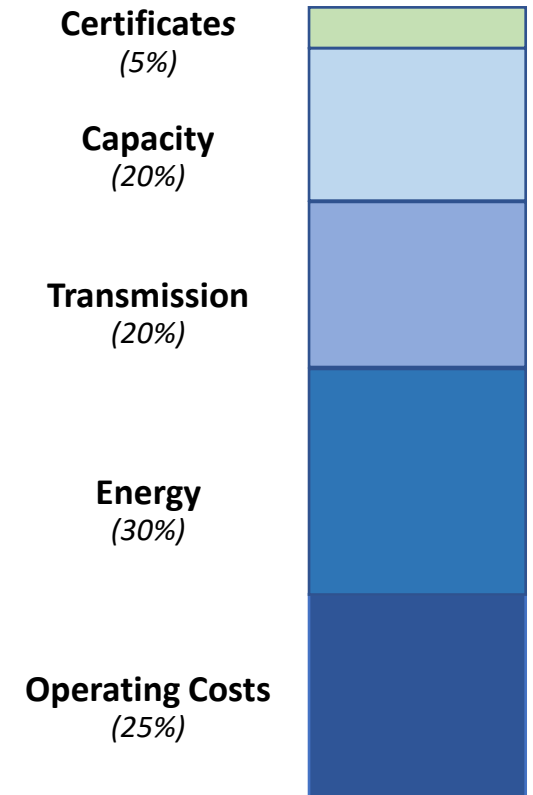
Goals

- Design rates to cover cost of providing service
- Allocate costs fairly, based on rate class load profiles
- Provide funds for efficiency and electrification incentives
- Offer customers better understanding and control of energy use
- Comply with DPU and Climate Bill requirements

Key inputs

- Actual and forecasted expenses; in context of load growth and Climate Bill
- Planned capital costs and existing plant value (net of depreciation)
- Coincident demand by rate class to energy, capacity, transmission costs
- Special provisions, such as NYPA credit for residential
- Energy use by rate class, including electrification adoption and efficiency

## **2025 expenses** *illustration*

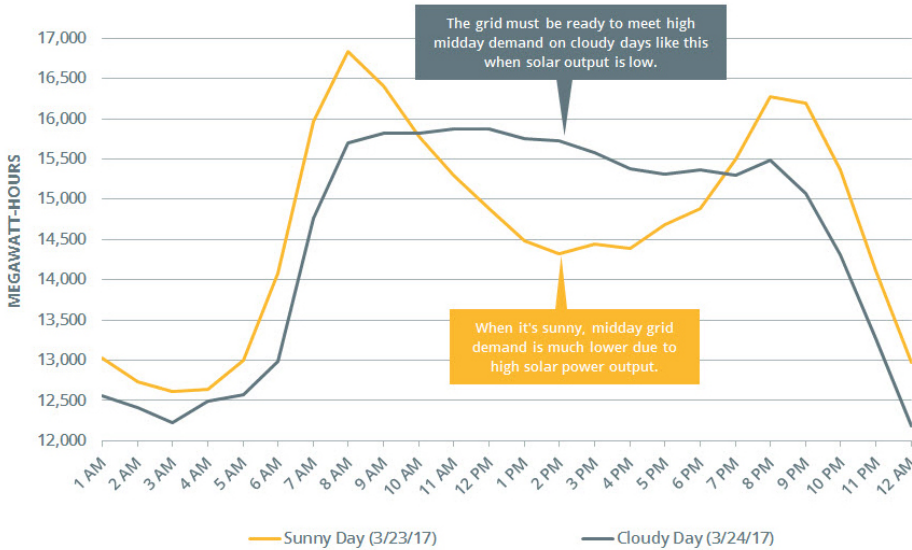




# Cost of Service – new context of peak shift

## regional solar shifts system peak hour – 2017 example

The Impact of Behind-the-Meter Solar Power Can Vary Widely from One Day to the Next



Source: ISO New England

## ISO NE capacity

Peak Date	Peak Hour	System Peak Load
Date	Hour End	MW
6/10/2008	15:00	-25,691
8/18/2009	15:00	-24,708
7/06/2010	15:00	-26,701
7/22/2011	15:00	-27,312
7/17/2012	17:00	-25,543
7/19/2013	17:00	-26,911
7/02/2014	15:00	-24,068
7/29/2015	17:00	-24,052
12-Aug-2016	15:00	-25,111
13-Jun-2017	17:00	-23,508
29-Aug-2018	17:00	-25,559
30-Jul-2019	18:00	-23,929
27-Jul-2020	18:00	-24,727

peak shifting later

Commercial & industrial peak mid afternoon (~HE15) then lower early evening

Residential load highest early evening (~HE18)

Transmission, capacity costs tied to peak hours

Increasing regional solar output reducing traditional mid-afternoon peak hour

**Peak Shift** – peak hours shifting to later in day

Typically peak shift would move expense allocation in cost of service analysis may require alternative

# Rates – preliminary residential illustration

Last rate increase ~1-2% of total bill across all rate classes, effective July 2018

Funds for planned capital projects already in current rates (ex new substation, MDM/AMI, ...)

During 2021, total cost of service partially paid from rate stabilization fund

Rate stabilization fund *may* continue to absorb a portion of rate increases – more detail at next CAB / BoC meeting

*preliminary  
residential  
illustration*

<i>cost of service factor</i>	<i>preliminary rate increase (\$/kWh)</i>	<i>estimated increase to average monthly residential bill (\$)</i>
operating expenses (~3% annual)	\$ 0.0013	\$ 1.04
electrification and energy conservation fund (net increase)	\$ 0.0040	\$ 3.28
power supply (~2% annual, 2022 - 2025)	\$ 0.0021	\$ 1.71
certificate retirement, Policy 30 R1 (avg 2022 - 2025)	\$ 0.0009	\$ 0.74
<b>subtotal</b>	<b>\$ 0.0074</b>	<b>\$ 6.03</b>
Renewable Choice 100% (77% calc)	\$ 0.0400	\$ 25.26
Non-Carbon Choice 100% (77% calc)	\$ 0.0100	\$ 6.31

~ 5% increase (illustrative)

reference - average monthly residential bill is 820 kWh for \$121

# MLP Renewable Choices

## Considerations

Communication

Customer preferences

Opt-in / opt-out

Eligibility  
(Solar Choice, Green Tariff)

Certificate count, pricing

Implementation  
(certificate mgmt, billing, ...)

<i>MLP Name</i>	<i>Annual Sales (MWH)</i>	<i>Program Name</i>	<i>Additional Cost</i>	<i>Participation</i>
Belmont	121,521	Green Choice Program	\$3.00 - \$42.00 per month	Opt In
Wellesley	239,768	Voluntary Renewable Energy Program	\$0.044 / kWh (\$24 / month)	Opt In
Shrewsbury	243,529	Green Light Renewable Power	\$5, \$10, \$15, or custom	Opt In
Middleborough	262,843	+ Green Choice	\$0.02 / kWh	Opt In
Taunton	640,323	Go Green 100%	\$0.019 / kWh	Opt In
Reading	651,187	Renewable Choice 100%	\$0.04 / kWh	Opt In
Reading	651,187	Non-Carbon Choice 100%	\$0.01 / kWh	Opt In

*Simple, Effective, Motivating*

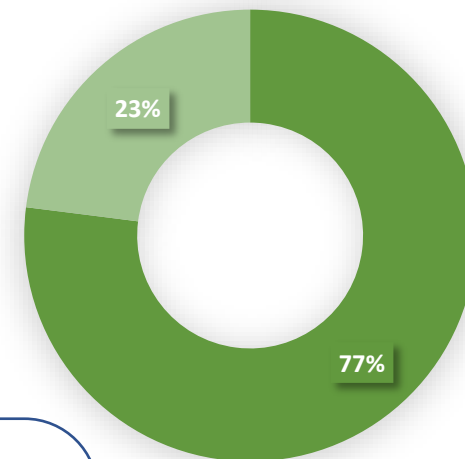
# Renewable Choice and Non-Carbon Choices

## Goals

Offer 100% options for rate payers

Additional to 23% that all RMLD ratepayers pay (incremental 77% to 23% minimum, to yield 100%)

*all ratepayers contribute 23% per Policy 30 Rev1*



## Renewable Choice 100%

- Funds to retire MA Class 1 certificates (IOU RPS/CES proxy)
- Fixed rate \$ 0.04 / kWh, adjusted annually
- Available to all rate classes
- Opt-in, minimum 1 year commitment
- ~8 certificates per participant per year

**Adds \$25.26 or 21%** to typical monthly residential (77% X 820 kWh X \$0.04 / kWh)

## Non-Carbon Choice 100%

- Funds to retire “other” certificates (not MA Class 1; not EFECs; but, Class II, Tier I)
- Fixed rate \$ 0.01 / kWh, adjusted annually
- Available to all rate classes
- Opt-in, minimum 1 year commitment
- ~8 certificates per participant per year

**Adds \$6.21 or 5%** to typical monthly residential (77 % X 820 kWh X \$0.01 / kWh)

*option for additional 77% to total 100%*

Thank You