Town of Reading
Meeting Posting with Agenda

Board - Committee - Commission - Council:

RMLD Board of Commissioners

Date: 2021-11-17	Time: 7:00 PM
Building:	Location:
Address:	Agenda:

Purpose: General Business

Meeting Called By: Robert Coulter, 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 AND THE JUNE 16, 2021, ACT EXTENDING CERTAIN COVID-19 MEASURES, THIS MEETING WILL BE HELD REMOTELY VIA ZOOM.

Public participation at this meeting:
This meeting will be held remotely on Zoom and streamed live on RCTV and YouTube. https://www.youtube.com/c/RCTVStudios/videos?view=57.

For public participation on Zoom please email emorse@rmld.com. Please include your full name and address. Comments and questions will be monitored during the meeting.

1. Call Meeting to Order – Chair Coulter

   Code of Conduct: The RMLD Board of Commissioners recognizes the importance of hearing public comment, at the discretion of the Chair, on items on the official agenda. We ask that all questions or comments from the public be directed to the Chair and that all parties, including members of the RMLD Board, act in a professional and courteous manner when addressing the Board or responding to comments. Once recognized by the Chair, all persons addressing the Board shall state their name and address prior to speaking. It is the role of the Chair to maintain order in all public comment or ensuing discussion.

2. Public Comment – Chair Coulter
   - Citizens' Advisory Board
   - Liaisons to RMLD Board
   - Public Comment

3. Approval of Board Minutes - (Attachment 1) – **ACTION ITEM** – Chair Coulter
   Board of Commissioners Suggested Motion: Move that the Board of Commissioners approve the meeting minutes of the July 19, 2021, and August 12, 2021, meetings on the recommendation of the General Manager.

4. Report on Citizens' Advisory Board Meeting on Oct 21 and Nov 11 – Ms. Bita and Mr. Pacino

5. General Manager's Report - Ms. O'Brien, General Manager

6. 2022 Budget Presentation

   - Capital Budget – Hamid Jaffari, Director of Engineering & Operations
     Suggested Motion: Move that the Board of Commissioners, on the recommendation of the Citizens' Advisory Board, approve the Calendar Year 2022 Capital Budget in the amount of $13,225,575 as presented, on the recommendation of the General Manager. Any significant changes are to be submitted to the CAB for review and recommendation.

   - Operating Budget – Wendy Markiewicz, Director of Business & Finance
     Suggested Motion: Move that the Board of Commissioners, on the recommendation of the Citizens' Advisory Board, approve the Calendar Year 2022 Operating Budget with a net income of $2,533,060 as presented, on the recommendation of the General Manager.

7. Integrated Resources Report (Attachment 3) -**ACTION ITEM** - Mr. Phipps, Director of Integrated Resources

   Rates Summary
   Suggested Motion**:** Move that the Board of Commissioners, on the recommendation of the Citizen's Advisory Board, vote to accept the General Manager's recommendation to replace the following MDPU rates effective on billings on or after January 1st, 2022:

   - Replace 279 Residential Schedule A with 296
   - Replace 280 Residential Time of Use Schedule A2 with 299
   - Replace 282 Commercial Schedule C with 297
   - Replace 283 Industrial Time of Use Schedule I with 298
   - Replace 284 School Schedule SCH with 300

   2021 Q2 2021 Certificates Update

   Power Supply Agreements

   Offshore Wind Opportunity
   Suggested Motion: Move that the Board of Commissioners, on the recommendation of the Citizen's Advisory Board, vote to accept the General Manager's recommendation to execute a contract with Commonwealth Wind for energy, including associated certificates, from an offshore wind facility off the southern coast of Massachusetts, contingent on appropriate environmental justice due diligence.

   Power Supply Opportunity
   Suggested Motion: Move that the Board of Commissioners, on the recommendation of the Citizens' Advisory Board, vote to accept the General Manager's recommendation to modify a power supply contract with NextEra for energy, including associated certificates, to increase the size of the previously approved solar array from up to 5 MW

to up to 12 MW for a solar PV system at the Seabrook nuclear facility site, contingent on appropriate environmental justice due diligence.

8. Procurement Requests Requiring Board Approval – (Attachment 4) – **ACTION ITEM** - Mr. Jaffari, Director of Engineering & Operations

   IFB 2021-19 Janitorial Services
   Suggested Motion: Move that IFB 2021-19 for Janitorial Services be awarded to: S. J. Services, Inc, for $119,424.00, pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder, on the recommendation of the General Manager. This is a three-year contract.

   IFP 2021-20 Substation Spare Equipment
   Suggested Motion: Move that IFP 2021-20 for Substation Spare Equipment be awarded to: Stuart C. Irby Company, for $49,873.98, and WESCO Distribution, Inc., for $6,956.001, pursuant to M.G.L. c. 164 § 560, on the recommendation of the General Manager.

   IFP 2021-23 #2CU 15 kV Underground Cable and #2STR CU 1 COND 600V XHHW Cable
   Suggested Motion: Move that IFP 2021-23 for #2CU 15kV Underground Cable and #2STR CU 1 COND 600V XHHW Cable be awarded to: Arthur J. Hurley Company, Inc., for $94,725.00, pursuant to M.G.L. c. 164 § 56D, on the recommendation of the General Manager.

   RFQ 2021-18 Pick-Up Truck with Dump Body and Material Spreader with Trade-Ins
   Suggested Motion: Move that RFQ 2021-18 for a Pick-Up Truck with Dump Body and Material Spreader Attachment with Trade-Ins be awarded to: Liberty Chevrolet for net delivered price of $65,774.00 ($68,774.00 minus $3,000.00 for trade ins), pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder, on the recommendation of the General Manager

9. Scheduling – Chair Coulter

   Subsequent RMLD Board Meetings: December doodle poll
   CAB Meeting Coverage: (December) Mr. Talbot
   AP: Mr. Coulter; Payroll: Mr. Pacino

10. Adjournment – Chair Coulter (Board of Commissioners) **ACTION ITEM**
    Suggested Motion: Move that the Board of Commissioners adjourn regular session.

BOARD MATERIALS AVAILABLE BUT NOT DISCUSSED

- Accounts Payable / Payroll Questions through pay date 10/11/2021
- Financial Update through August 2021
- Surplus and Scrap Material Report September 2021 & October 2021

READING MUNICIPAL

LIGHT DEPARTMENT

BOARD OF COMMISSIONERS MEETING

REGULAR SESSION

November 17, 2021

APPROVAL OF BOARD MINUTES

ATTACHMENT 1

Town of Reading
Meeting Minutes

Board - Committee - Commission - Council:

RMLD Board of Commissioners

Date: 2021-07-19 Time: 7:30 PM

Building: Location:

Address: Session: Open Session

Purpose: General Business Version: Draft

Attendees: **Members - Present:**

Mr. Robert Coulter, Chair; Mr. Philip Pacino, Vice Chair; Mr. John Stempeck, Commissioner; Mr. David Talbot, Commissioner; Ms. Marlena Bita, Commissioner

Members - Not Present:

RMLD Staff: Ms. Coleen O'Brien, General Manager; Mr. Greg Phipps, Director of Integrated Resources; Ms. Wendy Markiewicz, Director of Business Finance; Mr. John McDonagh, Assistant Director of Engineering and Operations; Ms. Erica Morse, Executive Assistant; Karen Herrick, Select Board, Reading; Mr. George Hooper, Commissioner, CAB, Wilmington.

Others Present:

Public: Mr. John Rogers, 39 Tower Hill Road, North Reading

Minutes Respectfully Submitted By: Philip Pacino, Secretary Pro Tem

---

Topics of Discussion:

DUE TO GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF OPEN MEETING LAW, G.L. c. 30A, §20 AND THE JUNE 16, 2021, ACT EXTENDING CERTAIN COVID-19 MEASURES, THIS MEETING WAS HELD REMOTELY VIA ZOOM

1. Call Meeting to Order

Vice Chair Pacino called the meeting to order at 7:34 PM and announced that the meeting would be held on Zoom and live on RCTV and YouTube.

Opening Remarks:
Vice Chair Pacino read the RMLD's Code of Conduct.

Vice Chair Pacino served as the Secretary for the meeting.

Introductions
Vice Chair Pacino welcomed everyone to the meeting of the RMLD Board of Commissioners and asked all attendees to identify themselves.

2. Public Comment

Liaisons to RMLD Board
Ms. Herrick stated that she will continue to be the Liaison to the Select Board and provided an update. Ms. Herrick commended the RMLD for the information and assistance provided to customers, such as herself, who are new to owning electric vehicles.

The RMLD and representatives from Reading, (Ms. Herrick; David Zeek, RCAR Chair; and Mark Dockser) testified at the telecommunications committee hearing. Ms. Herrick thanked Ms. O'Brien for testifying live, as well as, facilitating RMLD service areas to join green communities.

Ms. Herrick provided an update on Reading's Green Communities application. Recently changed regulations now allow applications on a rolling basis. Reading plans to apply in October; the EV policy has been approved and the stretch code adopted.

Ms. Herrick noted that the Town of Reading is discussing getting a Sustainability Director.

Mr. Talbot asked a question on Reading's green communities' application, and the process on handling peak periods. Ms. Herrick responded that if approved, the Town will ask the RMLD for help getting started and collecting $0.50 per account which will be forwarded to the renewable trust. Ms. Herrick will look further into a policy or process around shredding the peak.

Public Comment
Mr. Rogers attended the meeting on behalf of GRACE (Greater Reading Alliance for Clean Energy) and expressed his excitement and appreciation of the presentation around the Renewable Choice Program. Mr. Rogers recommended that MA Class 1 be defined more simplistically for people.

Mr. Pacino made a comment about the UN Report and climate change.

3. **Report on Citizens' Advisory Board Meeting on July 19, 2021**
Mr. Pacino reported that the Citizens' Advisory Board presentations mirrored tonight's Board of Commissioners presentations.

At this point Chair Coulter assumed the leadership position and thanked Mr. Pacino for starting the meeting in his stead.

4. Approval of Board Minutes
No discussion occurred.

Mr. Pacino made a **motion**, seconded by Mr. Stempeck, that the Board of Commissioners approve the meeting minutes of the February 24, 2021, meeting on the recommendation of the General Manager.

Roll call: Mr. Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye; Chair. Coulter, Aye; Ms. Bita, Abstain
Motion Passed: 4:0:1

5. General Manager's Report *(Taken out of order)*

Annual Report Confirmation
Ms. O'Brien reported on the CY20 Annual Report. The report will be distributed to the towns, as well as, posted on the website.

A recap of the 2020 highlights and 2021 year to date progress will be made at the fall Reading town meeting.

Discussion ensued on the Annual Report around content relating to Power Supply, the Climate Bill and Climate Bill compliance.

Mr. Talbot suggested modifications to the CY20 Annual Report that accurately reflect where the RMLD plans to go in accordance with the Climate Bill. Ms. O'Brien noted that this report is for CY20, before the Climate Bill was enacted, but indicated that there are notations regarding the pending climate bill with projections lines of compliance on the diagram.

Mr. Phipps noted that for CY20 retirement verses sales of certificates were not segregated. Mr. Stempeck noted that a4nnual reports reflect the previous year and the CY21 report would reflect what Mr. Talbot is requesting. Mr. Rogers suggested the RMLD note what RECs were sold vs. retired.

Discussion ensued on further modifications to the Annual Report.

Ms. O'Brien clarified what revisions the RMLD need to address; it was agreed that a revision with two pages would be presented.

The Board of Commissioners agreed to table the motion to approve the CY20 Annual Report

Mr. Pacino made a **motion**, seconded by Mr. Talbot, to table the motion until the August 2021 meeting at which point the concerns that have been raised by Mr. Talbot can be addressed and re-presented to the Board at that Meeting.

Roll call: Mr. Pacino, Aye; Mr. Talbot, Aye; Chair Coulter, Aye; Mr. Stempeck, Nay; Ms. Bita, Aye.
Motion Passed: 4:1:0

Board Agenda Quarterly Guideline Review
Ms. O'Brien presented the proposed quarterly BOC document, which outlines a meeting agenda schedule with rotating and quarterly updates.

The intent of the document is to ensure policy compliance; to ensure that quality presentations are afforded proper opportunity for discussion; to ensure proper consideration for new information requests; and to ensure efficient use of time.

MassEVIP Grant Update

Ms. O'Brien noted that the Board was provided with the updated changes that were sent to the State regarding the MassEVIP Grant, awarded to RMLD. The locations are as follows: Wilmington Library and Town Hall; Reading Main Street and Haven, Reading Train Depot, and the Reading Library pending final confirmation of feasibility of direct drilling a the Library site. Moving forward, the RMLD will look at additional areas for EV chargers with town assigned construction contacts.

Green Communities

Ms. O'Brien noted that the best-case scenario in relation to Green Communities is if all four of RMLD's service areas would be allowed to join based off one IOU meter (Wilmington) within the RMLD MLP service territory. As such, each of the service areas should have the opportunity to progress towards adopting green communities' criteria at their own pace.

Community Update

Ms. O'Brien reported on the community update.

<u>Recent Events</u>
- The RMLD attended the Wilmington Farmers Market on June 27, 2021.
- The RMLD held a Virtual Electrification Presentation on June 7, 2021, in partnership with the Wilmington, Reading, and North Reading libraries. The recording is available on RMLD's website and has been shared with the four community tv stations.

<u>Upcoming community events</u>
- Reading Library Vehicle Day – 8/10/2021
- Reading Fall Street Faire – 9/12/2021
- North Reading Town Day – 10/3/2021

<u>Upcoming RMLD events</u>
- Public Power Week Open House 10/7/2021 3-6pm; rain date 10/14
- Electric Car Show – 8/15/21 10am-1pm at Wilmington farmers market

- Heat Pump Workshop II – virtual, fall date TBD

.

6. Review of Policy 19: Board of Commissioners
   Ms. O'Brien presented Policy19: Board of Commissioners, Revision 15

   Mr. Pacino suggested to revise the language in Policy 19 to allow for the Vice Chair to serve as the Secretary.

   Mr. Pacino suggested to revise the language in Policy 19 to state that if the Chair and Vice Chair are not available then the most senior member of the Board will serve as the Chair for that meeting. Mr. Stempeck asked if this would cause an issue with quorum; Mr. Pacino replied that it would not.

   In reference to Chair term length, Mr. Pacino advocated for a maximum of a two-year term. Mr. Stempeck stated his support for a one-year term length as it allows for a rotation of people. Chair Coulter commented that with a three-year term and a two-year position there is more opportunity to get things accomplished. Mr. Talbot stated that he agrees with a one-year term. It was noted that the one-year term forces a rotation.

   The Board of Commissioners agreed to modify Policy 19 language, as edited during the meeting, to allow for the Vice Chair to be Secretary.

   The Board of Commissioners agreed to modify Policy 19 language, as edited during the meeting, that if the Chair is not present then the Vice Chair will act as Chair. If both the Chair and Vice Chair are not present then the most senior member, as defined by length of time on the Board, will act as Chair.

   Mr. Talbot questioned the need to include the language referencing M.G.L 30A 20 under meetings and procedures, as this language is already implicit in the state law.

   Discussion ensued on deliberation and M.G.L 30A 20.

   Ms. O'Brien noted that the intent of this section was to clarify serial communications and that Open Meeting Law does not apply to the General Manager, it applies to the public body. The department extracts sections of the law that are referenced in the policies to make those pieces of the law more accessible.

   Mr. Stempeck noted that he agrees with Mr. Talbot; in the past the Board has put "not for deliberation" in any emails that are sent out for educational or informational purposes. Ms. O'Brien responded that the language in Policy 19 is only speaking to deliberation and does not relate to education or informational emails. Mr. Talbot stated that the Board may send documents but can not offer an opinion on those documents.

   No modifications to the presented language in Policy 19, Section III referencing M.G.L 30A 20 and deliberation were made during the meeting.

   Mr. Talbot commented on the General Manager performance review process, noting that the language implies that the Board of Commissioners is only allowed to evaluate the General Manager on the goals. Ms. O'Brien responded that the language states that the Board will give the Manager a performance appraisal based on performance and satisfaction of agreed upon goals and tasks.

   No modifications to the presented language in Policy 19, Section C referencing the General Manager performance review process were made during the meeting.

   Mr. Talbot commented on the need for the language in the Public Comment section. Mr.

Stempeck responded that this language was a result of a past meetings where Public comment become disrespectful and unproductive.

Ms. O'Brien noted that some of the language referenced in Policy 19 is to clarify questions from new commissioners that have come up repeatedly.

No modifications to the presented language in Policy 19 referencing Public Comment were made during the meeting.

Mr. Talbot made a comment on the language regarding the quarterly outside expenditures report. Ms. O'Brien noted that the Board quarterly schedule, as previously presented, was to demonstrate that the RMLD will provide quarterly reports regardless of the requirements in Policy 19. The word "may" was added to provide flexibility with policy compliance in case of department scheduling conflicts or the Chair removing an agenda item.

Mr. Pacino made a suggestion to add verbiage relating to Public Comment stating comments must be respectful and appropriate.

The Board of Commissioners agreed to modify Policy 19 language, as edited during the meeting, to add the sentence "The Chair expects all comments to be respectful and appropriate" in Section 5 Letter F,

Mr. Pacino made a **motion**, seconded by Mr. Stempeck, to move that the Board of Commissioners approve Policy 19: Board of Commissioners, as edited and presented, on the recommendation of the General Manager.

Roll call: Mr. Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye; Chair. Coulter, Aye; Ms. Bita Aye.
Motion Passed: 5:0:0

7. IRD Report Attachment 4

Mr. Phipps reported on the load snapshot (Enclosed Slide 3). Mr. Phipps highlighted rate class characteristics. The residential rate class is the largest; has the broadest geography; and is the most dynamic both seasonally and hourly. Residential tends to show monthly peaks in January, February, and August. Commercial and industrial rate classes are smaller, are less broad in geography, and are more consistent seasonally (spider chart, slide 3).

Although the past decade saw an annual load decline of 1%, this trend began to change in 2020 with a 0.8% annual growth. This is due to slowing efficiency gains, the beginning of electrification, and business growth. Mr. Phipps cited the LED light replacement program as an example of slowing efficiency gains. Load growth is beneficial to ratepayers, as it diminishes upward pressure on rates. As the load begins to grow over the next five to ten years, the RMLD will transition from a period of network and maintenance to a period of equipment build out.

Mr. Phipps reported on the power supply update (Enclosed Slide 4). The RMLD needs to purchase power annually to fill in expiring contracts; this year there is the additional consideration of load growth.

In January, March, and May of 2021, RMLD executed three TFAs (Transaction Facility Agreements). The IRD team runs regular analysis, to replace expiring contracts and fill load growth. Through the TFA program, RMLD purchased approximately 19% of total power, each across four-year spans. Mr. Phipps noted that wholesale prices are increasing. The RMLD will present the TFA report on a quarterly basis.

Mr. Phipps provided an update on the hydro contracts that are in process (Enclosed Slide 4). The RMLD completed the environmental and social justice due diligence report for Dahowa and is finalizing the contract. The economic and social due diligence report for the second hydro project is in process. The Connecticut hydro is on schedule to sign in November.

Mr. Phipps stated that the Climate Bill's electrification requirements will increase load for New England; MA is the most aggressive in implementing these requirements and is a significant portion of the regional growth. Simultaneously, the Climate Bill calls for the removal of fossil fuel-based power supply including natural gas. This will result in a load increase coinciding with supply decrease, which will lead to increased competition for supply and especially for non-carbon supply. This emphasizes the importance of the RMLD's aggressive push for non-carbon and hydro supply, now.

In this context, RMLD is actively searching for utility scale solar and updating the residential solar incentives within the network. As offshore winds become available, the RMLD will work to secure contracts, along with other MLPs through ENE. The RMLD is actively looking to expand storage to allow for improved matching of load with renewable generation. Mr. Phipps noted that the battery storage project, which is part of RMLD's Shred the Peak Program, has been financially beneficial.

Mr. Phipps provided the 2021 Q1 quarterly report on certificates (per Policy 30) (Slide 5). RMLD opened with a 0 balance in CY21, as all certificates were retired or sold in CY20. In this quarter the department acquired 60,000 certificates (Minted 7/15/21) accounting for 43% of the power purchase portfolio; the department will retire all of the EFECS and a few others. In accordance with the requirements set in Policy 30 and the Climate Bill, each year the RMLD will increase the level of certificates retired by 3%; each quarter the RMLD will aim for an annual goal of 23% for CY21, 26% for CY22, etc.

Regarding the balance of certificates (per Policy 30), the RMLD is adopting an operating procedure where 80% of certificates that are earmarked to be sold, will be sold as soon as possible, and the remaining 20% will be banked in RMLD's NEPOOL GIS account for later transactions. This quarter will likely net over $440,000 in certificate sales. This provides a 23% retirement each quarter in 2021, despite load seasonality.

Mr. Phipps reported on rates, cost of service, incentives, and choices (slide 6). The rates are designed to cover the cost of providing service and the expenses associated with that (energy, transmission, and operating costs etc.) Mr. Phipps noted that funds must be provided for electrification and efficiency. RMLD's goal is to motivate customers to evaluate and change their use and the resultant cost. This can be accomplished by providing the customer with more options and data.

Mr. Phipps reported on the cost of service and peak shift (slide 7). The hour that the peaks occur needs to be considered when fairly allocating cost across rate class, as it relates to capacity and transmission (which accounts for 40% of RMLD costs). Mr. Phipps noted the impact of solar power is variable depending on weather; on a sunny day, solar reduces the net load in the middle of the afternoon which typically pushes the peak to a later hour.

Mr. Phipps provided an illustration on rate drivers (slide 8). The last rate increase that the RMLD has done was in July of CY18 (1-2%); the rates have been stable over the past several years. This fact, along with the load growth changes, calls for a rate discussion in CY21. Mr. Phipps noted that some of the planned capital expenses and projects are already in the current rates, and the rate stabilization fund may continue to absorb a portion of the rates. When considering the four cost of service factors, the estimated increase is approximately $6.03 to the average residential monthly bill (820 kWh / $121)

Mr. Phipps noted the comparison of other MLP certificate retirement programs in comparison to RMLD's suggested programs (slide 9). The relative additional costs are similar to what other MLPs are doing, except that Wellesley is introducing an opt-out program.

Mr. Phipps proposed Renewable Choice and Non-Carbon Choice programs (slide 10) and stated that the goal is to offer 100% options for rate payers, in addition to the 23% that all rate payers contribute now for retiring certifications in accordance with Policy 30.

Renewable choice focuses on Mass Class 1 certificates which are currently trading around $40 / certificate. Non – Carbon choice focuses on "other certificates" inclusive of Class II and Tier 1; the average cost of others in the portfolio is $11 / certificate. To manage the program and maintain stability, the department is proposing a one-year commitment for both programs.

Mr. Pacino asked a question about certificate numbers; could a person buy more than eight certificates? Mr. Phipps responded that the intent is to reach 100%, and although it has not been considered by the Department, RMLD can investigate customers buying more than 100%.

Mr. Pacino asked a follow up question on buying certificates on the open market. Mr. Phipps responded that the RMLD's intention is to retire certificates that the Department has in the NEPOOL GIS Account. If needed, RMLD would go to the open market to buy additional certificates, and then retire them. With the funds from the two programs, the RMLD is looking to retire certificates above the 23% line for 2021.

Mr. Pacino asked why the department is recommending opt in verses opt out. Mr. Phipps responded that the recommendation comes after reviewing other MLPS programs and initial feedback of opt in and opt out. The Renewable Choice represents a significant increase and if the Board suggests an opt out program, then a tremendous amount of communication will be required. The RMLD needs to consider the customer point of view. The department has received calls from the public about the direction of the opt-in / opt-out, to which RMLD is responding that the topic is open for discussion and is encouraging anyone with an opinion to attend the Board meetings to voice that opinion.

Mr. Pacino noted there is a large difference between Taunton and Reading; what are they doing differently in terms of cost per kWh. Mr. Phipps noted it is the type of certificate that they are retiring and if they are funding them 100%. Taunton is not funding for 100% retirement and instead is collecting a fund and then retiring as many as that fund will retire, where RMLD is proposing to fund retirement of 100% for that customer set.

Ms. Bita asked Mr. Phipps about participant rates from other MLPs; Mr. Phipps responded that the department would try to provide that information at the August session.

Chair Coulter asked about the departments' plan to market the suggested programs. Mr. Phipps responded the focus is to create a program that will encourage participation. The department is assuming those who are focused on climate change and knowledge of MA Class 1 certificates will lean towards Renewable Choice, whereas the non-Carbon choice may appeal to those who would like to support the initiative but would prefer to check a box. The RMLD is encouraging an opt in program for the non-carbon choice which will likely yield high participation.

Chair Coulter asked a follow up question on if the suggested programs tie in to a customer adding EV or solar. Mr. Phipps responded the department has not considered forcing someone into a program when they add EV or solar. Mr. Phipps cited the example of the time of use requirement for EV chargers; and a new time of use option that will be presented at the August meeting. Based on recent analysis done by the RMLD, there is an opportunity to encourage adoption with attractive rates. Attractive rates are likely to drive customers' economic analysis and become an additional motivator for EV adoption.

Ms. Bita asked about the Wellesley Voluntary Renewable Energy Program. Mr. Phipps responded that this program has been in existence and the opt out program came into effect in July, replacing the VREP program.

Discussion ensued on the current statistics and participation feedback of the Wellesley opt out program.

Mr. Talbot noted the large cost increase between the two suggested programs, and proposed that the RMLD combine the two programs into one renewable choice program with multiple

levels. Mr. Talbot noted that this allows the program more flexibility with an approachable cost; a second program can be added as needed later.

It was clarified that the RMLD's current Non – Carbon power supply is 23%.

Mr. Pacino agreed with the suggestion of one renewable choice program and noted that if the fixed rate could match the suggested rate of the non-carbon, he would support an opt-out option.

Mr. Stempeck agreed with the suggestion of one renewable choice program. Mr. Stempeck stated that he is not in favor of an opt out program; an opt out program would take advantage of customers who are forced into a program that they must get out of.

Ms. Bita stated that a decision cannot be made until Mr. Phipps provides the information on the participation rates for each program. Mr. Stempeck responded that, in his opinion, the opt- out had a high participation rate due to most people misunderstanding what they are being forced into.

Chair Coulter noted that he is for an opt in program and supports the suggestion of one renewable choice program with two to three tiers.

8. Procurement Requests Requiring Board Approval
The proposal was sent out to eighteen companies. Three companies responded to the proposal; Altec Industries, Inc.; James A. Kiley Company, and Taylor & Lloyd, Inc.

Altec, Inc. was the lowest bidder ($262K), took many exceptions, and had a two-year delivery time. James A. Kiley Company was the second lowest bidder; took three minor exceptions and had an estimated one-year delivery time.

Mr. McDonagh discussed RMLD's process of securing bids and the electrification operating procedure, which aligns with RMLD Fuel Efficiency Procedure and Mass DOER guidelines.

The RMLD is actively pursuing and vetting technology that allows for electrification, for example an EPTO system. The RMLD investigated a state grant for this type of program; there are no grants available at this time. Vehicles over 8500 pounds are exempt from DOER but efficiency alternatives are reviewed.

Considering the initial cost of the EPTO and cost recovery; the lack of available supporting data on the technology, and the concerns around reliability, maintenance and added waste, the RMLD is not recommending the purchase an EPTO at this time. The RMLD will continue to evaluate cost and carbon savings for all RMLD fleet vehicles as electrification technology advances.

Ms. O'Brien stated that the RMLD has historically, and is continuously, running cost analysis. As new technology comes forward the RMLD in collaboration with the Board, needs to discuss modifying calculations to account for green initiatives intersection with cost and return on investment. For this equipment, the RMLD examined carbon weight in pounds and what it is traded at in the European market, as well as amount of carbon saved during peak shredding. Through analyzing these factors, the RMLD created a formula that balances the cost of electrification (carbon reduction) and the return on investment.

Chair Coulter asked about the lift impact of electric vs gas; Mr. McDonagh responded there was no impact. Chair Coulter asked about a temperature profile to keep the battery stable and in operation; Mr. McDonagh responded that there is a heater inside the enclosure.

Mr. Pacino made a motion, seconded by Mr. Stempeck, that proposal IFP 2021-15 for one (1) Material Handler Truck with Trade-In be awarded to: James A. Kiley Company for $284,049.00, pursuant to M.G.L. c. 164, § 56D, on the recommendation of the General Manager.

Roll call: Mr. Pacino, Aye; Mr. Talbot, Aye; Ms. Bita, Aye; Chair Coulter, Aye; Mr. Stempeck, Aye.
Motion Passed: 5:0:0

9. Scheduling
   The next meeting will be a joint meeting of the Board of Commissioners and Citizen's Advisory Board held on August 12th at 6:30PM. This meeting will discuss rates and meeting minutes only. CAB meeting coverage is as follows: Mr. Talbot, August; Mr. Stempeck, September; and Ms. Bita, October.

10. Executive Session
    Mr. Pacino made a **motion,** seconded by Mr. Stempeck, move that the Board of Commissioners 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 union negotiations, and to consider the purchase, exchange, lease, or value of real property, and return to regular session for the sole purpose of adjournment.

    Mr. Pacino, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye; Ms. Bita, Aye; Chair Coulter, Aye.
    Motion passed 5:0:0

11. Adjournment – Chair Coulter
    The Board of Commissioners returned to regular session for the sole purpose of adjourning and promptly adjourned at 9:30 PM.

Town of Reading
Meeting Minutes

Board - Committee - Commission - Council:

RMLD Board of Commissioners

Date: 2021-08-12	Time: 6:30 PM
Building:	Location:
Address:	Session: Open Session
Purpose:	Version: Draft

Attendees: **Members - Present:**

Mr. Robert Coulter, Chair; Mr. Philip Pacino, Vice Chair; Mr. John Stempeck, Commissioner; Mr. David Talbot, Commissioner; Ms. Marlena Bita, Commissioner

Members - Not Present:

Others Present:

Citizens' Advisory Board: Mr. Jason Small, Chair (North Reading); Mr. Vivek Soni, Vice Chair, (Reading); Mr. Dennis Kelley (Wilmington)

RMLD Staff: Ms. Coleen O'Brien, General Manager; Mr. Greg Phipps, Director of Integrated Resources; Ms. Wendy Markiewicz, Director of Business Finance; Mr. Hamid Jaffari, Director of Engineering and Operations; Ms. Erica Morse, Executive Assistant

RMLD Board Liaisons: Ms. Karen Herrick, Select Board, Reading

Public: Mr. Mike Monahan Reading, Massachusetts.

Minutes Respectfully Submitted By: Philip Pacino, Secretary Pro Tem

---

Topics of Discussion:

JOINT MEETING OF THE RMLD BOARD OF COMMISSIONERS AND CITIZENS' ADVISORY BOARD

1. Call Meeting to Order

Chair Small called the Citizens' Advisory Board meeting to order at 6:30PM.

Chair Coulter called the Board of Commissioner' meeting to order at 6:31 PM and announced that the meeting would be held on Zoom and live on RCTV and YouTube

Opening Remarks

Chair Coulter read RMLD's code of conduct.
Vice Chair Pacino served as the Secretary for the meeting.

Introductions

Chair Coulter welcomed everyone to the meeting of the RMLD Board of Commissioners and asked all attendees to identify themselves.

2. Public Comment

Citizens' Advisory Board

Chair Small stated there is no comment from the Citizens' Advisory Board.

Liaisons to RMLD Board

No Liaisons to the RMLD Board spoke at this meeting.

Public Comment

Mr. Monahan identified himself and stated his address. Mr. Monahan asked that the rate increase for a green initiative be addressed, and if this was going to be opt-in or opt-out. Mr. Monahan stated that he strongly opposes an opt-out feature and encourages the Board to make the program opt-in. Chair Coulter responded that the matter is still under discussion and there is no decision at this point.

Mr. Monahan noted that the RMLD Board meeting minutes have not been published since February 2021, however tonight's agenda does include the minutes from March and April 2021. Mr. Monahan addressed the concern of open meeting law and encourage the Board to be timelier with publishing minutes.

Vice Chair Pacino made a statement under Public Comment, bringing attention to the UN Climate Change Report which was released earlier in the week.

3. Approval of Board Minutes

Vice Chair Pacino stated that he appreciates the public input on the meeting minutes, and as secretary, he is getting to them as fast as possible, despite length and software challenges.

Board Of Commissioners Motion: Vice Chair Pacino made a **motion**, seconded by Mr. Stempeck, that the Board of Commissioners approve the meeting minutes of the March 18, 2021, and April 22, 2021, meetings on the recommendation of the General Manager.
Motion Passed: 5:0:0
Roll Call: Vice Chair Pacino, Mr. Stempeck, Aye; Aye; Mr. Talbot, Aye: Ms. Bita, Aye; Chair Coulter, Aye.

4. Annual Report Confirmation

Mr. Phipps presented the revised CY20 Annual Report with changes demonstrated in two text pages and three graph pages.

Mr. Phipps reported on the changes made to Power Supply, Climate Bill Compliance (page 17). The graph now distinguishes the non-carbon resources that were retired (nuclear and hydro), and the certificates that were sold in CY20.In CY20, 22% of certificates were retired, which exceeds the 20% climate bill target. Sold certificates do not count toward Climate Bill compliance.

Mr. Phipps reported on Transaction by Source (page 18). The graph demonstrates the same transaction data but was modified to segregate certificate status between retired (solid color) and sold (hashed). Mr. Phipps noted that the green line on the graph represents RMLD's annualized Climate Bill targets and 3% annual increases in non-carbon certificate retirement.

The table titles on Power Supply Contract 2020 (page 19) were updated to identify the specific source, now stating "Hydro & Nuclear Sources", "Solar and Wind Sources", and "Mixed Sources"

Mr. Talbot stated that the report revision is a more accurate statement of what the RMLD's power supply is, net of REC sales. Mr. Talbot further stated that even with the modifications

he feels that the Annual Report is still misleading and cited the example of hydro being sold as a source.

Discussion ensued on the communication aspect of the revision process, and on the appropriateness of feedback and sharing of documents prior to meetings based on Open Meeting Law.
Board Of Commissioners Motion: Vice Chair Pacino made a **motion**, seconded by Mr. Stempeck, that the Board of Commissioners approve the Annual Report for CY20 as presented, on the recommendation of the General Manager.
Motion Passed: 3:0:2 (3 in favor, 0 opposed, 2 abstained)
Roll call: Vice Chair Pacino, Aye; Ms. Bita, Abstain, Mr. Stempeck, Aye; Mr. Talbot, Abstain; Chair Coulter, Aye.

5. Class Cost of Service Study Summary and Rates Presentation
   Materials: Board Packet; Attachment 3

Ms. O'Brien spoke on the timeline of the rates presentation, which will span over the next few meetings. Ms. O'Brien noted that although the agenda contains motions for the CAB and Board to vote, the CAB has based on the 20-year Agreement, 30 days to vote to recommend the rates.

Mr. Phipps reported on the Initial Rates Discussion and Recommendations as follows:

Class Cost of Service Study Results Summary (slide 3)
The class cost of service study is complete, the results of the study are highlighted on slide 3. The results are based on significant analysis by an outside consultant, PLM, and RMLD. Mr. Phipps noted that the key takeaways are as follows: The rates are in the normal context of prompting any adjustment of cost allocations and the results are incorporated into the RMLD's rate recommendations.

Rates Overview (slide 4)
Mr. Phipps identified the goals of RMLD's rate design. Overall, the rates are designed to cover the cost of providing service with the intention to allocate cost fairly across rate classes. RMLD rates must comply with DPU, statutory, and RMLD policies. Mr. Phipps noted that since 2008, rates have provided funds for efficiency and electrification incentives. The customer survey results prompted the RMLD to offer customers a better understanding and control of energy use.

Desired Outcomes (side 5)
The proposed rates which were designed around the following:
Electrification - The proposed A3 Rate is intended to encourage EV adoption by providing an additional rate-based incentive that targets residential. This additional incentive is made to encourage customers to consider purchasing an EV when buying a new vehicle and allow Time of use charging.

Generation - Mr. Phipps noted the importance of increasing generation within RMLD's territory, as the kWhs generated in RMLD territory are not subject to capacity and transmission costs. 40% of RMLD's costs are attributed to capacity and transmission. Hence, increasing generation within RMLD territory reduces those costs. Currently, solar is the primary generation source available within RMLD territory.

Customer Control – Rates are also intended to offer customers motivation to adjust their energy use in magnitude and timing. For example, the A3 rate works to prompt load shifts away from the afternoon peak hours and is structured to encourage EV charging overnight where there is open capacity and labor demand on the RMLD electric system.

Load Forecast
The load forecast acts as the foundation for the rate structure, analysis, and recommendation process. Residential is the largest class and is also the fastest growing. Hence, residential requires higher relative investment.

Summary rate classes – 2022 example (slide 7)
Mr. Phipps highlighted the three primary rate classes. The residential rate class is larger, grows faster, produces higher revenues, and covers more geography. These attributes tie into the presented rates, as the residential rate class requires a larger network investment moving forward. Mr. Phipps noted the importance of the average rate $/kWh as represented on slide 7.

Solar Incentive for Residential, Smaller C&I (slide 8)
The solar incentive will be mainly used by residential and smaller C&I. Mr. Phipps provided background on the DOER matching grant which the RMLD took advantage of, in addition to the current incentive through June 2021 when funds were depleted. The RMLD plans to continue the existing program that pays $1,200 per KW installed, by replacing the DOER match with RMLD EEC funds. The action plan and importance of battery storage in relation to solar system was discussed.

Efficiency Electrification Charge (EEC formerly ECC) (slide 9)
Energy Conservation Reserve Transfer
Mr. Phipps spoke on the scope of the various RMLD incentives both residential and commercial. The residential heat pump incentive has been extremely successful and is forecasted to account for 40% of the total incentive expenses in CY22. Due to the success and growth of the programs, the RMLD is seeing a funds deficit with the current EEC rate. The RMLD recommendation will allow the RMLD to continue the programs that support the goal of electrification and decarbonization.

The incentive charge increase is applied across all rate classes equally, and all classes can participate in the various incentives. The increase to the typical residential bill is $1.64 (1.4% increase). Mr. Phipps noted that most MLPs do not break out an EEC charge, and if they do, it is around 0.002 per kWh, and IOUs are $0.0017 per kWh or 6X the propose RMLD rate.

Mr. Talbot asked a question on proposed rebates and efficiency. Mr. Phipps responded that the RMLD has a broad set of incentives and cited examples of yard tools and panel upgrades. Regarding efficiency, Mr. Phipps cited the example of increasing equipment efficiency-level required to qualify for a rebate; further information regarding this topic can be found on RMLD's website.

Mr. Soni asked a question regarding incentives; Mr. Phipps responded that currently there is no limit on what the RMLD could put out for incentives, but each program has limits of payout magnitude frequency of eligibility, based on approved sales and budget.

Chair Coulter asked a question regarding the DOER solar matching fund; Mr. Phipps responded that if the DOER resumed the matching fund the RMLD would keep the program total at $1200 per KW and would decrease the Department's contribution to align with the DOER's fund. Chair Coulter asked a follow up question regarding customer sell back; Mr. Phipps responded that any sales that come back are bought only by RMLD.

Board of Commissioners Motion: Vice Chair Pacino made a **motion,** seconded by Mr. Stempeck, that the Board of Commissioners vote to approve a transfer of funds from the Unrestricted Operating Fund to the Energy Conservation Reserve by September 30, 2021.
Motion Passed: 5:0:0 (5 in favor; 0 opposed)
Roll Call: Vice Chair Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye; Ms. Bita, Aye. Chair Coulter was absent during the vote due to technical difficulties and later recorded his vote as "aye".

EEC
Mr. Phipps stated that the RMLD is proposing to change the name of the Energy Conservation Charge to the Efficiency Electrification Charge, which reflects the industry trend in electrification and to increase the rate from 0.001 to 0.003 per kWh across all rate classes. It was noted that the CAB can take 30 days to consider the EEC motion before taking a vote to replace MDPU 208 with MDPU 292.

The Citizens' Advisory Motion as required under the 20 year agreement was as follows: Mr. Soni made a **motion**, seconded by Mr. Kelley, that the Citizens' Advisory Board recommend that the Board of Commissioners vote to accept the General Manager's recommendation to replace the current MDPU 208 rate with MDPU 292, Efficiency Electrification Charge (EEC), effective on billing on or after January 1, 2022.
Motion Passed: 3:0:1 (3 in favor; 0 opposed; 1 absent)
Roll call: Mr. Soni, Aye; Mr. Kelley, Aye; Mr. Small, Aye. Mr. Hooper was absent from the meeting.

Board Of Commissioners Motion: Vice Chair Pacino made a **motion**, seconded by Mr. Stempeck, that the Board of Commissioners, on the recommendation of the Citizens' Advisory Board, vote to accept the General Manager's recommendation to replace the current MDPU 208 rate with MDPU 292, Efficiency Electrification Charge (EEC), effective on billings on or after January 1, 2022.
Motion Passed: 5:0:0. (5 passed; 0 opposed)
Roll call: Vice Chair Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye; Ms. Bita, Aye; Chair Coulter, Aye.

New Residential Time -of-Use rate – EV focused (slide 10)
Mr. Phipps reported on the RMLD's recommendation for a new residential A3 Time-of-Use Rate. The intention of the proposed A3 rate is to encourage more electric vehicle adoption in the RMLD territory by offering a more substantial fuel savings incentive and to increase awareness through education. Mr. Phipps referenced the chart on slide 10, which provides a snapshot of residential hourly load by month. The RMLD network is configured to handle the maximum peak load at any hour; the middle of the night has more open capacity than afternoon (load peaks). This rate structure offers three 8-hour periods designed to discourage EV charging during afternoon peak hours and encourage charging overnight to fill the network capacity. The A3 rate will offer a pricing structure as follows: highly discounted overnight, moderately discounted before afternoon peak, and premium during afternoon peak hours. Even if a customer does not have an EV, they can join the A3 rate.

Mr. Stempeck asked if there is a timer associated with the EV rate. Mr. Phipps responded that the timer is built into the vehicles not the RMLD system; most electric vehicles can be set up to always start or end charging at a certain time. Mr. Stempeck asked a question about wall-mount battery units. Mr. Phipps responded that it is possible for customers to use wall mount battery units.

Mr. Talbot asked a question regarding the increase that customers may experience with the proposed A3 rate during the afternoon hours; discussion followed on the concept and operational feasibility of second meters. Mr. Phipps reported that the A3 rate is predicted to work well and will be fine-tuned accordingly.

Vice Chair Pacino asked a question on public charging stations; Mr. Phipps responded that the A3 rate applies to residential only, but the RMLD will propose a different rate in the future for public chargers.

Ms. Bita asked a question on communicating the new A3 rate. Mr. Phipps responded that the RMLD will do a marketing communication when the A3 rate is released and will be as broad as possible with all communications to drive customer awareness and education.

Mr. Talbot asked if the RMLD was losing money with the overnight discount; Mr. Phipps responded no.

Mr. Kelly asked a question to Mr. Talbot; would the average person who has a long commute and does a lot of driving at night benefit from this rate and overnight charging? Mr. Talbot responded yes; this is a good rate.

Mr. Small asked a follow up question on daytime electric use on the proposed A3 rate. Mr. Talbot responded that customers who use most of their electricity during the day could stay on the current A2 rate if it fits their needs more appropriately.

Discussion ensued regarding a four-hour charging period with a level II EV charger and the benefit of the A3 rate.

Mr. Small asked a question on the length of the rate; Mr. Phipps responded that the intention is to have a minimum one-year commitment with the A3 rate.

The Citizens' Advisory Motion as required under the 20 year agreement was as follows: Mr. Soni made the **motion**, seconded by Mr. Kelly, to move that the Citizens' Advisory Board recommend that the Board of Commissioners vote to accept the General Manager's recommendation to establish a new Residential Time-of-Use Schedule A3 Rate, effective on billings on or after January 1, 2022, per the MDPU 293 rate sheet.
Motion Passed: 3:0:0 (3 in favor; 0 opposed; 1 absent)
Roll call: Mr. Soni, Aye; Mr. Kelley, Aye; Mr. Small, Aye. Mr. Hooper was absent from the meeting.

Board Of Commissioners Motion: Vice Chair Pacino made a **motion**, seconded by Mr. Talbot, to move that the Board of Commissioners, on the recommendation of the Citizens' Advisory Board, vote to accept the General Manager's recommendation to establish a new Time-of-Use Schedule A3 Rate, effective on billings on or after January 1st, 2022, per the MDPU 293 rate sheet.
Motion Passed: 5:0:0 (5 in favor; 0 opposed)
Roll call: Vice Chair Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye; Ms. Bita, Aye; Chair Coulter, Aye.

Renewable Choice 2022 (slide 11)
The RMLD made a recommendation, based on prior meeting feedback, to implement one program called "Renewable Choice" with different level options.

The program would become effective in 2022. The RMLD will move from retiring 23% of certificates to 26% which all rate payers will be participating in next year. Within the proposed Renewable Choice program, the Department is recommending a 50% option, a 75% option, and a 100% option. Mr. Phipps noted that the certificates mint over a 6-month period and there is a lot of variability in certificate cost.

The program will be structured as follows: The RMLD will create fund for the charges collected and those funds will be used to retire the most valuable certificates from the top down on a quarterly basis.

Mr. Phipps stated that the department is recommending an opt-in program with a minimum commitment of one year. Mr. Phipps discussed the 2022 example scenario for the average residential customer as outlined in the chart on slide 11.

Vice Chair Pacino asked a question on the 26%, to which Mr. Phipps responded that the 26% comes from the Policy 30 revision and Climate Bill Requirements. To reach 50% non-carbon by 2050, while simultaneously avoiding rate shock; 3% annual inclusive of certificate retirements. Thus, in 2021 the RMLD will be retiring 23% of certificates and in 2022 that will increase to 26%.

Vice Chair Pacino stated that he has concerns with the opt-in program, as not a lot of people tend to opt-in. Ms. Bita stated that the Wellesley Board and Wellesley General Manager

stated that they're program was rolled out on July 1 and has a 94% participation rate. It is a successful opt-out program so far.

Mr. Phipps compared the RMLD recommended program with the Wellesley "We Care" program which primarily funds projects; in contrast, the RMLD program will focus solely on certificate retirement.

Mr. Soni made a comment on the display of information relating to the increased cost per household. Mr. Phipps responded that the increase to the customer bill is tied to the customer's kWh and referenced the 2022 example scenario on slide 11.

Ms. O'Brien clarified that the additional annual 3% certificate retirement charge goal adjustment is a fixed charge that already goes above and beyond the climate bill. This is essentially not an opt in or opt out, it is a fixed charge above the Climate Bill requirements. No rate pater can opt out. The proposed Renewable Choice program is in addition to the approved annual 3% certificate requirement increase beyond the Climate Bill.

Mr. Stempeck stated that the opt-out is unfair to customers and what the RMLD is proposing is appropriate and fair.

Mr. Talbot stated that he believes the proposed rate is fair and the program is excellent. Mr. Talbot suggested that in the future we can investigate a sponsor your neighbor, or buddy system.

Ms. Bita asked about the participation levels of other towns; Mr. Phipps responded that he did not yet have that information.

Vice Chair Pacino noted that he would like to see the lowest level (50%) be an opt-out or hybrid method and asked if the program could be reviewed six months in.

Chair Coulter stated that he is in favor of an opt-in program and an 8% increase (slide 11) would be too significant for rate payers.

Discussion ensued regarding the possibility of a hybrid option and the impact of increased rates on rate payers, especially after the impacts of COVID-19. Ms. O'Brien indicated that the additional 3% fixed annual increase in certificate retirements and the Renewable Choice is a form of hybrid. Ms. O'Brien suggested that the RMLD team investigate other hybrid options to be discussed at the next meeting.

The Citizens' Advisory Board and Board of Commissioners agreed to address the Renewable Choice Program at the September meeting, where Mr. Phipps will provide additional information and updates.

6. Scheduling

The next joint meeting of the RMLD Board and the Citizens' Advisory Board will be held on September 23, 2021, at 6:30PM. Ms. Bita will cover the CAB meeting in October.

Mr. Small noted that Ms. Rybak will schedule the October meeting with the CAB separately.

7. Adjournment

Citizens' Advisory Motion: Mr. Kelley made a **motion**, seconded by Mr. Soni, that the Citizens' Advisory Board adjourn. The meeting adjourned at 7:29 PM.
Motion Passed: 3:0:0 (3 in favor; 0 opposed)
Roll Call: Mr. Soni, Aye; Mr. Kelley, Aye; Mr. Small, Aye. Mr. Hooper was absent from the meeting.

Board Of Commissioners Motion: Vice Chair Pacino made a **motion,** seconded by Mr. Stempeck, that the Board of Commissioners adjourn the meeting. The meeting adjourned at 7:29 PM

Motion Passed: 5:0:0 (5 in favor; 0 opposed)

Roll Call: Vice Chair Pacino, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye, Ms. Bita, Aye; Chair Coulter, Aye.

2022 BUDGET PRESENTATION

ATTACHMENT 2

READING MUNICIPAL LIGHT DEPARTMENT

CY2022 BUDGET

October 1, 2021

Revision 1: October 14, 2021

TABLE OF CONTENTS

2022 OPERATING BUDGET

2022 POWER SUPPLY

READING MUNICIPAL LIGHT DEPARTMENT

Mission Statement

RMLD is committed to providing excellent customer service, including competitively priced electricity through due diligence of power supply, risk management, system reliability, safety, and overall business efficiency.

Vision Statement

RMLD has transitioned from a reactive to a proactive approach in all aspects of the utility business to ensure efficiency, safety, and competitive rates. The Be Efficient – Get Greener – Go Paperless, Peak Performance, and Shred the Peak, campaigns, have been integrated into a core business and include sustained procedural changes in the areas of long-term planning, technology road mapping, talent managing, customer communication, system maintenance and power supply portfolio balancing.

SYSTEM PROFILE
(based on CY20)

SERVICE TERRITORY	51 square miles serving Reading, North Reading, Wilmington, and part of Lynnfield
TOTAL OPERATING REVENUES	$85,572,332
POWER PURCHASED	$57,292,309
NUMBER OF CUSTOMERS/ ACTIVE METERS	30,321
ANNUAL PEAK DEMAND	163,970 kW on July 28, 2020, hour ending 2:00 pm
ANNUAL SALES	651,179,904
PLANT VALUE	Gross: $164,059,000 Net: $82,772,000
SUPPLY VOLTAGE	115 Kv
SUPPLY CAPACITY	Station 4: (3) 60 MVA Transformers (2) 35 MVA Transformers – feeds Station 5 250 MVA Connected, 190 MVA Firm Station 3: (2) 60 MVA Transformers 120 MVA Connected, 60 MVA Firm
DISTRIBUTION SYSTEM VOLTAGE	13,800 volt wye 4,160 volt wye
OVERHEAD PRIMARY LINES	340.5 miles
UNDERGROUND PRIMARY LINES	155.85 miles
DISTRIBUTION TRANSFORMERS	4,010 transformers – 313.675 MVA Capacity
STATION TRANSFORMER CAPACITY	370 MVA Capacity
UTILITY POLES	18,105 poles *Ownership*: 50% Verizon, 50% RMLD *Custodial By Town:* North Reading – RMLD Lynnfield – Verizon Reading • east of Main Street – Verizon • west of Main Street, east of West Street, south of Prescott Street – Verizon • west of West Street – RMLD • west of Main Street, north of Prescott Street – RMLD Wilmington • all poles with 35 kV sub-transmission circuits, and Concord Street – RMLD • all other locations in Wilmington – Verizon

APPLICATION SOFTWARE	
	ChargePoint Cloud Services CMARS Constant Contact EFI (Energy Federation) eRequester ESRI eTrack Facility Dude Filezilla Forecast Pro Forecasting Futura Great Plains/Cogsdale Home Energy Audits Yukon ISO-NE Key Accounts CenturionCARES Team Gantt Itron LexisNexis ManagerPlus MIlsoft – WindMil Map/LightTable NEPOOL GIS Office 365 E3 PoleForeman Replicon SagLine SharePoint SpryPoint Survalent (OMS) Tangent AMP VMware Windows 10 Windows Server 2016, 2012 Adobe Creative Cloud CivicPlus
CONTACT INFORMATION	
Address:	230 Ash Street Reading, MA 01867
Telephone:	781-942-6598
Fax:	781-942-2409
Website:	www.rmld.com
Office Hours	8:00 am - 4:30 pm Monday through Friday
KEY PERSONNEL	
General Manager	Coleen O'Brien email: cobrien@rmld.com
Director of Business and Finance	Wendy Markiewicz email: wmarkiewicz@rmld.com
Director of Engineering & Operations	Hamid Jaffari email: hjaffari@rmld.com
Director of Human Resources	Janet Walsh email: jwalsh@rmld.com
Director of Information Technology	Brian Hatch email: bhatch@rmld.com
Director of Integrated Resources	Gregory Phipps email: gphipps@rmld.com
GOVERNING BODY	
	Robert Coulter David Hennessy Philip B. Pacino John Stempeck David Talbot
Number of Employees	73
Year Founded	1894

2022 CAPITAL BUDGET

PLANNED PROGRAMS

READING MUNICIPAL LIGHT DEPARTMENT

Capital Improvements CY22 thru CY27

$ Shown in thousands

LINE #	PAGE #	TOWN	PROJ #	FERC #	PROJECT NAME	CY21 BUDGET	CY21 EST.	CY22 PLAN EST.	CY23	CY24	CY25	CY26	CY27	BRIEF DESCRIPTION
1	**n/a**	A	129	390	Master Facilities Site Plan (ON-HOLD)									Town economic development plan impact. Master Facilities Site Plan - on hold. Evaluate maintenance only. 2021 BOC Goal: Convene joint public meeting with the Select Board and Town Planning staff to jointly discuss and share ideas on long-term Ash Street campus site planning.
2	**17**	R/NR/W	104	361/373	RMLD Lighting (LED) Upgrade Program	125	75	125						CY21-22: Convert existing interior/exterior lighting to LED fixtures - Ash Street Campus and Stations 3 and 4 per 2021 Physical Security study Assessment and recommendations made by Burns & McDonnell.
3	**19**	R/NR/W	095	390	Building/Grounds Upgrades	270	132	259	250	50	125	50	50	CY21: AC Cooling Project complete at Station 4. *CY21/22:* Transformer Rack/Pole Yard Proactive Design and Upgrade at Station 3. CY21/22: Station 3 back-up generator delivery and install.
4	**21**	R	098	391	Office Upgrades -230 Ash Street	105	15	110	70	30	30	30	30	CY22: Office upgrade of Grid Assets & Communication, Collection Manager, Billing Manager, and Materials Management office. CY21/22: Audio Visual upgrades for all conference rooms.
5	**23**	R	136		Credit Union Renovation	0	0	85						Renovation of the interior building element (lighting, ceiling tiles, paint, carpet, door repairs).
6	**25**	A	119	398	Security Upgrades - All Sites	250	87	106	106	30	30	30	30	CY21: Physical Security Assessment complete. CY21/22/23: Implement physical security assessment recommendations and upgrades.
7	**27**	A	118	392	Rolling Stock Replacement	620	289	744	350	350	350	350	350	Scheduled vehicle replacement, following Fuel Efficiency OP 19-07 FM, is based on Fleet Assessment and the Electrification Program. Carry-over (from 2021): material handler ($284K- CY22 delivery); dump truck with sander ($85K) in procurement process (CY22 delivery). CY22: SUV, van, trouble truck.
8	**31**	A	099	392	Electric Vehicle Supply Equipment (EVSE)	100	40	744	360	280	240	240	240	Installation of L2 (5 units) and L3 DC fast chargers (5 units) in all four communities to encourage the development of EV charging infrastructure. MassEVIP grant(s): $78k awarded in 2021 for five L2 EV chargers. CY22: Construction of five L2 chargers in Reading and Wilmington. CY22: An additional $99k grant is anticipated for five DCFC (L3).
9	**35**	A	127	382	Hardware Upgrades	89	97	105	115	125	0	125	130	Miscellaneous workstations: replacements/new employees; CY21: Improved network security at RMLD substations.
10	**37**	A	128	383	Software and Licensing	438		190	100	100	100	110	110	CY22: Adhoc software needs; Customer Relationship Management Engagement Software (carry-over); IT Asset Manager; HRIS; Information Security
11	**39**	A	138	383	Customer Portal (Mobile APP)			100	100					CY22-23: Develop two-way facing customer portal mobile customer application
12	**41**	A	139	382	IT Infrastructure Enhancements			370				500	300	CY22: Additional servers to accommodate growth (MDM, security, etc.); network redesign
13	**43**	A	140	382/383	IT Security			305	100	100	100	285	250	CY22: Multi-Factor Authentication; add firewalls; network visibility software; security information event manager
14	**45**	A	122	382	New Production Environment Disaster Recovery		420							CY21: Design and develop a data backup system to include essential components to align with the Disaster Recovery Plan. This project was an add-on to the 2021 Budget. The CAB and BOC approved spending for this project at the June 3, 2021, meetings.
15	**51**	R	133	362	Station 4 CCVT Replacement			140	62					CY22-23: Replacement of all the 115Kv CCTV's at Station 4 needed to comply with the planned relay upgrade work by National Grid and Eversource.
16	**53**	A	110	370	Primary Metering Inspection and Upgrade Program	516	250	100	80					CY21-23: A condition assessment program has been established for all RMLD primary metering equipment. This project will consist of the purchase, upgrade, and construction associated with replacing all primary equipment that is in need of repair or replacement.
17	**55**	R	130	362	Relay Protection Upgrades - Station 4	100	70	150	80					CY21-23: Northeast Power Coordinating Council (NPCC) Directory 1 requires installing high speed, relay protection upgrades between National Grid's Tewksbury Station #17 and Reading Station #494. Design change made to replace both system 1 and system 2 relays at RMLD's BES Substation 4. Project completion date pushed out to CY2023 due to delays by NGrid/Eversource.
18	**57**	W/R/ NR	102	367	Pad-mount Switchgear Upgrade at Industrial Parks	799	799	764	212					FY18-CY23: Starting in FY18, replace all 15 kV pad-mount switchgear at industrial parks. Fourteen units have been replaced as of August 2021; seven additional switches will be replaced in the fall of 2021. CY22: RMLD will purchase and install the next six units (four per the existing bid plus two additional motor operated units).
19	**59**	W	105		**NEW WILMINGTON SUBSTATION**									
20				360	Purchase Land in Wilmington	599	71	650						CY22: Land purchase.
				361/362/ 366/367	Wilmington Substation Construction & Commissioning	195	0	195	4,696	4,975				CY22-24: Conceptual design, permitting, procurement of materials, construction, commissioning, and all required materials and labor to bring the proposed Wilmington substation online.
21	**n/a**	W	124	364/365	MA-125 Pole Line Installation for New Wilmington Substation				374	374				This project covers an ~3,000 foot proposed pole line that will span MA-125 from Ballardvale Street to Andover Street, which will be used for riser pole getaways from the proposed Wilmington substation, and will interconnect the new substation to RMLD's existing overhead distribution system.
22	**n/a**	W	TBD	365	Distribution Improvements Associated with New Wilmington Substation					158	158			The proposed Wilmington substation's main objective will be to transfer the existing Station 5 circuits to the new Wilmington Substation. The new station will be designed for growth of load on Station 5 circuits, and will provide capacity relief to Stations 3 and 4. This line item will account for distribution modifications to provide load relief to Stations 3 and 4.
23	**63**	A	103		**GRID MODERNIZATION & OPTIMIZATION**									**Fifteen-year plan to implement Technology Road Map for grid efficiency, reduction of losses, etc.**
				365	*Scada- Mate Switches*	297	297	300	315	325	334	344	344	Installation of 4 switches/year plus IntelliTeam licenses
				365	*IntelliRupter®*	138	138	139	146	150	155	159	159	Installation of 2 switches/year plus IntelliTeam licenses
				365	*ABB Reclosers*	225	225	208		115	110			Installation of new/replacement of older reclosers on the system.
				383	*Cap Bank Automation*	36	36	49	34	36	36	36	36	Adding feeder cap banks and making them SCADA controlled
				383	*Software Integration*	21	21	26	21	21	21	21	21	Integration of AMI/Scada-Mate switches/OMS
				397	*Communication to Field Devices*			156	100	100	100	100	100	Implement study recommendations done in CY21 by Burns & McDonnell.
				383	*Meter Data Management (MDM)*			281						Software for long-term data storage and management of data delivered by smart metering systems to accommodate meter data analytics. Integrates multiple data sources (AMI/AMR, billing systems, and GIS as needed). CY21: Katama Technologies to create RFP for both MDM and AMI/AMR metering project. This project will be a carry-over; it was previously included in the IT Software budget for 2021.
					OUTAGE MANAGEMENT SYSTEM (OMS)									Outage Management System and supplemental modules to automate outage response and customer/public communication during outage events.
				383	OMS Module: Integrated Voice Response (IVR)									Installation of Integrated Voice Response (IVR) in progress - scheduled for completion in CY21.
				383	OMS Module: Crew Management	136	0							From the OMS, field crews can receive job notifications, view work orders, display the network model and outage map in real-time, report their progress, and close job tickets. On hold for further evaluation.

READING MUNICIPAL LIGHT DEPARTMENT

Capital Improvements CY22 thru CY27

$ Shown in thousands

LINE #	PAGE #	TOWN	PROJ #	FERC #	PROJECT NAME	CY21 BUDGET	CY21 EST.	CY22 PLAN EST.	CY23	CY24	CY25	CY26	CY27	BRIEF DESCRIPTION
				383	OMS Module: Power Factor Correction/VVR		154							Installation of new SCADA module that computes and presents phase voltages, currents, and losses on the entire distribution network. License for Volt/VAR optimization which coordinates the control of reactive power and voltage. Includes installation and training for both applications. Software module installed and integrated with OMS in CY21. Testing for implementation will continue in CY22.
24	**71**	A	112	361/370	AMI Mesh Network Expansion & Meter Replacement	2,000	0	1,211	3,273	3,161				CY21: RMLD hired an MDM - AMI/AMR consultant (Katama Technologies) to prepare RFPs for MDM/AMI following the evaluation study done in CY20 by Limmerhirt Consulting. CY22-24: Upgrade the existing AMI/AMR system to the new mesh metering AMI technology.
25	**73**	A	117	370	Meters and Primary Meters (for stock)	40	40	80	40	40	20	20	20	Purchase primary meters and meters (with disconnect option as available) for new construction, upgrades and failures.
26	**75**	R	214	364/365/ 373	Force Account (MassDOT): Main & Hopkins, R		51	98						Widen Main Street and install traffic lights at the intersections of Hopkins and Main, and Summer and Main.
27	**n/a**	W	TBD	364/365/ 373	Force Account (MassDOT): Lowell at Woburn Street, W				237					Widen Lowell Street and Woburn Street; upgrade traffic signals. Up to 21 poles to be relocated, RMLD to set 17 poles, VAZ to set 6.
28					**GETAWAY UPGRADES**									
29	**77**	NR	125	364/367	3W18 Getaway Improvements	211	108	108						Construction/improvements of OH/UG to result in significant added capacity to 3W18 and moderate increase in capacity to remaining Station 3 circuits.
30	**n/a**	R	TBD	364/367	4W28 Getaway Replacement					316				Station 4: Replace 3,400 feet of underground getaway to 750 mcm cu for increased feeder capacity and improved reliability.
31	**n/a**	W	TBD	364/367	5W4/5W5 Getaway Replacement								119	Station 5: Upgrade feeders from substation to risers to increase feeders' ampacity. This project will be revisited after the new Wilmington Substation is built.
32	**n/a**	R	TBD	364/367	4W7 Getaway Replacement						177			Station 4: Replace 1,900 feet of underground getaway to 750 mcm cu for increased capacity and improved reliability.
33	**n/a**	R	TBD	364/367	4W10 Getaway Replacement						177			Station 4: Replace 1,900 feet of underground getaway to 750 mcm cu for increased capacity and improved reliability.
34	**n/a**	R	TBD	364/367	4W24 Getaway Replacement							350		Station 4: Replace 3,725 feet of underground getaway to 750 mcm cu for increased capacity and improved reliability.
35		R	TBD	364/367	4W30 Getaway Replacement								225	Station 4: Replace 2,300 feet of underground getaway to 750 mcm for increased capacity and improved reliability.
36	**79**	A	116	365/366/ 367/368	Transformers and Capacitors Purchase (Stock and Projects)	418	418	751	444	457	471	485	499	Purchase units for stock, new construction and reliability projects including Aged/Overloaded Transformer Replacement, Secondary and Main Replacement , 13.8kV Upgrades (Step-down Areas), and Underground Facilities Upgrades (listed below). Refer to Project Cost Sheet and Summary for details including labor and additional materials for these reliability programs.
					LONG-TERM UPGRADE RELIABILITY PROJECTS (NO TRANSFORMERS)									
37	**81**	A	458	365	Secondary and Main Replacement Program - All Towns	257	753	309	272	280	289	298	298	Repair as necessary secondary/main services and connectors prioritized by age as determined by system-wide inspection. CY22 targeted areas: Middlesex Avenue, Reading.
38	**83**	A	107	365	13.8kV Upgrade (Step-down Area, etc.) - All Towns	506	506	623	140	131	333	302	307	Convert step-down areas to 13.8kV. Remove antiquated equipment and step-downs to lower losses and improve system efficiency. CY22 targeted area: Middlesex Avenue , Reading. This is the only area targeted for upgrade due to its large size and the cost associated with the upgrade.
39	**85**	A	106	366/367/ 368	UG Facilities Upgrades (URDs, Manholes, etc.) - All Towns	525	525	622	400	412	424	437	437	Replace primary and neutral cables and pad-mount transformers as needed in various aging URDs. Improved reliability. For the next five years, 2-3 subdivisions are planned to be upgraded per year. CY22: King James Grant and Wildwood Estates, Lynnfield; Blanchard Road, Wilmington; Parkwood Estates and Takoma Circle, North Reading.
40	**87**	R	134	366/367	Gazebo Circle, Reading, Underground Feed Relocation			284						Gazebo Circle is currently fed through the woods off Summer Avenue. Current work with Town extended the three-phase line on Hopkins Street to the entrance of Gazebo Circle. Obtain easement from Gazebo Circle, excavate, and install new UG feed from Hopkins Street to Gazebo Circle and removing existing feed through the woods
41	**89**	A	668	366/367/ 368	Aged/Overloaded Transformer Replacement Program	443	349	641	660	680	700	721	743	Labor associated with aged transformer replacements.
42	**91**	R/NR	175	364	Pole Replacement Program, R and NR	336	336	298	307	316	326	336	346	Replace poles identified through the Pole Inspection Program (700 poles/year inspected). This will include transfers and replacement of secondary services as necessary. To replace 50 poles per year.
43	**93**	R/NR/W	111	362	Substation Equipment Upgrade	10	10	90	30	30	30	30	30	Upgrade various equipment at substations as needed per RMLD's Preventative Maintenance Programs. CY22: Purchase of spare 35Kv breaker, lighting arrester, and insulator for Station 4 and Station 5.
44	**n/a**	n/a	n/a	n/a	Communication Equipment (Fiber Optic)	49	49							In 2022 this item is being moved to Grid Modernization & Optimization: Communication to Field Devices
45	**95**	A	115	394/395	Power/Lab and Tool Equipment	156	96	110	30	30	30	30	30	CY22: Power tools and equipment as necessary including Shop Meter Tester, Flir Thermal Camera, and miscellaneous items as needed.
46	**97**	A	various	369	Service Connections (Residential and Commercial) - All Towns	151	96	153	158	162	167	172	178	Install new and upgraded residential and commercial services as requested. Includes hardware, brackets, wires and connectors.
47	**99**	A	various	various	Routine Construction - All Towns	1,488	1,949	1,445	1,488	1,533	1,579	1,626	1,675	Miscellaneous capital expenses including: overhead and underground system upgrades, pole hits, station upgrades, porcelain cutout replacements, street light connections (new equipment), pole setting/transfers, new construction (underground divisions)
48	**n/a**	W	TBD	364/365	Industrial Way, Wilmington - Pole Line Upgrade					226	226			Replace approximately twenty-five (25) 55' poles and upgrade to H1 class poles to accommodate pole loading. Poles are under classed and are over 40 years old. There are currently 4 circuits on the Industrial Way pole line, 4W4, 4W12, 4W24 and 4W28.
49	**n/a**	R	TBD	364/365	4W24 Partial Circuit Reconductoring					356	30			Station 4: Upgrade main feeder of overhead circuit 4W24 to 556 to address voltage and conductor capacity issues.
50	**n/a**	W	TBD	364/365	Butters Row, Wilmington - Pole Line Upgrade							378		Verizon to replace/upgrade 25 aged/under-class poles on Butters Row between Main Street and Chestnut Street. Replace cable, upgrade transformers, and transfer secondary cable, services and street lights. Benefit to long-term reliability.
					TOTAL	**11,648**	**8,504**	**13,226**	**15,151**	**15,450**	**6,869**	**7,565**	**7,057**	

READING MUNICIPAL LIGHT DEPARTMENT

Capital Improvements CY22 thru CY27

$ Shown in thousands

	CY21 BUDGET	CY21 EST.	CY22 PLAN EST.	CY23	CY24	CY25	CY26	CY27
Total Additions:	**11,648**	**8,504**	**13,226**	**15,151**	**15,450**	**6,869**	**7,565**	**7,057**
TABLE 1: PLANT VALUES & DEPRECIATION EXPENSE:								
Plant in Service (Beginning)	165,144	164,058	171,562	183,788	197,938	212,389	218,257	224,823
Additions	**11,648**	**8,504**	**13,226**	**15,151**	**15,450**	**6,869**	**7,565**	**7,057**
Adjustments (Property Retirement)	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000
Plant in Service (Ending)	175,792	171,562	183,788	197,938	212,389	218,257	224,823	230,879
Less Land and Land Rights	-2,007	-1,266	-1,266	-1,266	-1,266	-1,266	-1,266	-1,266
Depreciable Plant in Service	173,785	170,296	182,522	196,673	211,123	216,992	223,557	229,614
Accumulated Reserve For Depreciation	-87,171	-86,170	-91,279	-96,754	-102,654	-108,988	-115,498	-122,205
Net Plant in Service	88,620	85,392	92,509	101,184	109,734	109,269	109,325	108,675
TABLE 2: DEPRECIATION FUND BALANCES:								
Beginning Balance	9,397	10,329	11,784	9,043	6,205	3,255	4,820	4,364
Depreciation Rate (3%)	3%	3%	3%	3%	3%	3%	3%	3%
Depreciation Expense	**4,916**	**4,884**	**5,109**	**5,476**	**5,900**	**6,334**	**6,510**	**6,707**
Bond Proceeds and Other Fund Sources	100	76	376	337	100	100	100	100
Operating Fund Transfer	5,000	5,000	5,000	6,500	6,500	2,000	500	300
	19,413	20,289	22,269	21,356	18,705	11,689	11,930	11,471
Capital Improvements	-11,648	-8,504	-13,226	-15,151	-15,450	-6,869	-7,565	-7,057
Ending Balance	**7,765**	**11,784**	**9,043**	**6,205**	**3,255**	**4,820**	**4,364**	**4,414**
TABLE 3: BOND PROCEEDS & OTHER FUND SOURCES:								
Force Account (MassDOT): Main & Hopkins, R	0	51	98	0	0	0	0	0
Force Account (MassDOT): Lowell at Woburn Street, W	0	0		237	0	0	0	0
Electric Vehicle Supply Equipment (EVSE)			177					
Interest Income	100	25	100	100	100	100	100	100
	100	76	376	337	100	100	100	100

CAPITAL PROJECTS

Facilities

CAPITAL PROJECT SUMMARY

Project Name: RMLD Lighting (LED) Upgrade Program **Project #:** 104

Project Schedule: 2021-2022 **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:
Energy conservation.

Brief Description/Scope:
RMLD continues to replace old and obsolete lighting fixtures and bulbs with LED fixtures. To complete this effort, RMLD will replace the site lighting on the Ash Street campus and Substation 3 and 4.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Substation lighting was reviewed as part of the physical security assessment completed in 2021, and the RMLD is implementing the recommendations of this assessment. The office building fluorescent light fixtures that were once removed from this project have been included again for LED conversion.

Status Update From Prior Fiscal Year:
In 2021 an electrical engineering firm will be hired to prepare bid specs for the construction and installation of the lighting fixtures.

CAPITAL PROJECT COST SHEET

PROJECT NAME: RMLD Lighting (LED) Upgrade Program **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Station (3 and 4) Upgrade (interior and exterior lighting)				$25,000
			$0	$0	$0	Ash Street Campus Upgrade (interior and exterior lighting)				$100,000
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$125,000**

PROJECT TOTAL: $125,000

CAPITAL PROJECT SUMMARY

Project Name: Building/Grounds Upgrades **Project #:** 095

Project Schedule: Annual **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:
Repairs and upgrades to RMLD buildings and grounds.

Brief Description/Scope:
The backup generator at Station 3 needs to be replaced due to age. The existing generator will be replaced with a similar generator. This is a proactive approach to eliminate the possibility of a significant failure of the equipment. The design and bid process has been completed, and the new generator has been ordered. Due to COVID and supply chain issues, the generator will be delivered and installed in 2022.

The Transformer Rack and Pole Yard Redesign Project (at Station 3) is a proactive approach to include a complete redesign of the pole yard. This includes:

- relocating the current spill containment,
- installing rack shelving to store the transformers, and
- installing a 32-foot-wide asphalt driveway to improve vehicle access, operations, deliveries, and snow removal.

A construction specification will be developed by the end of 2021 and construction will be completed in the Spring of 2022.

Barriers:
None anticipated at this time.

Change in Scope of Work from Prior Fiscal Year:
The original transformer rack project included a multitiered shelving system to be located at Station 3 to store transformers currently being stored in the Barbas Warehouse. This would reduce storage costs and space by 20%. This design was determined not feasible due to operational logistics and testing of equipment. Therefore, the scope of the project was changed to include a redesign of the entire pole yard at Station 3.

Status Update:
The Station 4 Cooling Project was completed in 2021.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Building/Grounds Upgrades **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Station 3 New Backup Generator (carry-over)				$59,000
			$0	$0	$0	Transformer Racks and Pole Yard Redesign (carry-over)				$200,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$259,000**

PROJECT TOTAL: $259,000

CAPITAL PROJECT SUMMARY

Project Name: Office Upgrades - 230 Ash Street **Project #:** 098

Project Schedule: Annual **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:
General office upgrades at 230 Ash Street.

Brief Description/Scope:
In 2021 an architect/designer will be hired to develop a bid specification and construction drawings to build offices and redirect the ceiling HVAC system and other building systems. Also, a feasibility review will be performed for the possible installation of a roof-top thermal energy heat pump for the leased area in the garage building.

In 2021-2022, RMLD will evaluate integrated AV technology for installation in the Winfred Spurr AV Room, General Manager's Conference Room, and the E&O Conference Room to facilitate meetings, webinars, training, etc.

In 2022, office upgrades will be scheduled for construction for the following staff:

- General Foreman Grid Asset and Communications
- Assistant Materials Manager
- Collection Manager
- Billing Manager

Barriers:
Scheduling of projects has been negatively impacted due to COVID 19 and the resulting equipment supply chain delays and increased material costs.

Change in Scope of Work from Prior Fiscal Year:
Not applicable.

Status Update:
RMLD is expecting to complete the installation of the auto/visual equipment in the Winfred Spurr AV Room by the end of 2021 or early 2022.

The construction of a Facilities/Grid Asset Conference Room will be moved to 2023.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Office Upgrades - 230 Ash Street **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	General Foreman Grid Asset and Communications Office				$15,000
			$0	$0	$0	Assistant Materials Manager Office				$15,000
			$0	$0	$0	Modernization and installation of AV equipment in the Winfred Spurr AV Room, General Manager's Conference Room, and E&O Conference Room.				$50,000
						Collection Manager Office				$15,000
			$0	$0	$0	Billing Manager Office				$15,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$110,000**

PROJECT TOTAL: $110,000

CAPITAL PROJECT SUMMARY

Project Name: Credit Union Renovation **Project #:** 136

Project Schedule: 2022 **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:

To upgrade the office space in the leased area of 218 Ash Street, currently occupied by the private entity “Reading Mass Town Employees Federal Credit Union.”

Brief Description/Scope:

In 2021 an architect/designer will be hired under Project 098 (Office Upgrades) to develop a basic layout and renovation plan for this area and the 230 Ash Street offices. This leased space consists of three rooms that have seen minimal upgrades over the years.

In 2022, the leased space will be renovated to include lighting, ceiling tiles, paint, carpet, door repairs, and other improvements. The Credit Union will need to be relocated temporarily. The existing floor tile contains asbestos and will have to be abated. The renovation is expected to start in April 2022.

The designer will specifically review the feasibility and cost-benefit of eliminating the existing window air conditioning units and replacing them with a roof top thermal energy heat pump system.

Barriers:
Scheduling of projects has been negatively impacted due to COVID 19 and the resulting equipment supply chain delays and increased material costs.

Change in Scope of Work from Prior Fiscal Year:
Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Credit Union Renovation **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Renovation				$85,000
			$0	$0	$0					
			$0	$0	$0					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$85,000**

PROJECT TOTAL: $85,000

CAPITAL PROJECT SUMMARY

Project Name: Security System Upgrades – All Sites **Project #:** 119

Project Schedule: Annual **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:

This project represents an annual allotment for security upgrades as needed at all RMLD facilities.

A physical security consultant performed a physical security risk assessment of all RMLD properties in 2021 and provided recommendations to improve the existing security systems and equipment. A work group has been formed to review, approve, and implement the security recommendations.

Brief Description/Scope:
The security work group will meet monthly to develop a security program and discuss the specifics of each of the security consultant's recommendations to secure the RMLD properties and substations. Security equipment and systems will be procured and installed per the assessment and recommendation of the work group.

Barriers:
None anticipated at this time.

Change in Scope of Work from Prior Fiscal Year:

Not applicable.

Status Update:
Physical security risk assessment was completed in 2021.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Security Upgrades - All Sites **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Comprehensive Security System Upgrade. Implement recommendations such as site access, intrusion detection, foliage clearing, increased signage, etc.	1	$106,292.00	1	$106,292
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$106,292**

PROJECT TOTAL: $106,292

CAPITAL PROJECT SUMMARY

Project Name: Rolling Stock Replacement **Project #:** 118

Project Schedule: Annual **Project Manager:** Paul McGonagle, Facilities Manager

Reason for Expenditure:
Scheduled vehicle replacement, following Fuel Efficiency OP 19-07 FM, and based on the Electrification Program and the "8 to 10" year cycle to reduce maintenance costs and improve reliability. Vehicles removed from the fleet will be traded-in to the dealer providing the new vehicle.

Brief Description/Scope:
Specifications, bids, and purchase orders will be completed for 2022 delivery of the following:

- Small SUV
- Van
- Trouble Truck

Barriers:
None anticipated at this time.

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update:

- Digger Derrick (carry-over from 2020) was delivered in 2021.
- Material Handler was bid and ordered in 2021; delivery expected in 2022.
- Dump Truck will be bid and ordered in 2021; delivery expected in 2022.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Rolling Stock Replacement **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Small SUV	each	$50,000.00	1	$50,000
			$0	$0	$0	Van	each	$75,000.00	1	$75,000
			$0	$0	$0	Trouble Truck	each	$250,000.00	1	$250,000
			$0	$0	$0	Material Handler (carry-over)	each	$284,049.00	1	$284,049
			$0	$0	$0	Small Dump Truck w/Sander Attachment (carry-over)	each	$85,000.00	1	$85,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$744,049**

PROJECT TOTAL: $744,049

CAPITAL PROJECTS

Integrated Resources

CAPITAL PROJECT SUMMARY

Project Name: Electric Vehicle Supply Equipment (EVSE) **Project #:** 099

Project Schedule: On-going **Project Manager:** Tom Ollila, Resource Engineer

Reason for Expenditure:

The goal of the EVSE project is to plan and install public charging infrastructure for electric vehicles within RMLD's service territory. This project will consist of Level 2 and DC Fast Charger (DCFC) systems. The goal of the DCFC portion of the project is to deploy high-speed, plug-in, electric vehicle chargers to provide short-duration charging cycles for EVs operated within the RMLD service territory.

This project increases the deployment of EV technology and availability of remote rapid charging capability for use by customers, thereby supporting state and local efforts to reduce carbon emissions in both the transportation and energy sectors.

Brief Description/Scope:

RMLD is working with each of the four towns to determine prioritized locations for installing Level 2 and DCFC charging stations in parking areas owned by the towns. All charging stations will be owned and operated by RMLD.

Barriers:

None anticipated at this time although changes to parking related policies will take persistence to resolve and then adapt as all parties learn more.

Change in Scope of Work from Prior Fiscal Year:

This project continues to evolve and expand. In 2021 RMLD received funding from a MassEVIIP Level 2 grant.

Status Update:

RMLD was awarded a $78,150 state grant in July 2021 to install five Level 2 chargers: three dual-head units in Reading and two dual-head units Wilmington. It is anticipated that these units will be installed in 2022.

RMLD has applied to MassEVIP for a DCFC grant ($99,136) to install rapid charging stations within RMLD's service territory. If awarded, this grant money would supplement the RMLD budget and hopefully enable us to install more DCFC units earlier.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Electric Vehicle Supply Equipment (EVSE) **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)							
ITEM/TASK	Straight Time	OT	Straight Time	OT	Vehicle (labor units x vehicle rate)	DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	**$7,077**	**$920**					
			$0	$0	$0	DC Fast Charger (DCFC) Equipment	each	$70,000.00	5	$350,000
						Contractor design and install DCFC chargers	each	$35,000.00	5	$175,000
						Level 2 (L2) Charger Equipment	each	$10,000.00	5	$50,000
						Contractor design and install L2 chargers	each	$26,000.00	5	$130,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Project Management	192.0		$18,439	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
Metering	50.0		$3,305	$0	$1,050					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	100.0		$11,259	$0		**Police Details**	**weeks**	**$2,427**	**2.0**	**$4,855**
TOTAL LABOR/VEHICLES			**$33,003**	**$0**	**$1,050**	**TOTAL MATERIALS/OTHER**				**$709,855**

PROJECT TOTAL: $743,908

CAPITAL PROJECTS

Information Technology

CAPITAL PROJECT SUMMARY

Project Name: Hardware Upgrades **Project #:** 127

Project Schedule: Annual **Project Manager:** Brian Hatch, Director of IT

Reason for Expenditure:
Each year RMLD must replace failed or obsolete computers and related equipment, as well as purchase equipment for new users.

Brief Description/Scope:
Miscellaneous hardware will be purchased to replace user workstations and purchase hardware for new employees as necessary.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
In 2021 IT sought and received Board and CAB approval to initiate a New Production Environment Disaster Recovery system. The new EMC data domain which was scheduled for 2021 will be accommodated as part of this new disaster recovery system.

The new firewalls for SCADA domain were installed along with separate vLans for security.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Hardware Upgrades **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Miscellaneous Hardware (computers, laptops, printers)				$105,000
			$0	$0	$0					
			$0	$0	$0					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$8,000**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$105,000**

PROJECT TOTAL: $105,000

CAPITAL PROJECT SUMMARY

Project Name: Software and Licensing **Project #:** 128

Project Schedule: Annual **Project Manager:** Brian Hatch, Director of IT

Reason for Expenditure:

Each year RMLD purchases miscellaneous new software for new users and to update existing users. Additional new software projects may be added at the request of various operating units as outlined below:

Brief Description/Scope:

- *Customer Relationship Management (CMR) Engagement Software:* Cloud-based CRM software that will fully integrate SpryPoint with the Great Plans/Cogsdale system. This item is a carry-over from 2021.
- *HRIS: Software t*o assist with previsioning and deprovisioning users at the employee lifecycle.
- *IT Asset Manager:* This software will allow IT to barcode and asset-tag all equipment as it comes in and efficiently track the user and location of that equipment. This will help IT better maintain their asset inventory and will help in depreciating and replacing equipment.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year:

Not applicable.

Status Update:

The migration of the Yukon AMI metering system, which was planned for 2021, has been cancelled. This will be accommodated as part of the MDM and AMI projects scheduled to start in 2022.

The Work Order Management (WOMS)/Futura Staking Software was installed in 2021. Testing and implementation to be completed in 2022 after the GIS integration is completed. The cloud-based phone system is being re-evaluated and will likely not require any additional in-house assets. Meter Data Management (now included with Grid Modernization and Optimization) will be purchased and implemented in 2022.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Software and Licensing **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Miscellaneous Software				$100,000
			$0	$0	$0	Customer Relationship Management (CMR)/SpryPoint Engagement Software (carryover)				$20,000
			$0	$0	$0	HRIS				$30,000
			$0	$0	$0	IT Asset Manager				$40,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$190,000**

PROJECT TOTAL: $190,000

CAPITAL PROJECT SUMMARY

Project Name: Customer Portal (Mobile APP) **Project #:** 138

Project Schedule: 2022-23 **Project Manager:** Gregory Phipps, Director of Integrated Resources

Reason for Expenditure:
Residential as well as commercial and industrial customers are now accustomed to accessing information and account data via secure applications on their mobile devices.

As electrification increases and electricity costs increase due to the recently passed climate bill and other legislation, customers are likely to more actively control their energy use. RMLD is adding new rates, including additional time-of-use options to further encourage customers to take a more active role in their energy use and associated costs.

A customer portal will be an additional communication avenue (ultimately two-way) keeping customers up-to-date and allowing them to compare rates, initiate incentive participation, and check on their monthly bill status, as examples.

Brief Description/Scope:
The RMLD will subcontract software development and integration of this customer portal. Where possible, the RMLD will attempt to use as much off-the-shelf software as possible. It is anticipated that this software application will interface with several RMLD databases; this requires noteworthy cyber security provisions.

The Customer Portal will have several sections including: news, usage, billing, events, UAN, rebate status, and rate comparison. The login will be secure and the RMLD data and network will remain secure, as will customer data.

Barriers:
None anticipated at this time.

Change in Scope of Work from Prior Fiscal Year:

Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Customer Portal (Mobile APP) **SCHEDULE:** CY2022-2023

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	$7,077	$920					
			$0	$0	$0	Subcontracted development of Customer Portal (Mobile APP)				$200,000
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			$8,000	N/A	$2,080					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			$6,991	N/A	$400					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			$106	$103						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			$96	$93						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			$87	$85	$21					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			$66	$64	$21					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			$113	$109						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$200,000**

PROJECT TOTAL:	**$200,000**

2022 ESTIMATED SPENDING	**$100,000**
2023 ESTIMATED SPENDING	**$100,000**

CAPITAL PROJECT SUMMARY

Project Name: IT Infrastructure Enhancements **Project #:** 139

Project Schedule: 2022 **Project Manager:** Brian Hatch, Director of IT

Reason for Expenditure:
The RMLD must continually evaluate its IT infrastructure to be sure the environment will accommodate system growth and change, and to remain up to date with current technology and best practices.

Brief Description/Scope:
In 2022 we will address the following items:

- *Servers:* The RMLD will expand its current virtual server environment to meet growing data needs. The addition of the meter data management software and its underlying database, the need for additional data in the transformer load management tool, and the expected exponential growth in the Yukon database, requires IT to plan to add additional resources to its current environment.

- *Network Redesign*: RMLD will be replacing its core networking stack as well as other network switches that are well beyond their useful life. Additionally, the current networking environment needs to be overhauled in order to be better aligned, be more secure, and to take advantage of IT best practices. This overhaul and implementation will provide RMLD with a more robust and reliable network infrastructure.

Barriers:
None anticipated at this time

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update from Prior Fiscal Year:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: IT Infrastructure Enhancements **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	$7,077	$920					
			$0	$0	$0	Servers	each	$60,000.00	2	$120,000
			$0	$0	$0	Network Re-Design				$250,000
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$370,000**

PROJECT TOTAL: $370,000

CAPITAL PROJECT SUMMARY

Project Name: IT Security **Project #:** 140

Project Schedule: 2022 **Project Manager:** Brian Hatch, Director of IT

Reason for Expenditure:
The RMLD is continually monitoring both the cyber and internal environments to assess and respond to threats. Systems must be added and/or updated to respond to these threats. The projects listed below are planned for 2022 in order to maintain the security and integrity of RMLD data assets.

Brief Description/Scope:

- *Multi-Factor Authentication*: RMLD will implement a multi-factor authentication service to improve overall security for RMLD servers and workstations. This will provide all RMLD users with a token that will need to be used to authenticate users logging into any RMLD device. This helps prevent any external sources from accessing any RMLD equipment.

- *Firewalls:* RMLD plans to expand its current firewall environment to improve the overall security of the RMLD network. RMLD will segment RMLD workstations from the RMLD server environment with two firewalls in a high availability pair between these two environments. This will allow IT to have greater control over what communication is allowed between user workstations and RMLD servers. This will improve the overall security posture of RMLD and provide greater defense over potential attacks.

- *Network Visibility Software:* Implement software to allow IT better optics on the current network infrastructure, and to provide tools for monitoring the flow of data and provide insight on how the network can be improved and alleviate any bottlenecks.

- *Security Information Event Manager (SIEM):* Implement a SIEM that will allow for greater optics on all RMLD IT enterprise systems. This will provide dashboards and tools that will allow IT to monitor and remediate any security events that may happen to any appliances in real time. This allows IT to have better optics for our environment and provide greater security for the network.

- *Information Security (Miscellaneous):* This is an allotment to address any unforeseen security issues which may arise during the year.

Barriers:
None anticipated at this time.

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update from Prior Fiscal Year:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: IT Security **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	$7,077	$920					
			$0	$0	$0	Muti-Factor Authentication	project			$25,000
						Firewalls	each	$15,000.00	2	$30,000
						Network Visibility Software	project			$50,000
			$0	$0	$0	Security Information Event Manager	project			$100,000
			$0	$0	$0	Information Security (miscellaneous)				$100,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$305,000**

PROJECT TOTAL: $305,000

CAPITAL PROJECT SUMMARY

Project Name: New Production Environment Disaster Recovery **Project #:** 122

Project Schedule: 2021 **Project Manager:** Brian Hatch, Director of IT

Reason for Expenditure:
RMLD does not have a proper industry standard data backup system or the essential components in place for disaster recovery. We currently are using external hard drives to backup RMLD data nightly. These drives are written over and over they start to cause corruption and it will become impossible to restore our data assets in the event of a small or large disaster. Plus, when tested our backups we have seen missing backups, corruption, and not full complete backups.

Brief Description/Scope:
Overall, need for two separate sites (Reading data center and an off-site data center rack) to separate the corporate and SCADA servers. Connect both sites with a high-speed WAN connection to a separate location outside of New England. As well as, repurposing all of our data storage and servers to use in disaster recovery location (outside of New England).

Phase 1 (Backup system with off-site replication): Purchase two backup systems. The first backup system will stay on-site at our data center at 230 Ash Street. We then deploy an agent on each server. That will continuously provide reliable backups nightly for one to 14 days. Then connect the second backup system to the first backup system, to hydrate the data from the first backup system to the second backup system. Upon completion, we ship the second backup system off-site to a designated disaster recovery site and connect the Reading data center to the disaster recovery site for nightly replication.

Phase 2 (New Production and repurposing our existing servers and storage): Purchase new production servers and storage and add it to RMLD existing network. Migrate all of the current production servers (including SCADA) to the new production device. Once all the virtual servers have been successfully moved, dismantle and erase all data and storage and repurpose the former hardware and ship it out to disaster recovery.

Phase 3 (A minute-by-minute backup and restoration): A minute-by-minute application will be replicated as an intermediary between the two sites and has a DVR like function and replication to synchronize the sites on a minute-by-minute basis. It also gives us a month of good backups every minute. For example, if we were hit with the ransomware attack, we would just identify that attack, then use minute-by-minute application to restore all of the data on the server or every server in the environment on a minute-by-minute basis.

Barriers:
None anticipated at this time

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update from Prior Fiscal Year:
It is anticipated that this project will be completed by the end of 2021.

CAPITAL PROJECT COST SHEET

PROJECT NAME: New Production Environment Disaster Recovery **SCHEDULE:** CY2021

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	$7,077	$920					
			$0	$0	$0	RMLD Server Storage Upgrade				$420,000
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$420,000**

PROJECT TOTAL: $420,000

CAPITAL PROJECTS

System

CAPITAL PROJECT SUMMARY

Project Name: Station 4 CCVT Replacement **Project #:** 133

Project Schedule: 2022-2023 **Project Manager:** Nick D'Alleva, Assistant General Foreman, Grid Assets & Communications

Reason for Expenditure:
This project is to replace the existing Coupled - Capacitive Voltage Transformers (CCVT's) at Substation 4 in Reading. The existing CCVT's are more than 40 years old and need replacement.

Brief Description/Scope:
Purchase direct replacement CCVT's that will be installed on the existing structures at the Bulk Electric Supply (BES) - Station 4. The replacements consist of the two sets of three CCTV's on each supply line and seven individual CCTV's on each of 115Kv bus sections.

Barriers:
The replacement of the supply line CCTV's is contingent upon the relay upgrade work proposed by National Grid and Eversource.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Station 4 CCVT Replacement **SCHEDULE:** CY2022 - CY2023

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	**$7,077**	**$920**					
CCTV Installation	3.0		$21,869	$0	$2,760	Engineering services to design new protection scheme				$12,500
						Testing services				$40,000
						CCTV	each	$12,000.00	7	$84,000
			$0	$0	$0	Miscellaneous materials				$10,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Installation of equipment	180.0		$15,734	$0	$3,780					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	100.0		$11,259	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$48,863**	**$0**	**$6,540**	**TOTAL MATERIALS/OTHER**				**$146,500**

PROJECT TOTAL:	**$201,903**

2022 ESTIMATED SPENDING	**$140,000**
2023 ESTIMATED SPENDING	**$61,903**

CAPITAL PROJECT SUMMARY

Project Name: Primary Metering Inspection and Upgrade Program **Project #:** 110

Project Schedule: 2021-2023 **Project Manager:** Nick D'Alleva, Assistant General Foreman Grid Assets & Communications

Reason for Expenditure:
RMLD has initiated an inspection program of all primary metering revenue equipment. It is predicted that many of these installations will need to be replaced due to age and/or condition. Some primary metering customers are expected to be converted to secondary metering during implementation. This project will cover the cost of any necessary upgrades.

Brief Description/Scope:
Equipment will be repaired, upgraded and/or replaced as necessary based on the results of the assessment.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
The primary metering review team is working internally and with its primary metering customers to remove existing primary metering equipment and install more conventional metering equipment. These efforts have reduced the scope and spending originally proposed for this project.

Status Update From Prior Fiscal Year:
Replacement primary current and voltage transformers have been ordered and will all be received by the end of 2021. Aged primary metering installations are being replaced after review by the primary metering review team.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Primary Metering Upgrade and Replacement Program **SCHEDULE:** CY2021-2023

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Primary metering make ready and installation	10.0	4.0	$72,898	$28,308	$12,880	Potential Transformers	each	$1,000.00	50	$50,000
			$0	$0	$0	Current Transformers	each	$1,000.00	70	$70,000
			$0	$0	$0	Miscellaneous equipment (racks, secondary control wire, meter sockets, and test switches)	each	$500.00	38	$19,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	100.0		$10,637	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Primary metering installation coordination and design	160.0	80.0	$15,366	$7,459						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Primary metering construction	960.0		$83,917	$0	$20,160					$0
Primary metering installation coordination and design		160.0	$0	$13,578	$3,360					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	160.0	40.0	$18,015	$4,372		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$200,832**	**$53,717**	**$36,400**	**TOTAL MATERIALS/OTHER**				**$139,000**

PROJECT TOTAL:	**$429,949**

2021 ESTIMATED SPENDING	**$250,000**
2022 ESTIMATED SPENDING	**$100,000**
2023 ESTIMATED SPENDING	**$79,949**

CAPITAL PROJECT SUMMARY

Project Name: Relay Protection Upgrades – Station 4 **Project #:** 130

Project Schedule: 2021-2023 **Project Manager:** Nick D'Alleva, Assistant General Foreman Grid Assets & Communications

Reason for Expenditure:
NSTAR is replacing existing static wires with optical ground wire to provide a means for diverse fiber communications on the NSTAR system. This project will address the need for fiber to support Northeast Power Coordinating Council (NPCC) Directory 1, high speed, relay protection upgrades required on 211-503 and 211-504 between National Grid's Tewksbury Station #22, Eversource's Woburn #211 Substation and Reading Station #494. This will also enable RMLD to migrate its remote terminal unit (RTU) communications.

Brief Description/Scope:
Replace existing relay protection on the 211-503 and 211-504 transmission lines. The primary and secondary relay protection scheme will be a fully functional three terminal line protection scheme between Station 4, Woburn Substation and Tewksbury. This protection scheme will communicate over fiber installed on the 115Kv transmission lines.

Barriers:
National Grid and Eversource scheduling of their relay upgrades. The RMLD cannot proceed with our construction until the investor-owned utilities proceed with theirs.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Both primary and secondary relay schemes are being completely replaced. This is a change from the original design proposed by National Grid and Eversource.

Status Update From Prior Fiscal Year:
The majority of the RMLD engineering and design for this project is completed. The RMLD is waiting for National Grid and Eversource to complete their design of the new relay protection system. This delay has prevented the RMLD from purchasing the new relays and equipment that were originally scheduled for 2021.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Relay Protection Upgrades - Station 4 **SCHEDULE:** CY2021 - 2023

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0					$0
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Installation of equipment	300.0		$26,224	$0	$6,300	Engineering services to design new protection scheme				$90,000
Wiring and testing	180.0		$15,734	$0	$3,780	Testing services				$40,000
						Communication equipment				$20,000
						Relays	each	$10,000.00	4	$50,000
						Associated equipment for relays	per relay	$1,250.00	10	$12,500
						Misc. materials				$16,000
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**	**$21**					
Supervision/Project Management	175.0		$19,703	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$61,662**	**$0**	**$10,080**	**TOTAL MATERIALS/OTHER**				**$228,500**

PROJECT TOTAL:	**$300,242**

2021 ESTIMATED SPENDING	**$70,000**
2022 ESTIMATED SPENDING	**$150,000**
2023 ESTIMATED SPENDING	**$80,242**

CAPITAL PROJECT SUMMARY

Project Name: Pad-mount Switchgear Upgrade at Industrial Parks **Project #:** 102

Project Schedule: FY18-CY23 **Project Manager:** Peter Price, Senior Distribution Engineer

Reason for Expenditure:
Increase distribution system protection in the underground industrial parks in Wilmington and North Reading as well as the three-phase underground distribution areas in Reading, i.e., River Park Drive, Jonspin Road, Haven Street, Woburn Street, Industrial Way, etc.

Brief Description/Scope:
Purchase new units to replace live front pad-mounted switchgear. New units will be dead front with provisions for remote/supervisor control. There are currently 29 units systemwide. In 2022 the RMLD will receive and install the last four units of a three-year bid.

Additionally, we will purchase two new motor operated units for River Park Drive. These units will be dead front with provisions for remote/supervisor control and motor operated positions to incorporate into the existing 4W10 and 3W13 automatic transfer schemes.

Barriers:
Delivery of three switchgear ordered in FY18 was significantly delayed, which has pushed back the installation schedule for all switchgear. The River Park units will need to be bid out in 2022.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

The two motor operated units for River Park Drive were originally slated for purchase in 2023.

Status Update From Prior Fiscal Year:
Installation of fourteen switchgear has been completed (as of August 2021):

- *Jonspin Road, Wilmington*: Switch-1 (FY18), Switch-2 and Switch-3 (CY19), Switch-4 and Switch-5 (CY19), and Switch-6 (CY20)
- *River Park Drive, North Reading:* Switch-2 in (FY18), *Switch-1 (CY20) Switch-5 (CY21)*
- *Concord Street, North Reading*: Switch-2 and Switch-3 in (FY18)
- *Reading Square (Haven Street), Reading: Switch-1 (CY20)*
- *80 Industrial Way, Wilmington: Switch-1 and Switch-2 in (CY21)*

CAPITAL PROJECT COST SHEET

PROJECT NAME: Pad-Mount Switchgear Upgrade at Industrial Parks **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Replace pad-mount switchgear (with contractor assist)		2.0	$0	$14,154	$1,840	Innovative Switchgear	each	$72,125.00	4	$288,500
Make up t-bodies and LB elbows (with contractor assist)	3.0		$21,869	$0	$2,760	Innovative Switchgear - MOS Style	each	$90,000.00	2	$180,000
Splice out line and load side primary cables (with contractor assist)	6.0		$43,739	$0	$5,520	T-bodies, LB elbows, reducers, caps, inserts, fused elbows, miscellaneous connectors per switchgear	per switch	$3,000.00	6	$18,000
						Splices for line and load side primaries (up to 12 per switchgear)	per switch	$3,000.00	6	$18,000
						Primary cable for piece outs	foot	$20.00	960	$19,200
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Replace pad-mount switchgear (assist RMLD crews)	2.0		$13,982		$800					$0
Make up t-bodies and LB elbows (assist RMLD crews)	3.0		$20,974		$1,200					$0
Splice out line and load-side primary cables (assist RMLD crews)	6.0		$41,947		$2,400					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	92.0	64.0	$9,786	$6,609						$0
Engineering: unit rate in hours			**$96**	**$93**						
Prepare switching order, coordinate outages, ad modifications, order materials, etc.	100.0	64.0	$9,604	$5,967						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Test cable, switchgear and rotation (2 techs)	120.0	48.0	$10,490	$4,073	$3,528					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Energize and test switchgear and relays	120.0	48.0	$13,511	$5,246		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$185,901**	**$36,050**	**$18,048**	**TOTAL MATERIALS/OTHER**				**$523,700**

PROJECT TOTAL: $763,699

CAPITAL PROJECT SUMMARY

Project Name: New Wilmington Substation **Project #:** 105

Project Schedule: FY17-CY24 **Project Manager:** Emmanuel Agouridis, Senior Distribution Engineer

Reason for Expenditure:
Substation 5 has reached the end of its useful life. The transformer and switchgear need major upgrades/repairs to keep the substation operational. The new Wilmington substation will be a replacement for Substation 5, while also providing added benefit to RMLD.

Brief Description/Scope:
Install a new 115kV / 13.8 kV substation in Wilmington in the Ballardvale area. The new substation will include two (2) 60 MVA transformers and 15kV switchgear with eight (8) (or more as needed) feeder breaker positions. It shall also provide backup and load relief for both Substation 3 and Substation 4.

Barriers:
Availability of land.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
RMLD continues to explore options for location of the new substation. RMLD is still in pursuit of land in the route MA-125 / Ballardvale Street Area.

CAPITAL PROJECT COST SHEET

PROJECT NAME: New Wilmington Substation
Land Purchase

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0					$0
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0		Land Purchase				$650,000
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$650,000**

PROJECT TOTAL: $650,000

CAPITAL PROJECT COST SHEET

PROJECT NAME: New Wilmington Substation
Construction and Commissioning

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0					$0
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Oversite and Management of Project	285.0		$27,370	$0		National Grid system impact study				$42,000
			$0	$0		Engineering consultant for permitting, interconnection, procurement, etc.				$73,500
			$0	$0		Survey, Civil, Permit, etc.				$52,500
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$27,370**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$168,000**

PROJECT TOTAL: $195,370

CAPITAL PROJECT SUMMARY

Project Name: Grid Modernization & Optimization **Project #:** 103

Project Schedule: On-going **Project Manager:** Hamid Jaffari, Director of Engineering & Operations
Peter Price, Senior Distribution Engineer
Brian Smith, Systems Engineer

Reason for Expenditure:
In compliance with DPU/OSHA Order DPU 12-76B, increase system reliability, modernize/optimize system operation and functionality, decrease system losses and expenses for labor and truck rolls related to outage management.

Brief Description/Scope:
Continue implementation of the Grid Modernization/Optimization Road Map including installation and integration of smart switches, IntelliRupters, and capacitor banks and controls. Cyber security, simulator, fiber rationale connection, fault detection, economic dispatch, and overall system integration, including GIS and AMI.

Barriers:
Technology/software integration; merging old technology with new emerging technology.

Change in Scope of Work From Prior Fiscal Year:
In 2021 a study is being conducted to evaluate communication between the various field devices. This study will provide a comprehensive plan to seamlessly integrate communication amongst all devices and provide guidance for future expansion. We have added a component to this project “Communication to Field Devices,” which will be used to implement the recommendations of this study. Communication to Field Devices will replace Capital Project #126 - “Communications Equipment (Fiber Optic).”

Status Update:
Four Scada-Mate switches and two IntelliRupters were received in 2021 and all were installed. This brings the total number of devices in the field to 24 Scada-Mate switches, and eight IntelliRupters.

RMLD continues to update capacitor bank controllers to prepare for implementation of the communication study results. The V.V.O. software which automates the capacitor banks has been installed and is in the testing phase. Integrated Voice Response is completed. Meter Data Management will be a carried-over from 2021. Crew Management has been cancelled.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
Scada-Mate Switches

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Install Scada-Mate switches and controls	1.0		$7,290	$0	$920	Scada-Mate CX Switch	each	$30,139.10	4	$120,556
Replace pole, install bypass disconnects, transfer primary, secondary, etc.	7.0		$51,029	$0	$6,440	55' pole, x-arms, brackets, guys, anchors, miscellaneous hardware, etc.	per switch	$2,000.00	4	$8,000
			$0	$0	$0	6801 IntelliTeam License	per switch	$2,500.00	4	$10,000
Install three (3) repeaters/radios per switch	0.4		$2,916	$0	$368	S&C repeaters/radios	each	$3,000.00	12	$36,000
Install antennas	1.5		$10,935	$0	$1,380	Antennas for radios	each	$600.00	6	$3,600
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	120.0		$12,764	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
PoleForeman, construction drawings, etc.	40.0		$3,841	$0						$0
Prepare switching orders, order materials, establish communication	40.0		$3,841	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Controls, programming, commissioning, etc.	64.0		$5,594	$0	$1,344					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Controls, programming, commissioning, etc.	32.0		$3,603	$0		**Police Details**	**weeks**	**$2,427**	**4.0**	**$9,710**
TOTAL LABOR/VEHICLES			**$101,813**	**$0**	**$10,452**	**TOTAL MATERIALS/OTHER**				**$187,866**

PROJECT TOTAL: $300,132

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
IntelliRupters

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Install IntelliRupter Switches	1		$7,290	$0	$920	IntelliRupter Switches	each	$37,289.50	2	$74,579
Replace pole, install bypass disconnects, transfer primary, secondary, etc.	3		$21,869	$0	$2,760	55' pole, cross-arms, brackets, guys, anchors, miscellaneous hardware, etc.	per switch	$2,000.00	2	$4,000
			$0	$0	$0	IntelliRupter License/IntelliTeam License	each	$2,500.00	2	$5,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	40.0		$4,255	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
PoleForeman, construction drawings, etc.	24		$2,305	$0						$0
Prepare switching orders, order materials, establish communication	24		$2,305	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Controls, programming, commissioning, etc.	64		$5,594	$0	$1,344					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Controls, programming, commissioning, etc.	16		$1,801	$0		**Police Details**	**weeks**	**$2,427**	**2.0**	**$4,855**
TOTAL LABOR/VEHICLES			**$45,420**	**$0**	**$5,024**	**TOTAL MATERIALS/OTHER**				**$88,434**

PROJECT TOTAL: $138,878

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
ABB Reclosers

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**7,290**	**$7,077**	**$920**					
Install reclosers and controls	1.0		7,290	$0	$920	ABB Reclosers	each	$20,000.00	4	$80,000
Replace pole, install bypass disconnects, transfer primary, secondary, etc.	7.0		51,029	$0	$6,440	55' pole, x-arms, brackets, guys, anchors, miscellaneous hardware, etc.	per recloser	$2,000.00	4	$8,000
			$0	$0	$0	Bypass disconnects	each	$350.00	12	$4,200
			$0	$0	$0	Contractor assist with recloser settings	per recloser	$1,800.00	4	$7,200
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	120.0		$12,764	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
PoleForeman, construction drawings, etc.	40.0		$3,841	$0						$0
Prepare switching orders, order materials, establish communication	40.0		$3,841	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Controls, programming, commissioning, etc.	80.0		$6,993	$0	$1,680					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Controls, programming, commissioning, etc.	40.0		$4,504	$0		**Police Details**	**weeks**	**$2,427**	**4.0**	**$9,710**
TOTAL LABOR/VEHICLES			**$90,262**	**$0**	**$9,040**	**TOTAL MATERIALS/OTHER**				**$109,110**

PROJECT TOTAL: $208,412

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
Capacitor Bank Automation

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0					$0
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
Install CAP controllers	1.0		$8,000		$2,080	CBC 8000 CAP Controller	each	$1,800.00	10	$18,000
						RADIO	each	$800.00	6	$4,800
			$0		$0	Miscellaneous	per controller	$400.00	3	$1,200
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	12.0		$1,276	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Connecting to Eaton System and SCADA switching	80.0		$7,683	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Controls, programming, commissioning, installation, etc.	24.0		$2,098	$0	$504					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Controls, programming, commissioning, installation, etc.	6.0		$676	$0		**Police Details**	**weeks**	**$2,427**	**1.2**	**$2,913**
TOTAL LABOR/VEHICLES			**$19,733**	**$0**	**$2,584**	**TOTAL MATERIALS/OTHER**				**$26,913**

PROJECT TOTAL: $49,230

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
Software Integration

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Services from vendor for integration of AMI and various devices				$15,000
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Work with vendor for software integration	80.0		$7,683	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Work with vendor for software integration	24.0		$2,098	$0	$504					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision	8.0		$901	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$10,682**	**$0**	**$504**	**TOTAL MATERIALS/OTHER**				**$15,000**

PROJECT TOTAL: $26,186

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
Communication to Field Devices

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Install Radio Antenna	1.2		$8,748	$0	$1,104	Radio	Each	$800.00	24	$19,200
			$0	$0	$0	Miscellaneous Fiber Optic Equipment				$53,460
		0	$0	$0	$0	Contractor to make connections to SCADA	Each	$2,000.00	24	$53,460
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
		0.0	$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	24.0	0.0	$2,553	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Prepare construction documents, PoleForeman, 605As, outage setup, outages, GIS updates	72.0	0.0	$6,915	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
	0.0	0.0	$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
Install devices.	24.0	0.0	$1,586	$0	$504					$0
Technical Services Manager: unit rate in hours			**$112.59**	**$109**						
Supervision of Meter crews	24.0		$2,702	$0		**Police Details**	**weeks**	**$2,427**	**2.4**	**$5,826**
TOTAL LABOR/VEHICLES			**$22,504**	**$0**	**$1,608**	**TOTAL MATERIALS/OTHER**				**$131,946**

PROJECT TOTAL: $156,058

CAPITAL PROJECT COST SHEET

PROJECT NAME: Grid Modernization & Optimization
Meter Data Management (MDM)

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Meter Data Management Software				$280,700
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
										$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$280,700**

PROJECT TOTAL: $280,700

CAPITAL PROJECT SUMMARY

Project Name: AMI Mesh Network Expansion and Meter Replacement **Project #:** 112

Project Schedule: 2022-2024 **Project Manager:** John McDonagh, Assistant Director of E&O and Nick D'Alleva, Assistant General Foreman Grid Assets & Communications

Reason for Expenditure:
The RMLD has ~28,600 Itron non-AMI/AMR meters that are not capable of providing end-of-line voltage. End-of-line voltage readings would provide the ability to monitor voltage, current, demand, power factor and power quality for these locations. Of these ~28,000 non-AMI meters, there are 3,600 commercial, industrial, and time-of-use meters that are not capable of communicating with the RMLD Outage Management System (OMS). Customers with these meters are not able to receive outage and restoration notifications.

Brief Description/Scope:
The RMLD hired a consultant who performed a system-wide evaluation of the current AMI/AMR mesh network and metering system and made recommendations for system upgrades to accommodate current deficiencies as outlined above and to address future metering needs. The RMLD then hired Katama Technologies, Inc., to prepare RFPs for both the AMI and MDM systems based on the recommendations of the consultant evaluation. Once the RFPs are created and the technical specifications are generated, it will be put out to bid in 2022. The MDM procurement will take place first followed by the AMI procurement in 2022. Once an AMI vendor is selected through the bidding process, and we have procured the materials, the headend and communication infrastructure installation will commence in 2022 followed by the full deployment of meters in years 2023 and 2024.

Barriers:
Supply chain concerns.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Implementation has been pushed back 2022.

Status Update From Prior Fiscal Year:
In 2021 RMLD proceeded to hire an AMI/MDM consultant to prepare RFPs for both the MDM and AMI systems. The actual implementation starts in 2022 and will be completed by 2024.

CAPITAL PROJECT COST SHEET

PROJECT NAME: AMI Mesh Network Expansion and Meter Replacement **SCHEDULE:** CY2022 - 2024

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Headend				$60,000
						Infrastructure				$224,000
						Meters				$5,401,000
						Installation				$949,000
			$0	$0	$0	Project Management and Delivery				$1,011,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
				$0						
						Police Details	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$7,645,000**

PROJECT TOTAL: $7,645,000

2022 ESTIMATED SPENDING	**$1,211,400**
2023 ESTIMATED SPENDING	**$3,272,800**
2024 ESTIMATED SPENDING	**$3,160,800**

CAPITAL PROJECT SUMMARY

Project Name: Meters and Primary Meters (for Stock) **Project #:** 117

Project Schedule: Annual **Project Manager:** Nick D'Alleva,
Assistant General Foreman
Grid Assets &
Communications

Reason for Expenditure:
Purchase of meters and metering equipment for new construction, upgrades, and failures.

Brief Description/Scope:
Meter and Primary Meter bids will be prepared, and units purchased as outlined on the Cost Sheet.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Meters and Primary Meters (for stock) **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Residential meters for stock (with disconnect option as available)	each	$300.00	200	$60,000
			$0	$0	$0	Secondary current transformers	each	$300.00	40.0	$12,000
			$0	$0	$0	CT Rated Meter Sockets	each	$400.00	20	$8,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$80,000**

PROJECT TOTAL: $80,000

CAPITAL PROJECT SUMMARY

Project Name: Force Account: Mass DOT
Main and Hopkins Street, Reading

Project #: 214

Project Schedule: 2021-22

Project Manager: Peter Price,
Senior Distribution
Engineer

Reason for Expenditure:

Reimbursable Force Account Project

Brief Description/Scope:

MassDOT roadway improvement and signalization project will require Verizon to set 12 poles and the RMLD to set three poles along Main Street and Hopkins Street in Reading. RMLD to transfer one three-phase spacer cable circuit and associated laterals, transformers, guys, streetlights, secondaries, and risers. This project also involves the relocation of the secondary riser for the restaurant at 107 Main Street.

Barriers:

Waiting for MassDOT to move forward with the project. As of August of 2021, MassDOT is moving forward with the project. RMLD is still waiting on a ‘Notice to Proceed” notification from MassDOT.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

Not applicable.

Status Update From Prior Fiscal Year:

The project is anticipated to start in September of 2021 and be completed in 2022.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Main & Hopkins Street, Reading
MassDOT Force Account Project

SCHEDULE: CY21-22

	LABOR					MATERIALS/OTHER			
	# of Units		Labor Total (unit rate x labor units)						
ITEM/TASK	Straight Time	OT	Straight Time	Overtime	Vehicle (labor units x vehicle rate)	DESCRIPTION	Unit	Unit Rate	# of Units
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**				
RMLD to transfer on 11 poles and attach to 4 new poles on Main Street.	8.4	1	$61,236	$7,077	$8,648	Spacer cable brackets, insulators, etc.	per pole	$400	12
RMLD to transfer three-phase secondary underground service to restaurant		1	$0	$7,077	$920	Secondary brackets	per pole	$40	12
			$0	$0	$0	Guy wire and hardware	each	$200.00	10
			$0	$0	$0	Cutouts, crossarms, risers, etc.	each	$300.00	15
			$0	$0	$0	Miscellaneous hardware	per pole	$250.00	15
			$0	$0	$0	55'-1 poles	per pole	$1,200.00	3.0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**				
			$0		$0				
			$0		$0				
			$0		$0				
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**				
Work with contractor on UG to the restaurant at 107 Main Street	1		$6,991		$400	U-Guard, riser ties, connectors, miscellaneous hardware	each	$500.00	1.0
			$0		$0				
			$0		$0				
Line Operations Supervision: unit rate in hours			**$106**	**$103**					
Supervision of Line crews	60		$6,360	$0					
Engineering: unit rate in hours			**$96**	**$93**					
PoleForeman, telco correspondence, pole petition hearings, construction plans, switching, planned outages, GIS updates, etc.	60	40	$5,760	$3,720					
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**				
Rotation (6 customers)		40	$0	$3,400	$840				
			$0	$0	$0				
Technical Services Manager: unit rate in hours			**$113**	**$109**					
			$0	$0		**Police Details**	**week**	**$2,427**	**7.2**
			$0	$0					
TOTAL			**$80,347**	**$21,274**	**$10,808**				

PROJECT TOTAL:	**$149,537**

2021 ESTIMATED SPENDING	**$51,197**
2022 ESTIMATED SPENDING	**$98,340**

CAPITAL PROJECT SUMMARY

Project Name: 3W18 Getaway Improvements **Project #:** 125

Project Schedule: 2021-2022 **Project Manager:** Emmanuel Agouridis, Senior Distribution Engineer

Reason for Expenditure:
The objective of this project is to have the 3W18 circuit separated from the existing duct bank at Station 3. At a high level, the plan is to run the circuit out of Station 3 in a separate duct bank and ultimately to Chestnut Street via newly built overhead lines installed on the existing pole line running from Chestnut Street down the driveway to Station 3. This will improve the rating of the 3W18 circuit, while also improving the ratings of the remaining circuits in the duct bank due to reduced heating and inherent thermal relief.

Brief Description/Scope:
Install new underground cable from Station 3 to a new riser installed in 2020. Perform all overhead line work to tie the new 3W18 riser to the existing overhead 3W18 circuit located on Chestnut Street. After all new construction is in place, cutover from existing feed to new feed.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: 3W18 Getaway Improvements **SCHEDULE:** CY2021 - CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Replace five poles w/ 55' CL1 poles	2.0		$14,580	$0	$1,840	55' - class 1 poles	each	$800.00	5	$4,000
Frame 15 poles for added circuit	2.0		$14,580	$0	$1,840	15kV, 556 AL spacer cable	foot	$2.02	5280	$10,666
Set-up for (1,000') messenger wire	2.0		$14,580	$0	$1,840	0.052 messenger wire	foot	$1.23	1760	$2,165
Pull in and install (3,000') 556 spacer cable	2.0		$14,580	$0	$1,840	Riser pole hardware	per pole	$1,700.00	1	$1,700
Move 3W15-3W6 and 3W15-3W18 tie switches	2.0		$14,580	$0	$1,840	15 kV Hendrix brackets, misc. hardware, misc. primary connectors (spacers, insulators, etc.)	per pole	$300.00	15	$4,500
Install underground cable, splice, term (with contractor assist)	2.0		$14,580	$0	$1,840	Gang operated air break switch	each	$3,040.00	2	$6,080
Wreck out underground (with contractor assist)	1.0		$7,290	$0	$920	15kV cable, 750 MCM	foot	$14.43	1500	$21,645
						600V, 4/0 CU cable	foot	$3.08	500	$1,540
						Terminations	each	$70.64	6	$424
						Splices	each	$443.56	3	$1,331
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Install underground cable, splice, term (assist RMLD crews)	2		$13,982		$800					$0
Wreck out underground (assist RMLD crews)	1		$6,991		$400					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	100.0		$10,637	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Design, work order, material procurement	80		$7,683	$0						$0
Oversight	40		$3,841	$0						$0
Switching: draft, review and execute	16		$1,537	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Switching: review and execution	16		$1,399	$0	$336					$0
Test cable	4		$350	$0	$84					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Switching: review and execution	16		$1,801	$0		**Police Details**	**weeks**	**$2,427**	**2.0**	**$4,855**
TOTAL LABOR/VEHICLES			**$142,989**	**$0**	**$13,580**	**TOTAL MATERIALS/OTHER**				**$58,905**

PROJECT TOTAL:	**$215,473**

2021 ESTIMATED SPENDING	**$107,737**
2022 ESTIMATED SPENDING	**$107,737**

CAPITAL PROJECT SUMMARY

Project Name: Transformers and Capacitors Purchase (Stock and Projects) **Project #:** 116

Project Schedule: Annual **Project Manager:** Vaughan Bryan, Senior Distribution Engineer

Reason for Expenditure:
All transformers and capacitors for planned and ad hoc projects are purchased under this project.

Brief Description/Scope:
Transformer and capacitor bids will be prepared, and units purchased as outlined on the Cost Sheet.

These transformers and capacitors will be used for new construction, as well as reliability projects including Secondary and Main Replacement, 13.8kV Upgrade (Step-down Areas), Underground Facilities Upgrades, and Aged/Overloaded Transformer Replacement.

Barriers:
None anticipated at this time

Change in Scope of Work From Prior Fiscal Year:
In 2022 additional single-phase pad-mount transformers will be purchased to expedite replacing aged transformers.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Transformers and Capacitors **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Three-phase pad-mount transformers for proposed commercial services and stock	average per transformer	$9,200	27	$248,400
			$0	$0	$0	Single-phase pad-mount transformers for proposed subdivisions and stock.	average per transformer	$2,875	91	$261,625
			$0	$0	$0	Three-phase pole-mount transformers for proposed commercial services and stock	average per transformer	$4,888	17	$83,096
			$0	$0	$0	Single-phase pole-mount transformers for proposed residential services and stock	average per transformer	$2,300	65	$149,500
			$0	$0	$0	1,200 kVar capacitor banks	average per transformer	$1,400	6	$8,400
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$751,021**

PROJECT TOTAL: $751,021

CAPITAL PROJECT SUMMARY

Project Name: Secondary and Main Replacement Program
All Towns

Project #: 458

Project Schedule: Annual

Project Manager: Leo Keefe, General Line Foreman
All Engineers

Reason for Expenditure:

This preventive maintenance program is intended to upgrade and improve system reliability and address aging infrastructure.

Brief Description/Scope:

This program identifies aging infrastructure and addresses a variety of work to include secondary upgrades and service drop upgrades as needed. Pole replacements, primary cable replacement and transformer upgrades will be done in conjunction with the Stepdown Area Conversions. The Middlesex Avenue area in Reading will be targeted for upgrade in 2022 in conjunction with the 13.8kV Upgrade (Step-down Areas) – Project 107.

Barriers:

The Middlesex Avenue area in Reading is an RMLD set area, so no barriers are anticipated.

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)

Not applicable.

Status Update from Prior Fiscal Year:

The Linda Lane area is predicted to be completed by the end of 2021.
The North Main Street/Lowell Street area in Lynnfield was completed 2021.
The Wisser Street and Brand Avenue area in Wilmington was completed in 2021.
Southwick Road was completed in 2021.
The Central Street area in North Reading was completed in 2021.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Secondary and Main Replacement Program **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Frame up to 120 poles	6		$43,739	$0	$5,520	4/0-3/C secondary cable	foot	$2	10,000	$20,000
Install 10,000' of secondary cable	12		$87,478	$0	$11,040	Secondary hardware, brackets, connectors, etc.	per pole	$75	120	$9,000
Replace services	8		$58,319	$0	$7,360	120' of 1/0 - 3/C service wire for each service	per service	$100	100	$10,000
			$0	$0	$0					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	80.0		$8,509	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Prepare construction documents, PoleForeman, outage set-up, GIS updates	200		$19,207	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**	**12.0**	**$29,130**
TOTAL LABOR/VEHICLES			**$217,252**	**$0**	**$23,920**	**TOTAL MATERIALS/OTHER**				**$68,130**

PROJECT TOTAL: $309,302

NOTE: Transformers for this project are purchased under Project 116.

CAPITAL PROJECT SUMMARY

Project Name: 13.8kV Upgrades (Step-down Areas, etc.) All Towns **Project #:** 107

Project Schedule: Annual **Project Manager:** All Engineers

Reason for Expenditure:
It is expected that at the conclusion of all work in the step-down conversion areas in 2021 that there will be 21 step-down areas remaining in the RMLD service territory awaiting conversion to 13.8kV. These areas on the RMLD distribution system were originally fed from 4.16 kV distribution circuits. When RMLD began moving load over to the 13.8kV distribution circuits, most areas were converted but some areas were re-fed with pole-mount, step-down transformers. Most of the distribution system in these areas are 30+ years old and in need of upgrade before they can be converted.

Brief Description/Scope:

Replace poles, primary cable, and overhead transformers, as needed, in the various step-down areas. Convert areas to 13.8kV and remove step-down transformers. The secondary cable and service upgrades will be done in conjunction with Project 458. The only area targeted for 2022 is the Middlesex Avenue area in Reading given its large size and cost associated for the upgrade.

Barriers:
None

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
The Central Street area in North Reading was converted in 2021. The area off of Summer Avenue in Reading that feeds Willow Street and Austin Prep is underway and is awaiting customer upgrades to complete the conversion. The areas surrounding Linda Lane in Wilmington are in progress. The areas in Reading off of South Street are awaiting some final pole sets from Verizon and RMLD expects to complete this area prior to the end of the year. Finally, a large section of North Lynnfield along Lowell and Main Streets was also converted with only a small side street remaining that requires upgrades to the underground distribution for completion.

CAPITAL PROJECT COST SHEET

PROJECT NAME: 13.8kV Upgrades (Step-down Areas, etc.) **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
RMLD to set up to 100 poles	20		$145,797	$0	$18,400	40' poles	each	$400.00	100	$40,000
RMLD to frame 110 poles for new primary cable (guying and anchors as needed)	12		$87,478	$0	$11,040	Hardware, insulators, connectors, guys, cutouts, taps, brackets, ground rods, etc.	per pole	$210.00	110	$23,100
Install 19,500' of single-phase primary cable, energize and cutover	12		$87,478	$0	$11,040	1/0 AAAC primary	foot	$0.87	19,500	$16,965
Replace twenty five (25) pole-mount transformers	6		$43,739	$0	$5,520					
Remove old primary cable	4		$29,159	$0	$3,680					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	120.0		$12,764	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
PoleForeman, 605As, construction drawings, switching orders, etc.	400		$38,415	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
			$0	$0		**Police Details**	**weeks**	**$2,427**	**20.0**	**$48,550**
TOTAL LABOR/VEHICLES			**$444,829**	**$0**	**$49,680**	**TOTAL MATERIALS/OTHER**				**$128,615**

PROJECT TOTAL: $623,124

Note: Transformers for this project are purchased under Project 116

CAPITAL PROJECT SUMMARY

Project Name: Underground Facilities Upgrades (URDs, Manholes, etc.) **Project #:** 106

Project Schedule: Annual **Project Manager:** All Engineers

Reason for Expenditure:

There are 210 +/- underground residential subdivisions in the RMLD service territory, of which, 80 +/- are over 25 years old. These subdivisions are in need of new primary cable and transformers. Some of the URDs are in step-down areas and need to be upgraded before they can be converted to 7,970 volts. Most of the existing transformers are live-front units. The new padmount transformers will be dead-front units, which will improve reliability by eliminating the possibility of animal contacts within the pad transformer. The new transformers will be placed on box-pads that will raise the transformers out of the mulch beds preventing premature rusting and corrosion of the transformers. Manholes in the underground areas are also aging and may need repairs.

Brief Description/Scope:

Replace primary and neutral cables, and padmount transformers as needed in the various URDs. The precast transformer pads will be replaced with fiberglass box pads as needed for elevation requirements. Certain areas will be targeted each year. Areas targeted for 2022 include King James Grant and Wildwood Estates in Lynnfield, Blanchard Road in Wilmington, and Parkwood Estates and Takoma Circle in North Reading. In 2022 we will continue with inspection of manholes to determine which manholes will need to be scheduled for replacement.

Barriers:

Availability of underground crews.

Change in Scope of Work From Prior Fiscal Year:

No notable change.

Status Update:

Area upgrades either completed or expected to be completed by the end of 2021 include:

- Pocahontas Way, Hampton Court/Midland Street, Carter Road/Willard Lane, and Kimberly Terrace (completed) in Lynnfield
- Gandolf Way at Glen Acres Estate (completed), Elmwood Village, Juniper Ridge, Scaltrito Drive (completed), and Corum Meadows in Wilmington
- Sandspur Lane, Pine Glen Drive (completed), and Gloria Lane (completed) in North Reading

CAPITAL PROJECT COST SHEET

PROJECT NAME: Underground Facilities Upgrades (URDs, Manholes, etc.)

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Replace approximately 18,400 feet of underground and neutral cable (with contractor assist)	20		$145,797	$0	$18,400	#2 CU 15 kV cable and neutral	foot	$3.00	18,400	$55,200
Splice, terminate, elbows, grounding, etc. (with contractor assist)	6		$43,739	$0	$5,520	Splices, elbows, terminations, tape connectors, hardware, etc.	each	$200.00	56	$11,200
Transformer replacement and crabbing (with contractor assist)	5		$36,449	$0	$4,600	Transformer box pads	each	$310.00	24	$7,440
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Replace approximately 15,000 feet of URD and neutral cables (assist RMLD crews)	20		$139,824		$8,000					$0
Splice, terminate, elbows, grounding, etc. (assist RMLD crews)	6		$41,947		$2,400					$0
Transformer replacement and crabbing (assist RMLD crews)	5		$34,956		$2,000					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	200.0		$21,273	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Switching, scheduling, notices, plans, etc.	216		$20,744	$0						$0
Inspection 35 manholes.	120		$11,524	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Testing cables and transformers	48		$4,196	$0	$1,008					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	8		$901	$0		**Police Details**	**weeks**	**$2,427**	**2.0**	**$4,855**
TOTAL LABOR/VEHICLES			**$501,350**	**$0**	**$41,928**	**TOTAL MATERIALS/OTHER**				**$78,695**

PROJECT TOTAL: $621,973

Note: Transformers for this project are purchased under Project 116

CAPITAL PROJECT SUMMARY

Project Name: Gazebo Circle, Reading Underground Feed Relocation

Project #: 134

Project Schedule: 2022

Project Manager: Brian Smith, System Engineer

Reason for Expenditure:
Improve reliability and access to the feed to Gazebo Circle, which is currently overhead through the woods off Summer Street. Current feed is not accessible by truck and requires an outage to the entire Gazebo Circle complex to complete any maintenance or trimming (approximately 215 customers).

Brief Description/Scope:
Staff will survey and obtain easement for a new underground feed off Hopkins Street to Gazebo Circle. Crews will then install approximately three manholes and 1,200 feet of four-inch conduit, as well as approximately 750 circuit feet of new underground cable. Crews will then remove overhead feed from the woods off Summer Avenue.

Barriers:
Obtaining easements from the Town and Gazebo Circle condo association.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Gazebo Circle, Reading - Underground Feed Relocation **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
			$7,290	**$7,077**	**$920**					
Installation of new conduit and wire, splice and install elbows as needed	3.0		$21,869	$0	$2,760	1,200 feet of conduit	foot	$6.00	1200.0	$7,200
			$0	$0	$0	2,000' of primary cable	foot	$4.00	2000.0	$8,000
						750 feet of ground wire	foot	$2.00	750.0	$1,500
						Miscellaneous hardware (fittings, splice kits, elbows, etc.)				$5,000
			$0	$0	$0	Surveyor and legal costs to obtain and record easements				$20,000
			$0	$0	$0	4-Manholes/Frames/Covers	each	$2,500.00	4.0	$10,000
			$0	$0	$0	Contractor excavation for manholes and duct-bank, repave driveway in area of excavations				$102,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
Removal of old overhead line through woods	4.0		$32,000		$8,320					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Installation of new conduit and wire, splice and install elbows as needed	6.0		$41,947		$2,400					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	40.0		$4,255	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Design/run project	100.0		$9,604	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Testing	32.0		$2,797	$0	$672					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	8.0		$901	$0		**Police Details**	**weeks**	**$2,427**	**1.0**	**$2,427**
TOTAL LABOR/VEHICLES			**$113,373**	**$0**	**$14,152**	**TOTAL MATERIALS/OTHER**				**$156,127**

PROJECT TOTAL: $283,652

CAPITAL PROJECT SUMMARY

Project Name: Aged/Overloaded Transformer Replacement Program

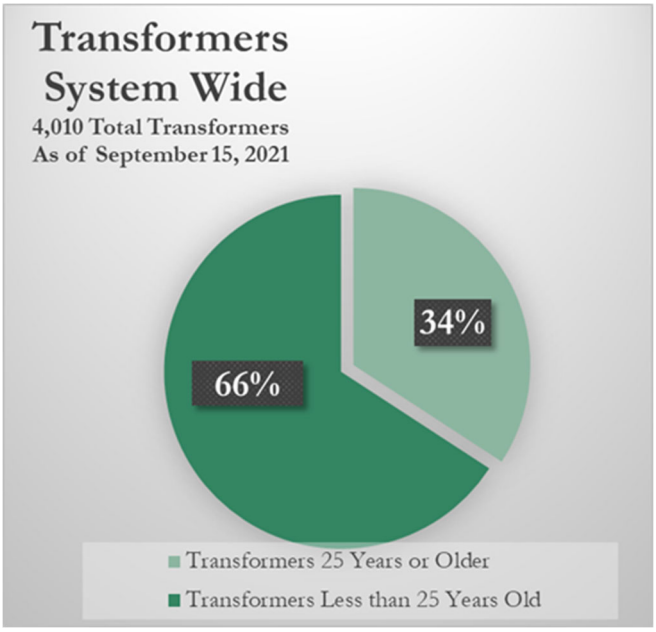
Project #: 668

Project Schedule: Annual

Project Manager: Vaughan Bryan, Senior Distribution Engineer

Reason for Expenditure:

In order to expedite the replacement of aged and over-loaded transformers on the system, the RMLD formalized the Aged/Overloaded Transformer Replacement Program as a separate capital project in 2020. RMLD plans to replace 120-150 aged or overloaded transformers annually either as part of this program or one of the other reliability programs (i.e., URD Upgrades, Stepdown Upgrades, Secondary and Main Upgrades).



Transformers Replaced 2021
108 Total YTD (through August)

	Pad-mount	Pole-Mount
Single Phase	26	75
Three Phase	3	4
Total	**29**	**79**

Brief Description/Scope:

All transformers over 25 years old have been prioritized for replacement based on age, physical condition, and load. Additionally, the transformer load management program will further identify transformers that need replacement. Any transformer replacement, which is not part of an area upgrade for one of the reliability programs, will be replaced under this project. RMLD crews, augmented by contract crews, will replace these transformers.

Barriers:

Difficulties scheduling outages with continued schooling and work from home due to the COVID-19 pandemic.

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
Year-to-date (through August) a total of 108 aged transformers have been replaced as part of this program or one of the other reliability projects as noted above.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Aged/Overloaded Transformer Replacement Program **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Replace three-phase pad-mount transformers system wide.		6.5	$0	$46,001	$5,980	Miscellaneous underground connectors, elbows, hardware and pads.	per transformer	$1,400.00	60	$84,000
Replace single-phase pad-mount transformers system side.	9.4		$68,524	$0	$8,648					
Replace three-phase pole-mount transformers system wide.		5.25	$0	$37,155	$4,830	Miscellaneous overhead connectors, poles, and hardware	per transformer	$1,000.00	35	$35,000
Replace single-phase pole-mount transformers system wide.	3.5		$25,514		$3,220					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
Replace single-phase pole-mount transformers system wide.	3.5		$28,000		$7,280					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Replace single-phase pad-mount transformers system side.	9.4		$65,717		$3,760					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	340.0	168.0	$36,164	$17,348						$0
Engineering: unit rate in hours			**$96**	**$93**						
Prepare construction documents, PoleForeman, 605As, outage setup, outages, GIS updates.	640.8	217.2	$61,540	$20,250						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Test UG cable connections; commercial customers being off hours	184.7	217.2	$16,145	$18,432	$8,440					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
Test rotation of commercial application; commercial customers being off hours	159.0	104.0	$10,510	$6,674	$5,523					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management	28.6		$3,214	$0		**Police Details**	**weeks**	**$2,427**	**5.4**	**$13,108**
TOTAL LABOR/VEHICLES			**$315,330**	**$145,859**	**$47,681**	**TOTAL MATERIALS/OTHER**				**$132,108**

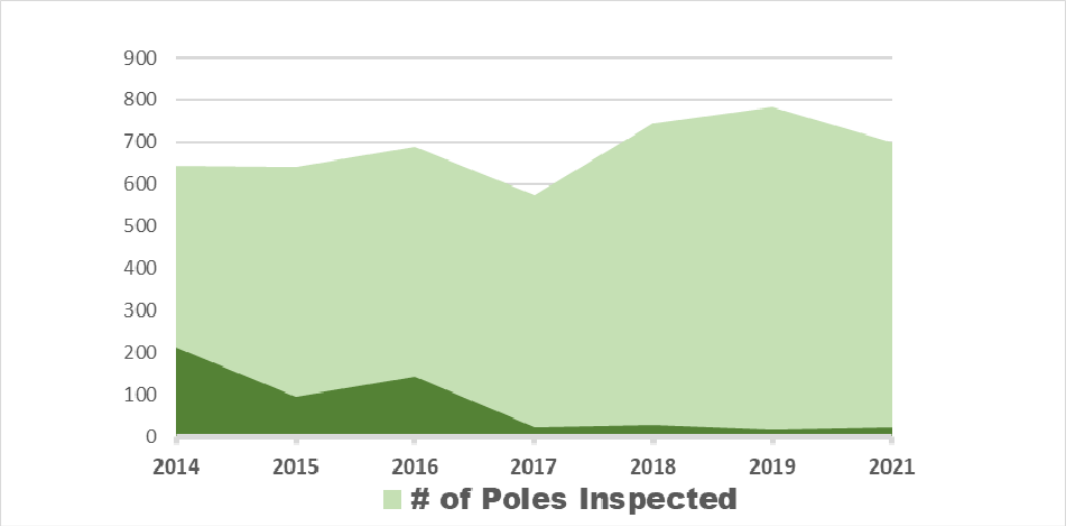
PROJECT TOTAL: $640,979

CAPITAL PROJECT SUMMARY

Project Name: Pole Replacement Program (R, NR) **Project #:** 175

Project Schedule: Annual **Project Manager:** Leo Keefe,
General Foreman Operations

Reason for Expenditure:
In 2014 RMLD initiated a Pole Inspection Program. Ten percent of RMLD-owned poles (Reading and North Reading) are inspected annually by an outside contractor using various technologies including resistorgraph technology. This Inspection Program provides RMLD with verifiable data on pole condition. Annual testing takes place each year in the fall. Testing (through 2021), has identified 541 poles that were recommended for replacement. The chart below shows the decline in the number of poles identified as "failed".



Note: Testing was not performed in 2020.

Brief Description/Scope:
RMLD will replace 50 poles per year that are identified as part of the Pole Inspection Program. This project includes setting poles, transfers, and replacing secondary services as needed.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
Since the inception of the Pole Inspection Program a total of 302 poles have been replaced, and 281 transfers have been completed (as of September 15, 2021).

CAPITAL PROJECT COST SHEET

PROJECT NAME: Pole Replacement Program, R/NR **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0					$0
			$0	$0	$0					$0
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
Set and transfer 50 poles.	20.0		$160,000		$41,600	Poles	each	$400.00	50.0	$20,000
			$0		$0	Miscellaneous hardware	per pole	$90.00	50.0	$4,500
Service upgrades as necessary	1.2		$9,600		$2,496	Connectors and wires (for service upgrades)	per service	$213.00	50.0	$10,650
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	200.0		$21,273	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Prepare PoleForemans and Digsafes	40.0		$3,841	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**	**10.0**	**$24,275**
TOTAL LABOR/VEHICLES			**$194,715**	**$0**	**$44,096**	**TOTAL MATERIALS/OTHER**				**$59,425**

PROJECT TOTAL: $298,235

CAPITAL PROJECT SUMMARY

Project Name: Substation Equipment Upgrade **Project #:** 111

Project Schedule: Annual **Project Manager:** Nick D'Alleva,
Assistant General Foreman Grid
Assets & Communications

Reason for Expenditure:
This is a proactive, preventive maintenance program for RMLD substations to increase reliability and prevent premature failure of long-lead substation equipment. United Power Group and RMLD personnel have identified substation equipment that needs to be replaced or upgraded as a result of their condition assessment. The equipment includes breakers, lightning arresters, potential transformers, bushings, and insulators at all substations.

Brief Description/Scope:

In 2022 the RMLD will purchase a spare 35Kv breaker, lightning arresters, and replacement insulator for installation at Station 4 and Station 5.

Barriers:
Availability of replacement parts.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
In 2021 the RMLD replaced the 35Kv lightning arresters for 115/35Kv transformers at Station 4.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Substation Equipment Upgrades **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Insulator replacements	2.7		$19,683	$0	$2,484	35Kv Breaker	each	$45,000.00	1	$45,000
			$0	$0	$0	Lightning arresters	each	$400.00	6	$2,400
			$0	$0	$0	Replacement Insulators	each	$200.00	24	$4,800
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
Testing and installation of lightning arresters	48.0		$4,196	$0	$1,008					$0
Insulator replacements	96.0		$8,392	$0	$2,016					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$32,270**	**$0**	**$5,508**	**TOTAL MATERIALS/OTHER**				**$52,200**

PROJECT TOTAL: $89,978

CAPITAL PROJECT SUMMARY

Project Name: Power/Lab and Tool Equipment **Project #:** 115

Project Schedule: Annual **Project Manager:** n/a

Reason for Expenditure:
This annual project is for the purchase of test equipment and tools. These purchases include the replacement or upgrade of existing equipment and new tools and equipment that assist line workers and technicians in performing their jobs safer and more efficiently.

Brief Description/Scope:

In 2022 the Grid Asset and Communications group plans to purchase a meter tester and thermal camera for detecting overheated equipment in order to schedule replacement before premature failure. The RMLD performs quarterly inspection of all substations, underground switches, and capacitor banks to detect any overheated and/or overloaded equipment system wide.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
Not applicable.

Status Update From Prior Fiscal Year:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Power/Lab and Tool Equipment **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
			$0	$0	$0	Shop Meter Tester	each	$50,000.00	1	$50,000
			$0	$0	$0	Flir Thermal Camera	each	$45,000.00	1	$45,000
			$0	$0	$0	Miscellaneous equipment as needed				$15,000
			$0	$0	$0					
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$0**	**$0**	**$0**	**TOTAL MATERIALS/OTHER**				**$110,000**

PROJECT TOTAL: $110,000

CAPITAL PROJECT SUMMARY

Project Name: Service Connections (Residential and Commercial) – All Towns **Project #:** various

Project Schedule: Annual **Project Manager:** Leo Keefe, General Foreman Operations

Reason for Expenditure:
Installation of new and upgraded services for both residential and commercial/industrial customers in the service territory.

Brief Description/Scope:
This item includes new service connections, upgrades, and service replacements for residential, commercial, and industrial customers. This represents the time and materials associated with the replacement of an existing or installation of a new overhead service drop and the connection of an underground service, etc. This does not include the time and materials associated with pole replacements/installations, transformer replacements/installations, primary or secondary cable replacements/ installations, etc. These aspects of a project are captured under Routine Construction.

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year
Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Service Connections (Residential and Commercial)

SCHEDULE: CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Install new and upgraded service connections at approximately 350 units.	12.0		$87,478	$0	$11,040	Secondary hardware, brackets, connectors, etc.	per service	$56.00	350	$19,600
			$0	$0	$0	120' of 1/0 - 3/C service wire for each service	per service	$100.00	350.0	$35,000
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
			$0		$0					$0
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews			$0	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
			$0	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**		**$0**
TOTAL LABOR/VEHICLES			**$87,478**	**$0**	**$11,040**	**TOTAL MATERIALS/OTHER**				**$54,600**

PROJECT TOTAL: $153,118

CAPITAL PROJECT SUMMARY

Project Name: Routine Construction **Project #:** various

Project Schedule: Annual **Project Manager:** Various

Reason for Expenditure:
Routine Construction covers unplanned routine activity as well as capital construction projects that develop during the year including, but not limited to items shown below.

Brief Description/Scope:
- Overhead and underground system upgrades
- Miscellaneous projects
- Pole damage
- Station upgrades
- Porcelain cutout replacements
- Street Light Connections – new equipment installation
- Pole setting/transfers
- Underground subdivisions (new construction)

Barriers:
None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year:
Not applicable.

Status Update:
Not applicable.

CAPITAL PROJECT COST SHEET

PROJECT NAME: Routine Construction **SCHEDULE:** CY2022

	LABOR					MATERIALS/OTHER				
	# of Units		Labor Total (unit rate x labor units)		Vehicle (labor units x vehicle rate)					
ITEM/TASK	Straight Time	OT	Straight Time	OT		DESCRIPTION	Unit	Unit Rate	# of Units	TOTAL
RMLD Line Crews 2-man crew - unit rate in weeks			**$7,290**	**$7,077**	**$920**					
Capital Construction	30.0	10.0	$218,695	$70,771	$36,800	Materials as necessary				$300,000
Street Light Installations	4.0		$29,159	$0	$3,680	Materials as necessary				$50,000
			$0	$0	$0					$0
Overhead Contractor 2-man crew - unit rate in weeks			**$8,000**	**N/A**	**$2,080**					
Pole Setting/Transfers	30		$240,000		$62,400	Materials as necessary				$95,000
			$0		$0					$0
Underground Contractor 2-man crew - unit rate in weeks			**$6,991**	**N/A**	**$400**					
Underground Construction	5		$34,956		$2,000	Materials as necessary				$125,000
			$0		$0					$0
			$0		$0					$0
Line Operations Supervision: unit rate in hours			**$106**	**$103**						
Supervision of Line crews	110.0		$11,700	$0						$0
Engineering: unit rate in hours			**$96**	**$93**						
Project Management	400.0		$38,415	$0						$0
			$0	$0						$0
Senior Tech: unit rate in hours			**$87**	**$85**	**$21**					
			$0	$0	$0					$0
			$0	$0	$0					$0
Meter Tech: unit rate in hours			**$66**	**$64**	**$21**					
			$0	$0	$0					$0
Technical Services Manager: unit rate in hours			**$113**	**$109**						
Supervision/Project Management			$0	$0		**Police Details**	**weeks**	**$2,427**	**52.0**	**$126,229**
TOTAL LABOR/VEHICLES			**$572,925**	**$70,771**	**$104,880**	**TOTAL MATERIALS/OTHER**				**$696,229**

PROJECT TOTAL: $1,444,804

2022 OPERATING BUDGET

Reading Municipal Light Department
Six Year Plan
CY22-CY27

	CY22 BUDGET	CY23 BUDGET	CY24 BUDGET	CY25 BUDGET	CY26 BUDGET	CY27 BUDGET
FORECASTED kWh SALES	**663,883,547**	**669,226,164**	**674,649,452**	**680,061,792**	**685,525,136**	**691,040,020**
OPERATING REVENUES						
SALES OF ELEC - BASE	$ 30,099,569	$ 32,040,746	$ 33,897,404	$ 34,251,312	$ 34,596,577	$ 35,464,316
SALES OF ELEC - FUEL	26,522,356	26,607,312	28,566,880	31,399,268	31,434,068	32,186,758
SALES OF ELEC - CAPACITY/TRANSMISSION	** 35,435,495	** 36,922,346	38,516,244	40,074,578	41,865,322	43,773,392
FORFEITED DISCOUNTS	902,987	961,222	1,016,922	1,027,539	1,037,897	1,063,929
EFFICIENCY ELECTRIFICATION	1,991,651	2,007,678	2,023,948	2,040,185	2,056,575	2,073,120
NYPA	(1,057,302)	(1,069,990)	(1,082,830)	(1,095,824)	(1,108,974)	(1,122,281)
TOTAL OPERATING REVENUES	93,894,755	97,469,315	102,938,568	107,697,059	109,881,465	113,439,234
OPERATING EXPENSES						
PURCHASED POWER - FUEL	25,465,054	25,537,322	27,484,050	30,303,444	30,325,094	31,064,477
PURCHASED POWER - CAPACITY	16,978,311	17,226,785	17,485,484	17,615,344	17,877,814	18,150,827
PURCHASED POWER - TRANSMISSION	18,457,184	19,695,561	21,030,760	22,459,234	23,987,508	25,622,565
EFFICIENCY AND ELECTRIFICATION EXPENSE	2,441,101	2,821,348	3,079,398	2,040,185	2,056,575	2,073,120
OPERATING & MAINTENANCE EXPENSE	6,559,972	6,756,771	6,959,474	7,168,259	7,168,259	7,383,306
GENERAL & ADMINISTRATIVE EXPENSE	13,124,771	13,518,514	13,924,070	14,341,792	14,341,792	14,772,045
DEPRECIATION EXPENSE	5,108,876	5,475,656	5,900,186	6,333,686	6,509,756	6,706,706
TOWN PAYMENTS - 2% NET PLANT	1,707,839	1,850,182	2,023,689	2,194,685	2,185,391	2,186,496
TOTAL OPERATING EXPENSES	89,843,108	92,882,139	97,887,110	102,456,628	104,452,189	107,959,543
OPERATING INCOME	4,051,647	4,587,176	5,051,458	5,240,430	5,429,277	5,479,691
NON-OPERATING REVENUES (EXPENSES)						
INTEREST INCOME	300,000	300,000	300,000	300,000	300,000	300,000
OTHER INCOME	850,000	850,000	850,000	850,000	850,000	850,000
VOLUNTARY PAYMENT TO READING	(2,528,587)	(2,550,081)	(2,573,391)	(2,593,356)	(2,614,252)	(2,635,305)
LOSS ON DISPOSAL OF ASSETS	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
CUSTOMER DEPOSIT INTEREST EXP	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)
TOTAL NON-OPERATING REVENUES (EXPENSES)	(1,518,587)	(1,540,081)	(1,563,391)	(1,583,356)	(1,604,252)	(1,625,305)
NET INCOME	$ 2,533,060	$ 3,047,095	$ 3,488,067	$ 3,657,075	$ 3,825,024	$ 3,854,386
RATE OF RETURN	**5.20%**	**5.28%**	**5.30%**	**5.49%**	**5.66%**	**5.74%**

The RMLD is allowed up to 8% rate of return. However, strategic planning targets a balance of keeping rates low, funding the capital infrastructure plan and supporting non-operating expenses.
****CY22-CY23 Portion of Projected Increase Supplemented by Rate Stabilization Fund**

Town of Reading, Massachusetts
Municipal Light Department
Statement of Budgeted and Actual Revenues and Expenses

	CY20 BUDGET	CY20 ACTUAL	CY20 BUDGET/ACTUAL % CHANGE	CY21 BUDGET	CY21 8 MOS ACTUAL 4 MOS BUDGET	CY21 BUDGET/ACTUAL % CHANGE	CY22 BUDGET
Operating Revenues							
Base Revenue	$ 29,040,738	$ 27,563,289	(5.09%)	$ 28,292,988	$ 27,686,586	(2.14%)	$ 30,099,569
Fuel Revenue	28,063,578	25,190,503	(10.24%)	27,894,454	26,082,849	(6.49%)	26,522,356
Purchased Power Capacity & Transmission	37,709,613	32,421,014	(14.02%)	35,465,548	33,865,547	(4.51%)	35,435,495
Forfeited Discounts	871,222	825,514	(5.25%)	929,005	969,027	4.31%	902,987
Energy Conservation Revenue	658,683	642,683	(2.43%)	653,994	659,193	0.80%	1,991,651
NYPA Credit	(1,138,021)	(1,070,670)	(5.92%)	(1,143,574)	(1,155,827)	1.07%	(1,057,302)
Total Operating Revenues	95,205,813	85,572,333	(10.12%)	92,092,414	88,107,375	(4.33%)	93,894,755
Expenses							
Power Expenses							
555 Purchased Power - Fuel	26,925,557	25,060,119	(6.93%)	26,750,880	26,373,346	(1.41%)	25,465,054
555 Purchased Power - Capacity	22,457,141	18,181,263	(19.04%)	17,687,368	16,537,603	(6.50%)	16,978,311
565 Purchased Power - Transmission	15,252,472	14,016,892	(8.10%)	17,778,180	16,951,257	(4.65%)	18,457,184
Total Purchased Power	64,635,170	57,258,273	(11.41%)	62,216,428	59,862,206	(3.78%)	60,900,549
Operating and Maintenance Expenses							
580 Supervision and Engineering	1,127,868	1,040,014	(7.79%)	1,143,193	1,029,422	(9.95%)	1,153,589
581 Station/Control Room Operators	476,641	485,450	1.85%	497,935	479,534	(3.70%)	538,942
582 Station Technicians	543,129	442,272	(18.57%)	448,015	519,774	16.02%	674,564
583 Line General Labor	468,999	584,261	24.58%	1,058,760	696,990	(34.17%)	1,124,845
586 Meter General	166,732	159,674	(4.23%)	192,017	201,069	4.71%	197,788
588 Materials Management	504,493	442,388	(12.31%)	455,963	441,064	(3.27%)	471,160
593 Maintenance of Lines - Overhead	1,003,333	400,587	(60.07%)	558,801	462,425	(17.25%)	552,225
593 Maintenance of Lines - Tree Trimming	899,090	631,152	(29.80%)	918,849	696,410	(24.21%)	907,776
594 Maintenance of Lines - Underground	112,590	56,754	(49.59%)	80,896	51,539	(36.29%)	88,139
595 Maintenance of Lines - Transformers	223,438	188,975	(15.42%)	227,331	313,869	38.07%	373,160
598 Line General Leave Time Labor	569,169	414,901	(27.10%)	447,878	380,853	(14.97%)	477,783
Total Operating and Maintenance Expenses	6,095,483	4,846,427	(20.49%)	6,029,637	5,272,947	(12.55%)	6,559,972
General & Administrative Expenses							
903 Customer Collection	1,181,516	1,293,878	9.51%	969,389	1,035,390	6.81%	1,176,246
904 Uncollectible Accounts	105,000	41,701	(60.28%)	105,000	105,000	0.00%	105,000
916 Integrated Resources	647,519	655,991	1.31%	601,419	743,600	23.64%	987,280
916 Efficiency and Electrification Expense	958,765	986,585	2.90%	1,214,035	1,954,751	61.01%	2,441,101
920 Administrative and General Salaries	2,109,933	2,038,351	(3.39%)	2,251,022	1,886,955	(16.17%)	2,373,838
921 Office Supplies	20,000	8,504	(57.48%)	20,000	20,000	0.00%	20,000
923 Outside Services - Legal	498,400	544,220	9.19%	497,000	482,625	(2.89%)	455,918
923 Outside Services - Contract	361,250	349,362	(3.29%)	508,400	518,489	1.98%	735,700
923 Outside Services - Education	266,975	61,935	(76.80%)	257,821	152,769	(40.75%)	329,826
924 Property Insurance	437,500	383,382	(12.37%)	489,700	443,616	(9.41%)	556,500
925 Injuries and Damages	7,678	3,723	(51.51%)	25,600	34,078	33.12%	25,600
926 Employee Pensions and Benefits	3,702,391	4,766,532	28.74%	3,697,458	3,697,432	(0.00%)	3,821,325
930 Miscellaneous General Expense	317,286	257,187	(18.94%)	506,290	478,511	(5.49%)	580,127
931 Rent Expense	212,000	194,542	(8.24%)	212,000	207,530	(2.11%)	212,000
933 Vehicle Expense	333,600	279,023	(16.36%)	388,600	361,234	(7.04%)	379,000
933 Vehicle Expense - Capital	(225,125)	(336,159)	49.32%	(354,544)	(351,628)	(0.82%)	(276,428)
935 Maintenance of General Plant - Technology	394,440	544,988	38.17%	463,775	511,054	10.19%	713,120
935 Maintenance of Building & Garage	908,880	1,178,224	29.63%	933,475	847,549	(9.20%)	929,718
Total General & Administrative Expenses	12,238,008	13,251,970	8.29%	12,786,440	13,128,954	2.68%	15,565,872
Other Operating Expenses							
403 Depreciation	4,734,000	4,699,207	(0.73%)	4,916,345	4,883,756	(0.66%)	5,108,876
408 Voluntary Payments to Towns	1,617,660	1,607,009	(0.66%)	1,654,460	1,655,434	0.06%	1,707,839
Total Other Expenses	6,351,660	6,306,216	(0.72%)	6,570,805	6,539,190	(0.48%)	6,816,715
Operating Income	5,885,492	3,909,446	(33.57%)	4,489,104	3,304,079	(26.40%)	4,051,647
Non-operating Revenues (Expenses)							
415 Contributions in Aid of Construction	-	-	0.00%	300,000	30,000	0.00%	50,000
419 Interest Income	350,000	390,425	11.55%	500,000	192,000	(61.60%)	300,000
419 Other Income	850,000	546,048	(35.76%)	795,000	645,000	(18.87%)	710,000
421 Intergovernmental Grants	-	451,761	0.00%	90,000	240,000	0.00%	90,000
426 Return on Investment Payment to Reading	(2,480,506)	(2,480,506)	(0.00%)	(2,480,506)	(2,480,506)	0.00%	(2,528,587)
426 Loss on Disposal	(100,000)	(163,530)	63.53%	(100,000)	(100,000)	0.00%	(100,000)
431 Interest Expense	(25,000)	(27,777)	11.11%	(45,000)	(45,000)	0.00%	(40,000)
Total Non-operating Revenues (Expenses)	(1,405,506)	(1,283,579)	(8.67%)	(940,506)	(1,518,506)	61.46%	(1,518,587)
Net Income	$ 4,479,987	$ 2,625,868	(41.39%)	$ 3,548,598	$ 1,785,573	(49.68%)	$ 2,533,060

Town of Reading, Massachusetts
Municipal Light Department
Statement of Budgeted Revenues and Expenses

	CY22 BUDGET	CY21 BUDGET	Change in Budget %
Operating Revenues			
Base Revenue	$ 30,099,569	$ 28,292,988	6.39%
Fuel Revenue	26,522,356	27,894,454	(4.92%)
Purchased Power Capacity/Transmission	35,435,495	35,465,548	(0.08%)
Forfeited Discounts	902,987	929,005	13.40%
Energy Conservation Revenue	1,991,651	653,994	204.54%
NYPA	(1,057,302)	(1,143,574)	(7.54%)
Total Operating Revenues	93,894,755	92,092,414	2.12%
Expenses			
Power Expenses			
555 Purchased Power - Fuel	25,465,054	26,750,880	(4.81%)
555 Purchased Power - Capacity	16,978,311	17,687,368	(4.01%)
565 Purchased Power - Transmission	18,457,184	17,778,180	3.82%
Total Purchased Power	60,900,549	62,216,428	(2.12%)
Operating and Maintenance Expenses			
580 Supervision and Engineering	1,153,589	1,143,193	0.91%
581 Station/Control Room Operators	538,942	497,935	8.24%
582 Station Tech	674,564	448,015	50.57%
583 Line General Labor	1,124,845	1,058,760	6.24%
586 Meter General	197,788	192,017	3.01%
588 Materials Management	471,160	455,963	3.33%
593 Maintenance of Lines - Overhead	552,225	558,801	(1.18%)
593 Maintenance of Lines - Tree Trimming	907,776	918,849	(1.21%)
594 Maintenance of Lines - Underground	88,139	80,896	8.95%
595 Maintenance of Lines - Transformers	373,160	227,331	64.15%
598 Line General Leave Time Labor	477,783	447,878	6.68%
Total Operating and Maintenance Expenses	6,559,972	6,029,637	8.80%
General & Administrative Expenses			
903 Customer Collection	1,176,246	969,389	21.34%
904 Uncollectible Accounts	105,000	105,000	0.00%
916 Integrated Resources	987,280	601,419	64.16%
916 Efficiency and Electrification Expense	2,441,101	1,214,035	101.07%
920 Administrative and General Salaries	2,373,838	2,251,022	5.46%
921 Office Supplies	20,000	20,000	0.00%
923 Outside Services-Legal	455,918	497,000	(8.27%)
923 Outside Services-Contract	735,700	508,400	44.71%
923 Outside Services-Education	329,826	257,821	27.93%
924 Property Insurance	556,500	489,700	13.64%
925 Injuries and Damages	25,600	25,600	0.00%
926 Employee Pensions and Benefits	3,821,325	3,697,458	3.35%
930 Miscellaneous General Expense	580,127	506,290	14.58%
931 Rent Expense	212,000	212,000	0.00%
933 Vehicle Expense	379,000	388,600	(2.47%)
933 Vehicle Expense - Capital	(276,428)	(354,544)	(22.03%)
935 Maintenance of General Plant - Technology	713,120	463,775	53.76%
935 Maintenance of Building & Garage	929,718	933,475	(0.40%)
Total General & Administrative Expenses	15,565,872	12,786,440	21.74%
Other Operating Expenses			
403 Depreciation	5,108,876	4,916,345	3.92%
408 Voluntary Payments to Towns	1,707,839	1,654,460	3.23%
Total Other Expenses	6,816,715	6,570,805	3.74%
Operating Income	4,051,647	4,489,104	(6.39%)
Non-operating Revenues (Expenses)			
415 Contributions in Aid of Construction	50,000	300,000	(83.33%)
419 Interest Income	300,000	500,000	(40.00%)
419 Other Income	710,000	795,000	(10.69%)
421 Intergovernmental Grants	90,000	90,000	0.00%
426 Return on Investment Payment to Reading	(2,528,587)	(2,480,506)	1.94%
426 Loss on Disposal	(100,000)	(100,000)	0.00%
431 Interest Expense	(40,000)	(45,000)	(11.11%)
Total Non-operating Revenues (Expenses)	(1,518,587)	(940,506)	61.46%
Net Income	$ 2,533,060	$ 3,548,598	(24.38%)

Reading Municipal Light Department
Operating Budget Supplemental Information
Budgeted and Actual Fixed and Semi-Variable Costs

	CY 20 BUDGET	CY 20 ACTUAL	CY 21 BUDGET	CY 21 8 MOS ACTUAL 4 MOS BUDGET	CY 22 BUDGET	CY 22 % OF BUDGET
FIXED COSTS						
Purchased Power - Fuel	$ 26,925,557	$ 25,060,119	$ 26,750,880	$ 26,373,346	$ 25,465,054	27.53%
Purchased Power - Capacity	22,457,141	18,181,263	17,687,368	16,537,603	16,978,311	18.35%
Purchased Power - Transmission	15,252,472	14,016,892	17,778,180	16,951,257	18,457,184	19.95%
						65.82%
Depreciation Expense	4,734,000	4,699,207	4,916,345	4,883,756	5,108,876	5.52%
Return on Investment Payment to Reading	2,480,506	2,480,506	2,480,506	2,480,506	2,528,587	2.73%
Town Payments - 2% of Net Plant	1,617,660	1,607,009	1,654,460	1,655,434	1,707,839	1.85%
Loss on Disposal of Assets	100,000	163,530	100,000	100,000	100,000	0.11%
TOTAL FIXED COSTS	73,567,336	66,208,525	71,367,739	68,981,902	70,345,851	**76.04%**
SEMI-VARIABLE COSTS						
Labor Expense	8,787,642	7,896,138	8,352,246	7,817,430	9,405,351	10.17%
Labor - Capital	(1,167,165)	(1,608,870)	(1,216,814)	(1,561,885)	(1,483,143)	-1.60%
						8.56%
Overtime Expense	1,051,800	1,042,373	1,066,200	1,108,684	1,036,780	1.12%
Overtime - Capital	(176,732)	(333,903)	(190,534)	(310,528)	(184,731)	-0.20%
						0.92%
Employee Benefits/Pension	4,413,754	5,287,591	4,508,090	4,059,694	4,782,020	5.17%
Employee Benefits/Pension - Capital	(774,085)	(521,059)	(810,632)	(362,262)	(960,695)	-1.04%
						4.13%
Other Operating and Maintenance Expense	1,650,981	2,513,183	2,161,285	2,236,177	2,575,148	2.78%
Efficiency and Electrification Expense	958,765	986,585	1,214,035	1,954,751	2,441,101	2.64%
Tree Trimming Services	899,090	591,686	918,849	696,410	907,776	0.98%
Contract/Consulting Services	361,250	349,362	508,400	518,489	735,700	0.80%
Software/Hardware Maintenance	394,440	544,988	463,775	511,054	713,120	0.77%
Property Insurance	437,500	383,382	489,700	443,616	556,500	0.60%
Legal Expense	498,400	544,220	497,000	482,625	455,918	0.49%
Vehicle Expense	333,600	279,023	388,600	361,234	379,000	0.41%
Vehicle Expense - Capital	(225,125)	(336,159)	(354,544)	(351,628)	(276,428)	-0.30%
Transformer Maintenance (Hazardous Material)	210,000	186,275	215,000	313,869	360,000	0.39%
Training & Tuition Reimbursement Expense	266,975	61,935	257,821	152,769	329,826	0.36%
Rent Expense	212,000	194,542	212,000	207,530	212,000	0.23%
Bad Debt Expense	105,000	41,701	105,000	105,000	105,000	0.11%
Injuries & Damages	70,400	3,723	25,600	34,078	25,600	0.03%
RMLB/CAB	30,000	10,954	30,000	9,795	30,000	0.03%
Office Supplies	20,000	8,504	20,000	20,000	20,000	0.02%
TOTAL SEMI-VARIABLE COSTS	18,358,491	18,126,175	18,861,077	18,446,900	22,165,844	**23.96%**
TOTAL	$ 91,925,827	$ 84,334,700	$ 90,228,816	$ 87,428,802	$ 92,511,695	**100.00%**

2022 POWER SUPPLY

Bulk Power Cost Projections
Reading Municipal Light Department
Total 2022 (Jan-Dec)

FCA TK
System Peak Demand (KW)
System Energy Requirements (MWH)

RESOURCES	FIXED COSTS Budget ($)	ENERGY Budget ($)	TRANS. COSTS Budget ($)	TOTAL COSTS Budget ($)
NYPA	$ 202,783.68	$ 135,978.92	$ 366,885.81	$ 705,648.41
Millstone Mix 1	$ 733,519.88	$ 141,114.37	$ 24,692.76	$ 899,327.01
Millstone Project 3	$ 512,636.91	$ 100,574.92	$ 17,584.60	$ 630,796.43
Seabrook Mix 1	$ 44,318.02	$ 12,147.08	$ 160.73	$ 56,625.84
Seabrook Project 4	$ 1,263,511.03	$ 275,839.88	$ 3,641.74	$ 1,542,992.65
Seabrook Project 5	$ 160,567.73	$ 34,023.64	$ 449.35	$ 195,040.72
SUBTOTAL - BASE	$ 2,917,337.25	$ 699,678.81	$ 413,415.00	$ 4,030,431.06
ISO FCM Costs	$ 9,064,806.25			$ 9,064,806.25
FCM Payments from LP	$ (441,368.72)			$ (441,368.72)
Saddleback Wind		$ 1,399,198		$ 1,399,197.64
Indian River Hydro		$ 318,358		$ 318,358.40
Pepperell Hydro		$ 868,394		$ 868,393.94
Turners Falls Hydro		$ 190,205		$ 190,205.38
Woronoco Hydro		$ 295,523		$ 295,523.21
Collins Hydro		$ 458,916		$ 458,915.81
Pioneer Hydro		$ 572,543		$ 572,542.68
Silver St Hydro		$ 255,454		$ 255,454.42
Wyre Wind Hydro		$ 449,446		$ 449,445.77
Jericho Wind		$ 810,269		$ 810,269.42
Exelon		$ -		
NextEra		$ 8,990,593		$ 8,990,592.54
Shepaug		$ 738,563		$ 738,563.11
Stevenson		$ 366,153		$ 366,152.87
Solar - Altus		$ 117,668		$ 117,668.50
Solar - Marina		$ 214,968		$ 214,967.52
Solar - Kearsarge		$ 172,735		$ 172,734.63
Quinebaug Hydro		$ 861,570		$ 861,569.61
RoxWind		$ 2,228,676		$ 2,228,675.64
Gravel Pit Solar III		$ -		$ -
Cabot/Tuners		$ 1,059,172		$ 1,059,171.53
Gravity Renewables CT		$ 1,625,000		$ 1,625,000.00
Gravity Renewables Dahowa (NY)		$ 2,100,000		$ 2,100,000.00
GMP (Gravity) Plant #4 (NY)		$ 1,375,000		$ 1,375,000.00
Battery Storage	$ 274,464.00			$ 274,464.00
Coop / Resale	$ 25,200.00			$ 25,200.00
Watson	$ 1,343,738.71	$ -	$ -	$ 1,343,738.71
StonyBrook Inter	$ 2,011,544.83	$ 432,259.43	$ 54,322.22	$ 2,498,126.48
SUBTOTAL - INTERMEDIATE	$ 12,278,385.06	$ 25,900,662.06	$ 54,322.22	$ 38,233,369.34
StonyBrook Peaking	$ 695,308.98	$ 51,640.13	$ 28,074.78	$ 775,023.89
SUBTOTAL - PEAKING	$ 695,308.98	$ 51,640.13	$ 28,074.78	$ 775,023.89
ISO Energy Net Interchange		$ 2,826,168.29		$ 2,826,168.29
Eversource Transmission	$ -	-	$ 12,337.33	$ 12,337.33
ENE All Req/Short Supply	$ 312,660.00	-	-	$ 312,660.00
ISO Ancillary/Schedule Charges	1,035,243.67	-	-	$ 1,035,243.67
ISO Annual Fee	5,570.00	-	-	$ 5,570.00
PDR Transmission	$ -	$ -	$ 102,350.98	$ 102,350.98
ISO RNS Charges	$ -	$ -	$ 17,775,912.81	$ 17,775,912.81
HQ Phase I-VEC	$ -	$ -	$ 13,109.04	$ 13,109.04
HQ Phase I-NEE	$ -	$ -	$ 36,705.31	$ 36,705.31
HQ Phase II	$ -	$ -	$ 262,180.80	$ 262,180.80
HQ Use Right Sale	$ (266,193.63)	$ -	$ (241,224.06)	$ (507,417.69)
SUBTOTAL - OTHER CHARGES	$ 1,087,280.03	$ -	$ 17,961,372.22	$ 19,048,652.25
Certificates				
RECs		$ (4,013,095.14)		$ (4,013,095.14)
SUBTOTAL - Certificates		$ (4,013,095.14)		$ (4,013,095.14)
TOTAL	**$ 16,978,311.33**	**$ 25,465,054.14**	**$ 18,457,184.22**	**$ 60,900,549.69**

Description of RMLD's Power Supply Resources for 2022

Stony Brook Intermediate Unit

The Stony Brook Intermediate Unit is a 354-megawatt, combined-cycle power plant that entered commercial operation in 1981.

The unit's three gas turbines generate electricity using either No. 2 oil or natural gas, with additional electricity produced using a single steam turbine in the combined-cycle process. MMWEC completed construction of a natural gas pipeline to serve the Intermediate Unit in September 2002. RMLD has a Life of Unit (LOU) entitlement for 14.453% of the unit or approximately 51 MWs. RMLD has paid off the debt service associated with this project.

Quick Facts – Stonybrook Intermediate Unit

Location	Ludlow, Massachusetts
On-Line Date	1981
Fuel	No. 2 oil/natural gas
Principal Owner/Operator	MMWEC
Total Capacity	354 MWs

Stony Brook Peaking Unit

The Stony Brook Peaking Unit is a 172-megawatt peaking plant that entered commercial operation in 1982.

The unit's two turbines generate electricity using No. 2 oil. RMLD has a Life of Unit (LOU) entitlement for 19.516% of the unit which is equivalent to approximately 33 MWs. RMLD has paid off the debt service associated with this project.

Quick Facts – Stonybrook Peaking Unit

Location	Ludlow, Massachusetts
On-Line Date	1982
Fuel	No. 2 oil
Principal Owner/Operator	MMWEC
Total Capacity	172 MWs

Braintree Electric Light Department - Watson Unit

The simple-cycle gas fired plant is powered by the first two Rolls-Royce Trent 60 gas turbines built for the U.S. power generation market – known as Watson Units #1 and #2. The units entered commercial operation on June 23, 2009.

Both Watson Units are bid into the ISO New England market system daily and are dispatched based on their bid price.

The units two turbines generate electricity using natural gas, with No. 2 oil as backup fuel. RMLD has a 20 year entitlement for 10% of the unit which is equivalent to about 10 MWs.

Quick Facts – Watson Unit

Location	Braintree, Massachusetts
On-Line Date	2009
Fuel	Natural gas/No. 2 oil
Principal Owner/Operator	BELD
Total Capacity	100 MWs

Seabrook Station

Seabrook Station is a 1,244-megawatt nuclear generating plant located in Seabrook, New Hampshire. An operating license for Seabrook was issued in 1986, but the plant did not begin commercial operation until 1990. The principal owner and operator of Seabrook Station is NextEra Energy Resources LLC, a subsidiary of Florida based FPL Group, Inc. NextEra owns 88.2% of Seabrook Station. The other owners are MMWEC (11.59%) and two Massachusetts municipal utilities, the Taunton Municipal Lighting Plant (0.13%) and Hudson Light & Power Department (0.08%).

On March 12, 2019, NextEra received an extension of its Seabrook operating license from the current license expiration of 2030 out to March 15, 2050. RMLD signed 3 different projects to finance Seabrook; Mix 1, Project 4, and Project 5. The debt service associated with these projects will be paid-off in 2014, 2017 & 2018 respectively. RMLD has a Life of Unit (LOU) entitlement for 0.635% or approximately 8 MWs of the unit. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Quick Facts – Seabrook Station

Location	Seabrook, New Hampshire
On-Line Date	1990
Fuel	Nuclear – Pressurized Water Reactor
Principal Owner/Operator	NextEra Energy Resources, LLC
Total Capacity	1,244 MWs

Millstone Unit 3

Millstone Unit 3 is a 1,237-megawatt nuclear generating plant located in Waterford, Connecticut. Millstone Unit 3, which began operation in 1986, is the newest and largest of the Millstone Station's three nuclear units, one of which is retired from service. The principal owner and operator of Millstone Station is Dominion Nuclear Connecticut, Inc., a subsidiary of Virginia-based Dominion Resources, Inc. Dominion Connecticut owns 93.4% of Millstone Unit 3.

The Nuclear Regulatory Commission (NRC) on November 28, 2005 approved Dominion Nuclear Connecticut's request for a 20-year operating license extension for Millstone's Unit 3 reactor. The license now expires in November, 2045. RMLD signed two different projects to finance Millstone #3, Mix 1 and Project 3. The debt service associated with these projects has been paid off as of 2018. RMLD has a LOU agreement for 0.404% of the units which equates to approximately 4.6 MWs. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Quick Facts – Millstone Station

Location	Waterford, Connecticut
On-Line Date	1986
Fuel	Nuclear – Pressurized Water Reactor
Principal Owner/Operator	Dominion Nuclear Connecticut, Inc.
Total Capacity	1,237 MWs

New York Power Authority (NYPA)

RMLD receives inexpensive hydroelectric power from NYPA at its generating stations in Niagra and St. Lawrence NY. RMLD receives capacity and energy from this contract. The Massachusetts Department of Public Utilities (DPU) has appointed MMWEC as the administrator of this contract. The current contract expires in 2025. This is a non-carbon

generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Hydro-Quebec Interconnection

The Hydro-Quebec Interconnection Phase 1 is an approximate 2,000 MW, DC electric transmission line connecting central New England with the Canadian utility Hydro Quebec. Construction of the U.S. portion of the interconnection, which stretches from Groton/Ayer, in Massachusetts to the Canadian border in northern Vermont, was a joint effort of many New England electric utitilies. RMLD has an entitlement of approximately 0.47% of the capacity of the facility from this contract. Currently, RMLD sells it share of the facility's capacity.

The Hydro-Quebec Interconnection Phase 2 is a 450 kV DC electric transmission line connecting the Canadian utility, Hydro Quebec's hydro facilities at La Grande in James Bay with Sandy Pond in Massachusetts. This was a joint effort between Hydro Quebec and a number of New England electric utilities. RMLD receives approximately 0.48% of the capacity of the facility from this contract. Currently, RMLD sells it share of the facility's capacity.

NextEra: TFA

In December, 2017 RMLD signed a Master Supply Agreement, as well as a Transaction Facilitation Agreement with NextEra that enables RMLD to leverage NextEra's trade floor. RMLD approved a Risk Management Strategy that secures transactions based on price and time triggers. The Risk Management Strategy will permit RMLD to take advantage of price opportunities consistently over the next several years and beyond. This strategy will allow RMLD to secure monthly quantities that are below the four year average versus locking in annual quantities. Additionally, the strategy of utilizing time triggers will smooth out variations in the market over time. The TFA has prompted RMLD to purchase on-peak and off-peak energy blocks out to the year 2025. Under the TFA, RMLD has currently secured 284,947 MWHs for 2022, 174,373 MWHs for 2023, 82,300 MWHs for 2024 and 5,363 MWHs for 2025.

Eagle Creek Energy Holdings

In March, 2011 RMLD signed purchase power agreements with Swift River Hydro, LLC for the output of four hydro systems located in Massachusetts that are effective from

February 1, 2011 through January 31, 2026. Swift River Trading Company is the lead market participant for and represents these hydroelectric generators with a total nameplate capacity of approximately 7 MWs and average annual generation of 25,000 megawatt-hours per year.

These facilities include the Woronoco Hydro facility in Russell, MA, Pepperell Hydro in Pepperell, MA; Indian River Power Supply in Russell, MA; and Turners Falls Hydro in Turners Falls, MA. Each of these facilities is owned by a special purpose entity, e.g., the Woronoco facility is owned by Woronoco Hydro, LLC. In 2016, Swift River Trading Company assigned the projects to Eagle Creek Energy Holdings. The four facilities are now managed by the Eagle Creek Energy Holdings as the lead market participant for each of the facilities. RMLD is the only buyer. These are non-carbon generating resources and RMLD is entitled to the associated output certificates for its share of the facilities.

- **Pepperell Hydro:** 15-year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1.9 MWs. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates, and Environmental Attributes (to the extent not included in the RECs).

- **Woronoco Hydro:** 15-year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 2.7 MWs. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates, and Environmental Attributes (to the extent not included in the RECs).

- **Turners Falls Hydro:** 15-year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1 MW. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs).

- **Indian River Hydro:** 15-year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1.4 MWs. The products include, but are not limited to, Energy, Installed Capacity, Ancillary

Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs).

Collins Hydro

In August, 2013, RMLD signed a purchase power agreement with Swift River Hydro LLC.for the output of Collins Hydro located in between Ludlow and Wilbraham Massachusetts. The contract with Swift River Hydro is effective from September 1, 2013 through August 31, 2028. RMLD receives enery only from this contract. The average annual generation is approximately 5,667 MWHs per year. This is a non-carbon generating resource and RMLD is exploring acquisiton of the associated output certificates for the facility.

Pioneer Hydro

In August, 2013, RMLD signed a purchase power agreement with Ware River Power Inc. for the output of Pioneer Hydro located in Ware, Massachusetts. The contract for Pioneer Hydro is effective from September 1, 2013 through August 31, 2028. RMLD receives enery only from this contract. The average annual generation is approximately 4,480 MWHs per year. This is a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility.

Hoisery Mills Hydro

In March, 2014, RMLD signed a purchase power agreement with Silver Street Hydro Inc. for the output of Hosiery Mills located in Hillsborough, New Hampshire. The contract for Hosiery Mills Hydro is effective from March 1, 2014 through February 28, 2024. RMLD receives enery only from this contract. The average annual generation is approximately 2,046 MWHs per year. This is a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility.

Aspinook Hydro

In August, 2016, RMLD signed a purchase power agreement with Aspinook Hydro Inc. for the output of Aspinook Hydro located in Griswold, Connecticut. The contract is effective from August, 2016 through August, 2017. RMLD receives enery only from this contract. The average annual generation is approximately 9,300 MWHs per year. This is

a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility.

Saddleback Ridge Wind

In December, 2013, RMLD signed a purchase power agreement with Saddleback Ridge Wind, LLC for the output of Saddleback Ridge Wind located in Carthage, Maine. The contract for Saddleback Ridge Wind is effective from January 1, 2015 through December 31, 2035. RMLD receives enery plus all attributes under this contract. The average annual generation is estimated to be approximately 15,820 MWHs per year. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Jericho Wind

In November, 2014, RMLD signed a purchase power agreement with Jericho Power, LLC for the output of Jericho Wind located in Berlin, New Hampshire. The contract for Jericho Wind is for 20 years. The project went into commercial operation in December, 2015. RMLD receives energy plus all attributes from this contract. The average annual generation is estimated to be approximately 10,788 MWHs per year. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

One Burlington - Solar

In March, 2015, RMLD signed a purchase power agreement with CREECA Energy, LLC for the output of 2 MW AC solar array located at One Burlington Ave., Wilmington, Massachusetts. The solar array went on-line in November, 2015. The term of the contract for One Burlington is effective for ten years. The average annual generation is estimated to be approximately 3,450 MWHs per year. This is a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility, once the 40 quarters of Solar (SRECs) has run its course.

Altus Power – Community Solar

In March, 2016, RMLD signed a purchase power agreement with ECA Solar, LLC for the output of a 1MW AC solar array located at 326 Ballardvale Street, Wilmington, Massachusetts. The solar array went on-line in June, 2017. In May, 2017, the contract was assigned to Altus Power America, Inc. DBA WL MA Solar LLC. The term of the

contract for WL MA Solar LLC is twenty years. The average annual generation is estimated to be approximately 1,700 MWHs per year. RMLD has developed a Community Shared Solar program called Solar Choice. This project is RMLD's first Solar Choice project and is fully subscribed by 500 residential customers. This is a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility, once the 40 quarters of Solar (SRECs) has run its course.

Kearsage – Community Solar

In October, 2017, RMLD signed a purchase power agreement with Kearsage Wilmington, LLC for the output of 1.8MW AC solar array located at 40-50 Fordham Road, Wilmington, Massachusetts. The solar array went on-line in February, 2018. The term of the contract for Kearsage Wilmington LLC is twenty years. The average annual generation is estimated to be approximately 2,376 MWHs per year. This project is RMLD's second Solar Choice project and is fully subscribed by 617 residential and commercial customers. This is a non-carbon generating resource and RMLD is exploring acquisition of the associated output certificates for the facility, once the 40 quarters of Solar (SRECs) has run its course.

Battery Energy Storage System – NextEra

In December, 2017, RMLD was awarded a $1 million grant for the installation of an energy storage unit at its North Reading substation. The grant is funded by the Masssachusetts Department of Energy Resources (DOER). RMLD's project consists of a 5 MW Lithium Ion Battery unit with 10 MWHs of storage capacity at its North Reading substation to reduce peak demand, thereby lowering future transmission and capacity costs related to the purchase of wholesale electricity. The battery unit will be co-located with RMLD's new 2.5-megawatt Distributed Generator. RMLD is negotiating a Battery Energy Storage System (BESS) Agreement with NextEra. BESS was placed in service on June 1, 2019.

FirstLight Hydro

In March, 2019, RMLD signed a purchase power agreement with FirstLight Power Resources Management, LLC. for 10.3% of the output of the Shepaug Hydroelectric Station and 7.3% of the output of the Stevenson Hydroelectric Station. The contract for Firstlight Hydro is effective from May, 2019 through December, 2023. The average annual generation is approximately 12,000 MWHs per year on-peak and 8,000 MWHs

per year off-peak. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Gravity Renewables

RMLD has executed contracts with Gravity Renewables for hydroelectric generation at Cabot-Turners Falls and a facility in southern Conecticut. The Cabot-Turners Falls contract is anticipated to deliver 22,254 MWHs in 2022, 37,571 MWHs in 2023, and 33,728 MWHs from 2024 through 2030. The southern Connecticut plant is expected to produce 25,000 MWHs annually from 2021 through 2030.

RMLD has signed a Letter of Intent to purchase the output of the Dahowa Plant in Upstate New York beginning in 2021. Output from the plant is expected to be 35,000 MWHs annually from 2022 thorugh 2045. RMLD is in active negotiations for the output from Plant #4, another Upstate New York facility that is expected to deliver 25,000 MWHs annually beginning in 2022 and running through 2045. These are non-carbon generating resources and RMLD is entitled to the associated output certificates for its share of the facilities.

NextEra

RMLD has purchased a 5 MW block of around the clock power for the years 2022-2024. This is a bilateral purchase picked up at an opportunistic price and does not identify the source of the enegy. Energy delivereed under the contract will be 43,800 MWHs annually.

RoxWind

RMLD has contracted for 50% of the output from 4 wind turbines being constructed in Maine; RMLD's share of the annual output from these units will be 25,200 MWHs per year, beginning in the 4th quarter of 2021 and continuing for 20 years, through 2041. This is a non-carbon generating resource and RMLD is entitled to the associated output certificates for its share of the facility.

Reading Municipal Light Department

CY22 Operating Budget

Financial Strategic Balance

Balance the impact of Rate Increases to RMLD Customers

Expected Rate of Return – between 4% to 8%, closer to 6%

Fund Below-the-line Town of Reading obligation

Fund Capital Projects with Operating Fund Transfers

Maintain the Operating Fund at 2 to 3 months of monthly operating expenses

Balance the Rate Stabilization Fund fluctuation and limits

Impact of Power Supply Fluctuation

CY22 Operating Budget Fixed Costs

	CY 21 BUDGET	CY 22 BUDGET	CY 22 % OF BUDGET
FIXED COSTS			
Purchased Power - Fuel	$ 26,750,880	$ 25,465,054	27.53%
Purchased Power - Capacity	17,687,368	16,978,311	18.35%
Purchased Power - Transmission	17,778,180	18,457,184	19.95%
Depreciation Expense	4,916,345	5,108,876	5.52%
Return on Investment Payment to Reading	2,480,506	2,528,587	2.73%
Town Payments - 2% of Net Plant	1,654,460	1,707,839	1.85%
Loss on Disposal of Assets	100,000	100,000	0.11%
TOTAL FIXED COSTS	71,367,739	70,345,851	**76.04%**

65.82%

- Total Fixed Costs represent 76.04% of the overall operating budget
- Power Supply of 65.82% decreased by 2.12% from the previous budget
- Depreciation Expense of 5.52% increased ~4% due to necessary capital investments
- Voluntary Payment to The Town of Reading of 2.73% reflects the formula change commitment to that of 3.875 mils of the 3-yr average of kWh sales with an increase of nearly 2%
- Town Payments - 2% Net Planet of 1.85% increased by ~3% due to necessary capital investments

CY22 Operating Budget Semi-Variable Costs

	CY 21 BUDGET	CY 22 BUDGET	CY 22 % OF BUDGET
SEMI-VARIABLE COSTS			
Labor Expense	8,352,246	9,405,351	10.17%
Labor - Capital	(1,216,814)	(1,483,143)	-1.60%
		8.56%	
Overtime Expense	1,066,200	1,036,780	1.12%
Overtime - Capital	(190,534)	(184,731)	-0.20%
		0.92%	
Employee Benefits/Pension	4,508,090	4,782,020	5.17%
Employee Benefits/Pension - Capital	(810,632)	(960,695)	-1.04%
		4.13%	
Other Operating and Maintenance Expense	2,161,285	2,575,148	2.78%
Efficiency and Electrification Expense	1,214,035	2,441,101	2.64%
Tree Trimming Services	918,849	907,776	0.98%
Contract/Consulting Services	508,400	735,700	0.80%
Software/Hardware Maintenance	463,775	713,120	0.77%
Property Insurance	489,700	556,500	0.60%
Legal Expense	497,000	455,918	0.49%
Vehicle Expense	388,600	379,000	0.41%
Vehicle Expense - Capital	(354,544)	(276,428)	-0.30%
Transformer Maintenance (Hazardous Material)	215,000	360,000	0.39%
Training & Tuition Reimbursement Expense	257,821	329,826	0.36%
Rent Expense	212,000	212,000	0.23%
Bad Debt Expense	105,000	105,000	0.11%
Injuries & Damages	25,600	25,600	0.03%
RMLB/CAB	30,000	30,000	0.03%
Office Supplies	20,000	20,000	0.02%
TOTAL SEMI-VARIABLE COSTS	18,861,077	22,165,844	**23.96%**

- Labor is 10.17%, of which 1.6% is for capital projects
- Overtime is 1.12%, of which less than a quarter percent is for capital projects
- Employee Benefits/Pension is 5.17%, of which ~1% is for capital projects
- Other Operating/Maintenance and Efficiency and Electrification Expenses represent nearly 3%
- Tree Trimming, Contract Services, Software/Hardware Maintenance and Property Insurance each represent less than 1% of the total budget
- Legal Expenses, Vehicle Expenses, Transformer Maintenance, Training & Tuition Reimbursement and Rent Expense each represent approximately a quarter to a half percent of the total budget

Significant Increases Budget to Budget

Labor projected to increase by ~12.5%

- Increased staffing levels to support ongoing strategic plans
- Competitive market value to retain and attract talent
- Negotiation year with assumed contract increases
- 2022 Retirees included as slight overlap for training and succession

Employee Benefits/Pension projected to increase by ~6%

- Increased staffing levels
- Actuarial determinations for pension obligations

Other Operating and Maintenance Expenses projected to increase by ~19%

- Customer processing services support customer payment needs and expectations
- Maintenance of Wilmington substation; spare parts for obsolete equipment
- Increasing magnitude of communication to customers

Efficiency and Electrification Expense projected to double

- Rebate programs to accelerate the adoption of electrification for compliance with the climate bill
- More electrification prevents less upward pressure on rates
- Promote in-territory solar installations

Contract/Consulting Services projected to increase by ~45%

- Employee Survey and Market Analysis
- Feasibility Study for Solar Projects

Software and Hardware Maintenance projected to increase ~54%

- Co-location for new data center; 2nd data center for disaster recovery
- Phone System migrating to the cloud for better onsite support and better service of combined service providers
- Microsoft Enterprise Agreement to afford flexibility and freedom with levels of compliance through Microsoft applications
- Forward movement for continuous information security protection

Property Insurance projected to increase ~14%

- Impacts of supply chain, natural disasters and hardened insurance market, etc.

Transformer Maintenance projected to increase ~67%

- Clean-up and testing of hazardous material due to aged and decreased transformer life expectancy

Training & Tuition Reimbursement projected to increase ~28%

- Support training for employee development and continued education
- Encourage higher education for continued growth

CY22 Budgeted
Other Operating and Maintenance Expenses

General Manager Expenses - $89,675
- MEAM, APPA, NEPPA Dues
- Public Power Week
- Storm Related Supplies and Expenses
- Department Supplies and Expenses

Human Resources Expenses - $80,900
- Printing & Training Materials
- Drug Testing
- Recruiting & Job Posting
- Dues & Subscriptions
- Employee Assistance
- Employee Assessment & Background
- Employee Recognition & Retirement
- Contract Labor Expenses

Community Relations - $75,900
- Chamber of Commerce & MEAM Membership
- Advertising, Constant Contact, Marketing, Social Media
- Historical Calendars
- Printing & Promotional Items
- Public Power Week
- School Education Programs
- Department Supplies and Expenses

Building Maintenance - $500,550
- Heating – Oil & Gas
- Water & Sewer
- Electrical & Plumbing Supplies and Services
- Hardware & Janitorial Supplies and Services
- HVAC Supplies and Services
- Cleaning Supplies and Services
- Landscape & Snow Removal Supplies and Services
- Fire Alarm, Fire Extinguishers
- Rubbish, Wood Waste, Hazardous Waste
- Building Security Supplies and Services
- Pest Control
- Radio Equipment Repair & Testing
- Drinking Water & Kitchen Supplies
- Safety Equipment
- Roof Repairs and Services
- Grounds Repairs and Maintenance
- Ash Street Office Maintenance & Upgrades
- Department Supplies and Expenses

Materials Management - $160,000
- Telephone Expenses
- Copier Leases
- Department Supplies and Expenses
- Personal Protective Equipment

CY22 Budgeted
Other Operating and Maintenance Expenses Cont'd

Engineering & Operations Supplies and Expenses - $31,000
- MBTA Pole Leases
- Plotter Supplies
- OSHA Remediation
- Transformer Warning Labels
- Dues & Subscriptions

Overhead & Underground Maintenance of Lines - $367,234
- Police Detail
- Pole Testing
- Department Supplies and Expenses

Station & Meter Technician Expenses - $326,362
- Dig Safe
- Vegetation Clean-up
- Equipment Testing
- Infrared Scan
- Department Supplies and Expenses
- Generator Maintenance

Information Technology Supplies and Expenses - $50,000
- Hardware Related Parts & Tools
- Digital Services for Remote Access

Integrated Resources - $129,027
- Rate Design
- Energy Solutions
- Customer Rebate System and Portal

Business & Finance Expenses - $191,000
- Town of Reading Services
- Department Supplies and Expenses

Customer Deposit Interest Expense - $40,000

Customer Processing Fees - $533,500
- Bank & Merchant Services
- Envelopes, Invoices & Letterhead
- Postage
- Post Office Boxes
- Mailing Services

CY22 Budgeted Legal Expenses

General Manager & Policy Review - $25,000
- New Updates and Requirements on Existing Policy Language
- Compliance Requirements on New Policies

Human Resources & Labor Relations - $92,000
- Negotiations
- Grievances/Arbitrations
- Staffing/Succession Planning
- Labor Law
- COVID Compliance & Liability at a Federal and State Level
- FFCRA and Employee Benefits
- Investigations

Engineering & Operations - $90,000
- OSHA Compliance
- Terms & Conditions
- Service Requirements Handbook
- Dark Fiber Contracts and Negotiations
- Small Cell Attachments
- NERC Compliance

Business & Finance - $30,000
- Audit Review
- GASB Compliance
- DPU Regulations
- Sales Tax Exemptions
- Fraud Prevention
- Cash Custodial Responsibility

Procurement & Liability - $60,000
- Vendor Contracts
- Chapter 30B
- Insurance Updates and Requirements
- Electric Liability Claims
- Wilmington Substation Land

Purchased Power - $158,918
- Power Supply Contracts
- ISO Litigation
- FERC Regulations
- Renewable Energy Certificates
- Renewable Portfolio Standard

Projected Rate Increases

CY2022 – January 1-June 30, 2022

- An approximate 2.2%-4.7% overall rate increase across all rate classes for the 1st half of calendar year 2022, partially supplemented by the Rate Stabilization Fund of approximately 1.4% or $1,200,000

CY2022 – July 1-December 31, 2022

- An approximate 2.2%- 4.7% overall rate increase across all rate classes for the 2nd half of calendar year 2022

INTEGRATED RESOURCES REPORT

ATTACHMENT 3

RMLD Rates 2Q21 Certificates Wind Power

BOC and CAB Meetings

20 - 21 October 2021

Outline

Rates Summary

2Q21 Certificates

Wind Power

Summary of changes rate classes - 2022

updated

total average monthly bill

	current	*proposed*	$ change	% change
Residential A	$ 123	$ 129	$ 6	4.7%
Residential TOU A2	$ 107	$ 112	$ 5	4.3%
Commercial C	$ 910	$ 946	$ 36	3.9%
Industrial TOU	$ 21,174	$ 21,952	$ 778	3.7%
School	$ 4,054	$ 4,143	$ 89	2.2%

Electrification pushing more investment in distribution network (support load growth)

2022 - distribution network upgrades and EEC are primary rate increase drivers

Supports proposed 2022 RMLD budget and incorporates 2021 Class Cost of Service Study results

source: Rate and Analysis by Cost Stream v18

Overview 2022 rate recommendations

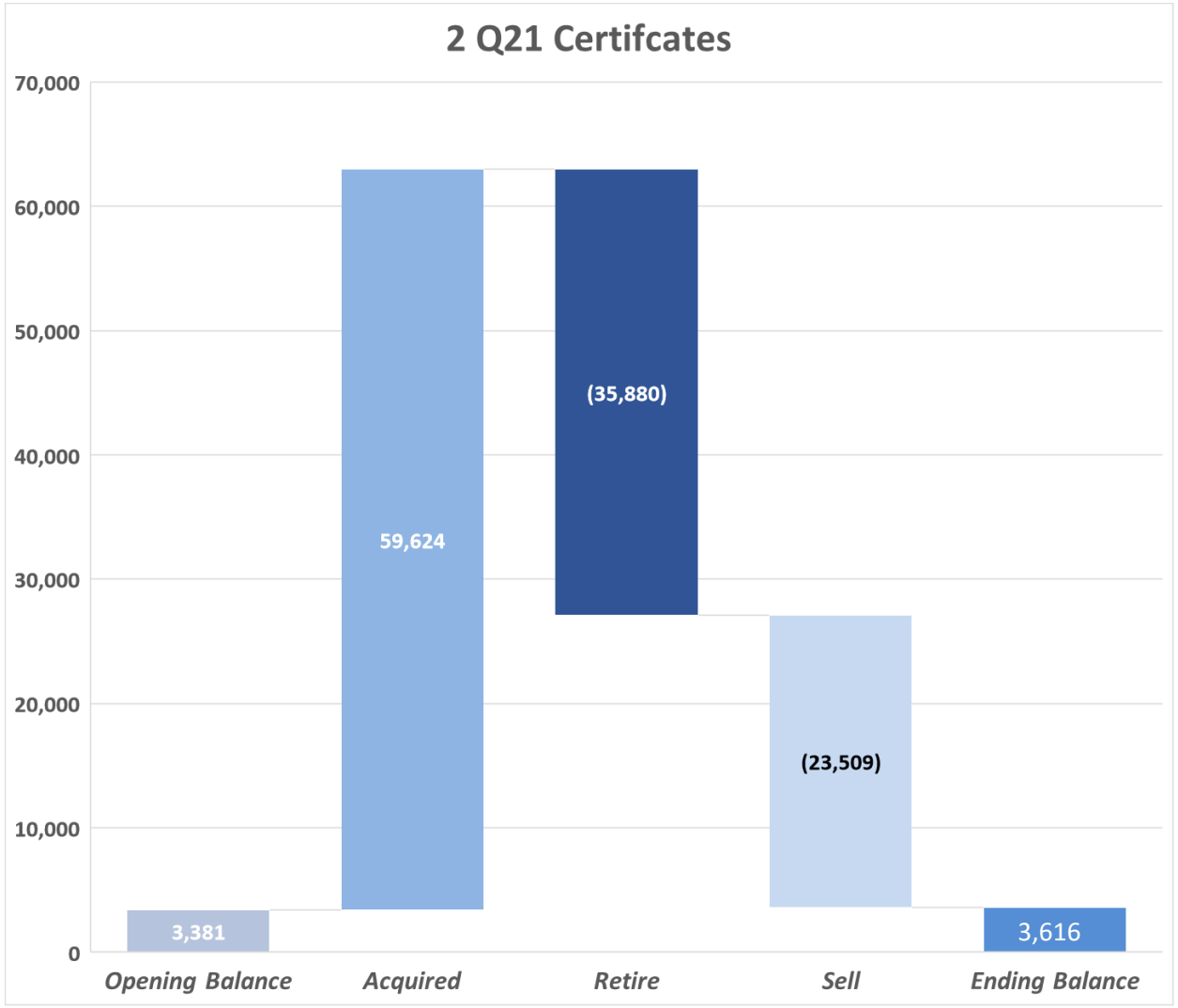
updated

current MDPU	*new MDPU*	*description*	*total monthly change*	*notes and key drivers*
247		Municipal Street Lighting Schedule F Formula Rate	no change	transition to LED's nearly complete
275		Backup and Standby Rate	no change	
277		Electric Vehicle Supply Equipment Schedule EVSE Rate	no change	
285		Cooperative Resale Schedule G Rate	no change	
286		Residential Customer Owned Generation Under 20kW	no change	evaluating facilities charge and higher credit for exported kWh
287		Commercial/Industrial Customer-Owned Generation	no change	
288		Purchase Power Capacity and Transmission Charge	market	forecasted flat 2022; ~4% annual increase through 2025
289		Private Street Lighting Rate Schedule D	no change	
290		Municipal LED Street Lighting Rate	no change	
291		Standard Fuel Charge Clause	market	forecasted 1.7% increase 2022; flat 2023; ~7.3% increase 2024
279	296	**Residential Schedule A Rate**	4.7%	distribution, EEC
280	299	Residential Time of Use Schedule A2 Rate	4.3%	distribution, EEC
282	297	**Commercial Scheduled C Rate**	3.9%	distribution, EEC
283	298	**Industrial Time of Use Schedule I Rate**	3.7%	demand, EEC
284	300	School Schedule SCH Rate	2.2%	distribution, EEC
208	292	Efficiency Electrification Charge	200%	approved August 2021; $0.001 / kWh to $0.003 / kwh
	293	A3 residential TOU (EV focused)	new	approved August 2021
	294	Renewable Choice	new	approved September 2021
278	295	Solar Choice Rider	revised	approved September 2021

distribution energy (load growth) and EEC (electrification) push 2022 rate increase

source: Rate and Analysis by Cost Stream v18

2Q21 Certificates – quarterly report



59,000 certificates acquired in 2Q21

- minted Oct 15th
- all associated with power purchases
- 1 certificate per MWH

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
- ~$520,000 from 2Q21 certificate sales

Banking balance in NEPOOL GIS account

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

Source: 2Q21 certificates 2021-10-18

Power Supply – Offshore Wind

Offshore wind power supply contracts beginning and moving fast

Wind is renewable and non-carbon

Wind certificates are typically MA Class I

Current opportunity - Commonwealth Wind (south of Martha's Vineyard)

- Term - 25 year, commissioning 2027
- Pricing – forecasted near recent hydro PPA's
- PPA Timing – 1Q22

Authorization up to 15% of RMLD portfolio, within 24 months

Source: Energy New England

RMLD Solar PPA

BoC Meeting

17 November 2021

Power Supply – Solar PV

ADDITION to previous approved power supply motion at same site

Expansion of new PV array at Seabrook, NH site to ~9 MW AC, to be built by NextEra

Total Volume - ~16,000 MWh/yr (~2% RMLD total energy purchases; 100% array output to RMLD)

Term - 30 year; planned commissioning Q4 2023

Certificates - Class I (renewable and non-carbon)

Pricing – slightly below average of solar only portfolio; ~50% higher than RMLD total portfolio average

Source: NextEra and RMLD analysis; energy position master graph 2021-11-08

solar motion

Thank You

Residential A – 2022 – new rate 296

updated

	average monthly bill					
Residential A	***current***	***proposed***	**$ change**	**% change**	**MDPU 279**	**MDPU 296**
*Customer Charge	$ 5.12	$ 5.43	$ 0.31	6.0%	$5.12/mo	$5.43/mo
*Distribution Energy	$ 54.49	$ 58.58	$ 4.09	7.5%	$0.06711/kWh	$0.07214/kWh
*Distribution Demand	$ -	$ -	$ -	0.0%		
EEC	$ 0.81	$ 2.44	$ 1.62	200.0%		
Fuel Adjustment	$ 32.48	$ 32.64	$ 0.16	0.5%		
NYPA Credit Rate	$ (3.63)	$ (3.30)	$ 0.33	-9.0%		
Cap & Trans (PPCT)	$ 43.10	$ 43.07	$ (0.03)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (8.94)	$ (9.60)	$ (0.66)	7.4%		
Total Monthly Bill	**$ 123.44**	**$ 129.25**	**$ 5.81**	**4.7%**		
Average Monthly kWh	812	812				
Average kW	NA	NA				

- Cover more of residential cost allocation
- Fund distribution network upgrades to support load growth

With proposed rates, total average monthly bill up $5.81 (4.7%)

source: Rate and Analysis by Cost Stream v18

Residential A2 (resi time of use) – 2022 - 299

updated

	average monthly bill						
Residential TOU A2	***current***	***proposed***	**$ change**	**% change**	**MDPU 280**	**MDPU 299**
*Customer Charge	$ 8.00	$ 8.48	$ 0.48	6.0%	$8.00/mo	$8.48/mo
*Distribution Energy	$ 32.66	$ 35.11	$ 2.45	7.5%	$0.04022/kWh	$0.04324/kWh
*Distribution Demand	$ -	$ -	$ -	0.0%		
EEC	$ 0.81	$ 2.44	$ 1.62	200.0%		
Fuel Adjustment	$ 32.18	$ 32.34	$ 0.16	0.5%		
NYPA Credit Rate	$ (3.63)	$ (3.30)	$ 0.33	-9.0%		
Cap & Trans (PPCT)	$ 43.10	$ 43.07	$ (0.03)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (6.10)	$ (6.54)	$ (0.44)	7.2%		
Total Monthly Bill	**$ 107.02**	**$ 111.59**	**$ 4.57**	**4.3%**		
Average Monthly kWh	812	812				
Average kW	NA	NA				

- Cover more of residential cost allocation
- Fund distribution network upgrades to support load growth

With proposed rates, total average monthly bill up $4.57 (4.3%)

source: Rate and Analysis by Cost Stream v18

Commercial C -2022 – new rate 297

updated

- Demand and EEC represent majority of increase
- Demand and EEC to cover Climate Bill electrification

	average monthly bill					
Commercial C	***current***	***proposed***	**$ change**	**% change**	**MDPU 282**	**MDPU 297**
*Customer Charge	$ 7.77	$ 8.24	$ 0	6.0%	$7.77/mo	$8.24/mo
*Distribution Energy	$ 118	$ 125	$ 7	6.0%	$0.01725/kWh	$0.01829/kWh
*Distribution Demand	$ 187	$ 204	$ 17	9.0%	$8.13/kW	$8.86/kW
EEC	$ 7	$ 21	$ 14	200.0%		
Fuel Adjustment	$ 274	$ 275	$ 1	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 364	$ 363	$ (0)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (47)	$ (51)	$ (4)	7.8%		
Total Monthly Bill	**$ 910**	**$ 946**	**$ 36**	**3.9%**		
Average Monthly kWh	6,848	6,848				
Average kW	23	23				

With proposed rates, total average monthly bill up $36 (3.9%)

 source: Rate and Analysis by Cost Stream v18

Industrial I (all time of use) – 2022 – new 298

updated

- Demand and EEC represent majority of increase
- Demand to cover growth and EEC to cover electrification, both Climate Bill

	average monthly bill					
Industrial TOU	***current***	***proposed***	**$ change**	**% change**	**MDPU 283**	**MDPU 298**
*Customer Charge	$ 39	$ 42	$ 2	6.0%	$39.18/mo	$41.53/mo
*Distribution Energy	$ -	$ -	$ -	0.0%		
*Distribution Demand	$ 3,103	$ 3,507	$ 403	13.0%	$9.79/kW	$11.06/kW
EEC	$ 201	$ 602	$ 402	200.0%		
Fuel Adjustment	$ 7,959	$ 7,999	$ 40	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 10,342	$ 10,334	$ (8)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (471)	$ (532)	$ (61)	12.9%		
Total Monthly Bill	**$ 21,174**	**$ 21,952**	**$ 778**	**3.7%**		
Average Monthly kWh	200,823	200,823				
Average kW	317	317				

With proposed rates, total average monthly bill up $778 (3.7%)

 source: Rate and Analysis by Cost Stream v18

School – 2022 – new rate 300

updated

	average monthly bill						
School	***current***	***proposed***	**$ change**	**% change**	**MDPU 284**	**MDPU 300**
*Customer Charge	$ 7	$ 8	$ 0	6.0%	$7.23/mo	$7.66/mo
*Distribution Energy	$ 384	$ 407	$ 23	6.0%	$0.01193/kWh	$0.01265/kWh
*Distribution Demand	$ 816	$ 816	$ -	0.0%	$7.56/kW	$7.56/kW
EEC	$ 32	$ 97	$ 64	200.0%		
Fuel Adjustment	$ 1,287	$ 1,293	$ 6	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 1,708	$ 1,707	$ (1)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (181)	$ (185)	$ (4)	1.9%		
Total Monthly Bill	**$ 4,054**	**$ 4,143**	**$ 89**	**2.2%**		
Average Monthly kWh	32,175	32,175				
Average kW	108	108				

- EEC represents majority of increase
- EEC to cover Climate Bill electrification

With proposed rates, total average monthly bill up $89 (2.2%)

 source: Rate and Analysis by Cost Stream v18

MEMORANDUM

TO: COLEEN OBRIEN, GENERAL MANAGER

FROM: GREG PHIPPS, INTEGRATED RESOURCES DIVISION

SUBJECT: 2022 RATE CHANGE RECOMMENDATIONS

DATE: OCTOBER 18, 2021

In preparation for the upcoming BoC/CAB meetings to vote on the rates that were presented during the September BoC/CAB meeting, attached is the text for each of the rates that are changing. Once approved, these rate changes will be effective January 1. 2022.

These rates support the final RMLD budget that is being presented at the upcoming BoC/CAB meetings next week. Note that the Commercial, Industrial, and School were increased slightly to cover the approximate $80,000 difference between the final budget and the rates that were presented at the September meeting. As discussed in the August B0C/CAB meeting, the Class Cost of Service Study was a key input for the following rate changes.

Change Summary -The list below identifies the current and the replacement rate numbers.

a) replace 279 Residential Schedule A with 296
b) replace 280 Residential Time of Use Schedule A2 with 299
c) replace 282 Commercial Schedule C with 297
d) replace 283 Industrial Time of Use Schedule I with 298
e) replace 284 School Schedule SCH with 300

Implications for Major Rate Classes - The table below summarizes the updated changes for the major rates.

	current	*proposed*	$ change	% change
Residential A	$ 123	$ 129	$ 6	4.7%
Residential TOU A2	$ 107	$ 112	$ 5	4.3%
Commercial C	$ 910	$ 946	$ 36	3.9%
Industrial TOU	$ 21,174	$ 21,952	$ 778	3.7%
School	$ 4,054	$ 4,143	$ 89	2.2%

Key Drivers - The 2021 Class Cost of Service Study prompted refinement of cost allocations for fairness based on changing energy use characterization by rate class. In addition, the March 2021 Massachusetts comprehensive climate legislation, An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy (Climate Bill), established for the first time, compliance standards for Municipal Light Plants (MLPs). This legislation

requires 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 addition,

In addition to making electricity generation net-zero carbon by 2050, the Climate Bill also aims to reduce emissions in the building and transportation sectors by shifting these uses away from fossil fuels and towards electricity – this concept is known as electrification. Increasing electrification will increase electricity usage (load). The table below is a summary of the changes. Note that most of the rates are not changing in 2022.

current MDPU	*new MDPU*	*description*	*total monthly change*	*notes and key drivers*
247		Municipal Street Lighting Schedule F Formula Rate	no change	transition to LED's nearly complete
275		Backup and Standby Rate	no change	
277		Electric Vehicle Supply Equipment Schedule EVSE Rate	no change	
285		Cooperative Resale Schedule G Rate	no change	
286		Residential Customer Owned Generation Under 20kW	no change	evaluating facilities charge and higher credit for exported kWh
287		Commercial/Industrial Customer-Owned Generation	no change	
288		Purchase Power Capacity and Transmission Charge	market	forecasted flat 2022; ~4% annual increase through 2025
289		Private Street Lighting Rate Schedule D	no change	
290		Municipal LED Street Lighting Rate	no change	
291		Standard Fuel Charge Clause	market	forecasted 1.7% increase 2022; flat 2023; ~7.3% increase 2024
279	296	**Residential Schedule A Rate**	4.7%	distribution, EEC
280	299	Residential Time of Use Schedule A2 Rate	4.3%	distribution, EEC
282	297	**Commercial Scheduled C Rate**	3.9%	distribution, EEC
283	298	**Industrial Time of Use Schedule I Rate**	3.7%	demand, EEC
284	300	School Schedule SCH Rate	2.2%	distribution, EEC
208	292	Efficiency Electrification Charge	200%	approved August 2021; $0.001 / kWh to $0.003 / kwh
	293	A3 residential TOU (EV focused)	new	approved August 2021
	294	Renewable Choice	new	approved September 2021
278	295	Solar Choice Rider	revised	approved September 2021

Line by line details of each change for the changing rate classes are pasted below:

	average monthly bill					
Residential A	***current***	***proposed***	**$ change**	**% change**	**MDPU 279**	**MDPU 296**
*Customer Charge	$ 5.12	$ 5.43	$ 0.31	6.0%	$5.12/mo	$5.43/mo
*Distribution Energy	$ 54.49	$ 58.58	$ 4.09	7.5%	$0.06711/kWh	$0.07214/kWh
*Distribution Demand	$ -	$ -	$ -	0.0%		
EEC	$ 0.81	$ 2.44	$ 1.62	200.0%		
Fuel Adjustment	$ 32.48	$ 32.64	$ 0.16	0.5%		
NYPA Credit Rate	$ (3.63)	$ (3.30)	$ 0.33	-9.0%		
Cap & Trans (PPCT)	$ 43.10	$ 43.07	$ (0.03)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (8.94)	$ (9.60)	$ (0.66)	7.4%		
Total Monthly Bill	**$ 123.44**	**$ 129.25**	**$ 5.81**	**4.7%**		
Average Monthly kWh	812	812				
Average kW	NA	NA				

	average monthly bill				
Residential TOU A2	***current***	***proposed***	**$ change**	**% change**	**MDPU 280**	**MDPU 299**
*Customer Charge	$ 8.00	$ 8.48	$ 0.48	6.0%	$8.00/mo	$8.48/mo
*Distribution Energy	$ 32.66	$ 35.11	$ 2.45	7.5%	$0.04022/kWh	$0.04324/kWh
*Distribution Demand	$ -	$ -	$ -	0.0%		
EEC	$ 0.81	$ 2.44	$ 1.62	200.0%		
Fuel Adjustment	$ 32.18	$ 32.34	$ 0.16	0.5%		
NYPA Credit Rate	$ (3.63)	$ (3.30)	$ 0.33	-9.0%		
Cap & Trans (PPCT)	$ 43.10	$ 43.07	$ (0.03)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (6.10)	$ (6.54)	$ (0.44)	7.2%		
Total Monthly Bill	**$ 107.02**	**$ 111.59**	**$ 4.57**	**4.3%**		
Average Monthly kWh	812	812				
Average kW	NA	NA				

	average monthly bill				
Commercial C	***current***	***proposed***	**$ change**	**% change**	**MDPU 282**	**MDPU 297**
*Customer Charge	$ 7.77	$ 8.24	$ 0	6.0%	$7.77/mo	$8.24/mo
*Distribution Energy	$ 118	$ 125	$ 7	6.0%	$0.01725/kWh	$0.01829/kWh
*Distribution Demand	$ 187	$ 204	$ 17	9.0%	$8.13/kW	$8.86/kW
EEC	$ 7	$ 21	$ 14	200.0%		
Fuel Adjustment	$ 274	$ 275	$ 1	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 364	$ 363	$ (0)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (47)	$ (51)	$ (4)	7.8%		
Total Monthly Bill	**$ 910**	**$ 946**	**$ 36**	**3.9%**		
Average Monthly kWh	6,848	6,848				
Average kW	23	23				

	average monthly bill					
Industrial TOU	***current***	***proposed***	**$ change**	**% change**	**MDPU 283**	**MDPU 298**
*Customer Charge	$ 39	$ 42	$ 2	6.0%	$39.18/mo	$41.53/mo
*Distribution Energy	$ -	$ -	$ -	0.0%		
*Distribution Demand	$ 3,103	$ 3,507	$ 403	13.0%	$9.79/kW	$11.06/kW
EEC	$ 201	$ 602	$ 402	200.0%		
Fuel Adjustment	$ 7,959	$ 7,999	$ 40	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 10,342	$ 10,334	$ (8)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (471)	$ (532)	$ (61)	12.9%		
Total Monthly Bill	**$ 21,174**	**$ 21,952**	**$ 778**	**3.7%**		
Average Monthly kWh	200,823	200,823				
Average kW	317	317				

	average monthly bill					
School	***current***	***proposed***	**$ change**	**% change**	**MDPU 284**	**MDPU 300**
*Customer Charge	$ 7	$ 8	$ 0	6.0%	$7.23/mo	$7.66/mo
*Distribution Energy	$ 384	$ 407	$ 23	6.0%	$0.01193/kWh	$0.01265/kWh
*Distribution Demand	$ 816	$ 816	$ -	0.0%	$7.56/kW	$7.56/kW
EEC	$ 32	$ 97	$ 64	200.0%		
Fuel Adjustment	$ 1,287	$ 1,293	$ 6	0.5%		
NYPA Credit Rate	$ -	$ -	$ -	0.0%		
Cap & Trans (PPCT)	$ 1,708	$ 1,707	$ (1)	-0.1%		
other	$ -	$ -	$ -	0.0%		
other	$ -	$ -	$ -	0.0%		
Prompt Payment	$ (181)	$ (185)	$ (4)	1.9%		
Total Monthly Bill	**$ 4,054**	**$ 4,143**	**$ 89**	**2.2%**		
Average Monthly kWh	32,175	32,175				
Average kW	108	108				

Source file - Rate and Analysis by Cost Stream v18 .xlsx.

Finally, the new A3 EV rate is not included in this package. It will be available at a later date once the implementation details have been finalized.

With Much Appreciation,

Gregory J Phipps
Director, Integrated Resources Division

Residential Schedule A Rate

Designation:
Residential A Rate

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Individual residential customers for all domestic uses where service is taken through one meter. Incidental commercial use, not exceeding 20% of the total energy used on the same premises is permitted.

Character of service:
A.C. 60 cycles: single phase.

Customer Charge:
$5.43 per month

Distribution Energy Charge:
$.07214 per Kilowatt-hour for all Kilowatt-hours usage

Budget Billing:
The customers under this rate will have available to them a budget billing program under which the customer is required to pay a levelized amount to the Department each billing period during the calendar year. The specifics of this program are outlined in the Department's General Terms and Conditions.

Low Income Discount
The Customer Charge under this rate will be waived upon verification of a low-income customer's receipt of any means-tested public benefit, or verification of eligibility for the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 200 percent of the federal poverty level based on a household's gross income. In a program year in which maximum eligibility for LIHEAP exceeds 200 percent of the federal poverty level, a household that is income eligible under LIHEAP shall be eligible for the low-income electric discount. It is the responsibility of the customer to annually certify, by forms provided by the utility, the continued compliance with the foregoing qualifications.

Rate Filed: October 29, 2021
Effective: On Billings on or After January 1, 2022
Filed By: Coleen M. O'Brien, General Manager

Residential Schedule A Rate (cont'd)

Farm Discount:
Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional 10% discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Energy Conservation Charge:
The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:
The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:
The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Meter Reading and Billing:
Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

General Terms and Conditions:
Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

Residential Time-of-Use Schedule A2 Rate

Designation:
Residential Time-of-Use A2 Rate

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Individual residential customers for all domestic uses where service is taken through one On-Peak and Off-Peak meter. Incidental commercial use, not exceeding 20% of the total energy used on the same premises is permitted.

Character of service:
A.C. 60 cycles: single phase.

Customer Charge:
$8.48 per month.

Distribution Energy Charge:
$.04324 per Kilowatt-hour for all Kilowatt-hours usage

Definition of Periods:
The On-Peak period is defined as the hours between 12:00 Noon and 7:00 P.M. Monday through Friday except holidays as listed under the "Granted Holidays" paragraph listed below. The Off-Peak period is defined as the hours between 7:00 P.M. and 12:00 Noon Monday through Friday and all hours Saturday, Sunday and granted holidays as listed below.

Term:
A customer electing to be billed under this rate must remain on this rate for a minimum of one year. At the end of one year on this rate a customer may elect to remain on this rate or be billed under the Residential A Rate.

Residential Time-of-Use Schedule A2 Rate (cont'd)

Budget Billing:
The customers under this rate will have available to them a budget billing program under which the customer is required to pay a levelized amount to the Department each billing period during the calendar year. The specifics of this program are outlined in the Department's General Terms and Conditions.

Rate Filed: October 29, 2021
Effective: On Billings on or After January 1, 2022
Filed By: Coleen M. O'Brien, General Manager

Low Income Discount
The Customer Charge under this rate will be waived upon verification of a low-income customer's receipt of any means-tested public benefit, or verification of eligibility for the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 200 percent of the federal poverty level based on a household's gross income. In a program year in which maximum eligibility for LIHEAP exceeds 200 percent of the federal poverty level, a household that is income eligible under LIHEAP shall be eligible for the low-income electric discount. It is the responsibility of the customer to annually certify, by forms provided by the utility, the continued compliance with the foregoing qualifications.

Farm Discount:
Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Energy Conservation Charge:
The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:
The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:
The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Meter Reading and Billing:
Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

Residential Time-of-Use Schedule A2 Rate (cont'd)

Granted Holidays
Under the Residential Time-of-Use Schedule A2 Rate the holidays granted for Off-Peak are: New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Columbus Day, Veteran's Day and Christmas Day.

General Terms and Conditions:
Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

Town of Reading, Massachusetts
Municipal Light Department

MDPU # 297 supersedes and cancels MDPU # 282
DRAFT

Commercial Schedule C Rate

Designation:
Commercial C Rate

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Service under this rate is available to industrial or commercial customers who take all their requirements under this rate. All electricity furnished under this rate will be metered through one service unless it is convenient for the Department to do otherwise.

Character of service:
AC 60 cycles: single phase or three phase.

Customer Charge:
$8.24 per month.

Distribution Demand Charge:
$8.8617 per Kilowatt for all demand usage.

Distribution Energy Charge:
$0.01829 per Kilowatt-hour for all Kilowatt-hours usage.

Budget Billing:
The customers under the C Rate may elect the Budget Billing program under which the customer is required to pay the levelized amount to the Department each billing period during the calendar year. This rate is not available to C Rate Customers electing the Contract Demand Rate, or the Non-Firm Demand Rate. The specifics of this program are outlined in the Department's General Terms and Conditions.

Energy Conservation Charge:
The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:
The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:
The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: October 29, 2021
Effective: On Billings on or After January 1, 2022
Filed By: Coleen M. O'Brien, General Manager

Commercial Schedule C Rate (cont'd)

Measurement of Billing Demand:
The billing demand shall be the highest of the fifteen minute kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer season or sixty percent of the maximum demand established during the winter season.

Definitions of Seasons:
The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Farm Discount:
Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Customer Transformer Ownership:
A customer requiring a minimal transformer capacity of over 2,000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

$.12 per kilowatt of demand when the service is taken at 2,400/4,160 volts.

$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Primary Metering Discount:
The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformer through which the service is furnished. In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill's consumption charges but in no case will such discount be allowed if the metering voltage is less than 2,400 voltage.

Commercial Schedule C Rate (cont'd)

Meter Reading and Billing:
Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

General Terms:
Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

Industrial Time-of-Use Schedule I Rate

Designation:
Industrial Time-of-Use I Rate

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Service under this rate is available to industrial or commercial customers who take all their requirements under this rate. All electricity furnished under this rate will be metered using an electronic meter capable of metering On-Peak and Off-Peak energy as well as kW demand.

Character of service:
A.C. 60 cycles: single phase or three phase.

Customer Charge:
$41.53 per month.

Distribution Demand Charge:
$11.0627 per Kilowatt for all demand usage.

Definition of Periods:
The On-Peak period is defined as the hours between 12:00 Noon and 7:00 P.M., Monday through Friday except holidays as listed below. The Off-Peak period is defined as the hours between 7:00 P.M. and 12:00 Noon, Monday through Friday and all hours Saturday, Sunday and granted holidays as listed below.

Term:
A customer electing to be billed under this rate must remain on this rate for a minimum of one year. At the end of one year on this rate a customer may elect to remain on this rate or be billed under the Commercial C Rate.

Energy Conservation Charge:
The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:
The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:
The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: October 29, 2021
Effective: On Billings on or After January 1, 2022
Filed By: Coleen M. O'Brien, General Manager

Industrial Time-of-Use Schedule I Rate (cont'd)

Measurement of Billing Demand:
The Billing demand shall be the highest of the fifteen minute On Peak kilowatt demand established during the billing period, but not less than eighty percent of the maximum On Peak demand established during the preceding summer season or sixty percent of the maximum On Peak demand established during the winter season.

The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Farm Discount:
Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Customer Transformer Ownership:
A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

$.12 per Kilowatt of demand when the service is taken at 2,400/4,160 volts.

$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Primary Metering Discount:
The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformer through which the service is furnished. In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill's consumption charges but in no case will such discount be allowed if the metering voltage is less than 2,400 voltage.

Industrial Time-of-Use Schedule I Rate (cont'd)

Meter Reading and Billing:
Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

Granted Holidays
Under the Industrial Time-of-Use Schedule I Rate the holidays granted for Off-Peak are; New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Columbus Day, Veteran's Day and Christmas Day.

General Terms and Conditions:
Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

School Schedule SCH Rate

Designation:
School SCH Rate

Available in:
Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:
Applicable to public or private schools offering kindergarten, regular elementary, middle, and high school as approved by the Department, who take all their requirements under this rate. All electricity furnished under this rate will be metered through one service unless it is convenient for the Department to do otherwise.

Character of service:
AC 60 cycles: single phase or three phase.

Customer Charge:
$7.66 per month.

Distribution Demand Charge:
$7.56 per Kilowatt for all demand usage.

Distribution Energy Charge:
$.01265 per Kilowatt-hour for all Kilowatt-hours usage.

Budget Billing:
The customers under the School Rate may elect the Budget Billing program under which the customer is required to pay levelized amount to the Department each billing period during the calendar year.

Energy Conservation Charge:
The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:
The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:
The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: October 29, 2021
Effective: On Billings on or After January 1, 2022
Filed By: Coleen M. O'Brien, General Manager

School Schedule SCH Rate (cont'd)

Measurement of Billing Demand:
The billing demand shall be the highest of the fifteen minute Kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer season or sixty percent of the maximum demand established during the winter season.

Definitions of Seasons:
The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Customer Transformer Ownership:
A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

$.12 per kilowatt of demand when the service is taken at 2,400/4,160 volts.

$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Metering:
The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformers through which the service is furnished.

In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill's distribution and consumption charges but in no case will such a discount be allowed if the metering voltage is less than 2,400 volts.

Meter Reading and Billing:
Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

General Terms:
Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

PROCUREMENT REQUESTS REQUIRING BOARD APPROVAL

ATTACHMENT 4

RMLD Reading Municipal Light Department
RELIABLE POWER

October 7, 2021

Town of Reading Municipal Light Board

Subject: IFB 2021-19 Janitorial Services

Pursuant to M.G.L. c. 30B, on September 8, 2021, an invitation for bid (IFB) requesting sealed bids for Janitorial Services was placed as a legal notice in the Middlesex East Section of the Daily Times Chronicle and was posted on COMMBUYS, and the RMLD website. On September 6, 2021, the invitation was published in the Commonwealth of Massachusetts Goods and Services Bulletin.

An invitation for bid was sent to forty (40) companies.

Sealed bids were received from four (4) companies: Express Janitorial Service Group, Partner Solutions General Contracting Corp., S. J. Services, Inc., and Star Building Services, Inc.

The sealed bids were publicly opened and read aloud at 11:00 a.m. on September 29, 2021, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The bids were reviewed, analyzed, and evaluated by staff and recommended to the General Manager.

> Move that bid IFB 2021-19 for Janitorial Services be awarded to: **S. J. Services, Inc. for $119,424.00,** pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder, on the recommendation of the General Manager.[1] This is a three-year contract.

[1]See attached analysis.

These services will be paid from the Operating Budget.

Paul McGonagle (Oct 7, 2021 14:52 EDT)

Paul McGonagle

John McDonagh

Hamid Jaffari (Oct 8, 2021 09:36 EDT)

Hamid Jaffari

coleen obrien (Oct 8, 2021 20:03 EDT)

Coleen O'Brien

Janitorial Services Analysis
IFB 2021-19

Bidder	Year 1	Year 2	Year 3	Combined 3-Year Total	Responsive Bidder	Exceptions
Express Janitorial Service Group	$0.00	$0.00	$0.00	$0.00	No[1]	N/A
Partner Solutions General Contracting Corp.	$43,096.80	$44,784.60	$47,039.76	$134,921.16	No[2]	No
Star Building Services, Inc.	$39,316.44	$41,374.84	$43,265.68	$123,956.96	No[3]	No
S. J. Services, Inc.	$38,720.00	$39,824.00	$40,880.00	$119,424.00	Yes	No

[1]Bid packet did not include all required documentation or bid security

[2]Detailed Plan is not specific to RMLD requirements

[3]Unauthorized Signature on all required documents per the Certificate of Vote

RMLD Reading Municipal Light Department
RELIABLE POWER

October 7, 2021

Town of Reading Municipal Light Board

Subject: IFP 2021-20 Substation Spare Equipment

Pursuant to M.G.L. c. 164 § 56D, on September 8, 2021, an invitation for proposals was placed as a legal notice in the Middlesex East Section of the Daily Times Chronicle requesting sealed proposals for Substation Spare Equipment.

An invitation for proposals was sent to fourteen (14) companies.

Sealed proposals were received from four (4) companies: Harp Service, Inc., Mitsubishi Electric Power Products Inc., Stuart C. Irby Company, and WESCO Distribution, Inc.

The sealed proposals were publicly opened and read aloud at 11:00 a.m. on September 29, 2021, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed, and evaluated by staff and recommended to the General Manager.

> Move that IFP 2021-20 for Substation Spare Equipment be awarded to: **Stuart C. Irby Company, for $49,873.98, and WESCO Distribution, Inc., for $6,956.00**[1], pursuant to M.G.L. c. 164 § 56D, on the recommendation of the General Manager.

[1]See attached analysis.

The 2021 Capital Budget amount for these items is $100,000.

Nick D'Alleva (Oct 7, 2021 17:20 EDT)

Nick D'Alleva

John McDonagh

Hamid Jaffari (Oct 8, 2021 09:36 EDT)

Hamid Jaffari

coleen obrien (Oct 8, 2021 20:03 EDT)

Coleen O'Brien

Analysis - Substation Spare Equipment
IFP 2021-20

Proposer	*Manufacturer*	*Delivery Date*	*Unit Cost*	*Qty*	*Total Cost*	*Total Cost Awarded*	*Meet Specification Requirement*
Stuart C. Irby Company							
Item 1 Replacement for Catalog # 211330	**Hubbell**	**4 weeks**	**$1,329.66**	**3**	**$3,988.98**	**$3,988.98**	**yes**
Item 2 Replacement for McGraw – Edison Serial # C54947				1	$0.00		
Item 3 ABB, O plus C, 1200 Amp, style # 034Z0412UT	**PCORE Electric**	**8-10 weeks**	**$2,681.00**	**2**	**$5,362.00**	**$5,362.00**	**yes**
Item 4 Replacement for Lapp Catalog # B-81394-10-70	**PCORE Electric**	**12-14 weeks**	**$3,209.00**	**2**	**$6,418.00**	**$6,418.00**	**yes**
Item 5 Replacement for Pennsylvania Transformer 13Kv Transformer Bushing				2	$0.00		
Item 6 Replacement for General Electric, Type U, Catalog # 7B532-BB	**PCORE Electric**	**8-10 weeks**	**$2,681.00**	**1**	**$2,681.00**	**$2,681.00**	**yes**
Item 7 ABB Type V, 38Kv, 1200 Amp, 25KA, 200Kv BIL Vacuum Breaker	**ABB**	**16-17 weeks**	**$31,424.00**	**1**	**$31,424.00**	**$31,424.00**	**yes**
					$49,873.98	$49,873.98	
WESCO Distribution, Inc.							
Item 1 Replacement for Catalog # 211330	Hubbell Power Systems	5-6 weeks	$1,664.00	3	$4,992.00		
Item 2 Replacement for McGraw – Edison Serial # C54947				1	$0.00		
Item 3 ABB, O plus C, 1200 Amp, style # 034Z0412UT	Electro Composite/ Hubbell Power	8-10 weeks	$2,690.00	2	$5,380.00		
Item 4 Replacement for Lapp Catalog # B-81394-10-70	Electro Composite/ Hubbell Power	8-10 weeks	$2,690.00	2	$5,380.00		

RMLD Reading Municipal Light Department
RELIABLE POWER

October 8, 2021

Town of Reading Municipal Light Board

Subject: IFP 2021-23 #2CU 15kV Underground Cable and #2STR CU 1 COND 600V XHHW Cable

Pursuant to M.G.L. c. 164 § 56D, on September 22, 2021, an invitation for proposals was placed as a legal notice in the Middlesex East Section of the Daily Times Chronicle requesting sealed proposals for Substation Spare Equipment.

An invitation for proposals was sent to eight (8) companies.

Sealed proposals were received from three (3) companies: Arthur J. Hurley Company, Inc. (2), Stuart C. Irby Company, and WESCO Distribution, Inc.

The sealed proposals were publicly opened and read aloud at 11:00 a.m. on October 6, 2021, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed, and evaluated by staff and recommended to the General Manager.

> Move that IFP 2021-23 for #2CU 15kV Underground Cable and #2STR CU 1 COND 600V XHHW Cable be awarded to: **Arthur J. Hurley Company, Inc. for $94,725.00**[1], pursuant to M.G.L. c. 164 § 56D, on the recommendation of the General Manager.

[1]See attached analysis.

These are inventory items.

Brian Smith (Oct 12, 2021 06 53 EDT)
Brian Smith

John McDonagh

Hamid Jaffari (Oct 12, 2021 07 54 EDT)
Hamid Jaffari

coleen obrien (Oct 14, 2021 18 29 EDT)
Coleen O'Brien

Analysis - Item #1: #2CU 15kV Underground Cable and Item #2 #2STR CU 1 COND 600V XHHW Cable
IFP 2021-23

Proposer	*Manufacturer*	*Delivery Date*	*Unit Cost*	*Qty. (ft)*	*Total Cost*	*Combined Total*	*Meet Specification Requirement*
Arthur J. Hurley Company, Inc.							
Item 1 Underground Cable	**Okonite**	**14 weeks**	**4.44**	**15,000**	**$66,600.00**		**Yes**
Item 2 Ground Wire	**Service Wire**	**Stock to 4 weeks**	**1.875**	**15,000**	**$28,125.00**		**Yes**
						$94,725.00	
Arthur J. Hurley Company, Inc. (Alternate)							
Item 1 Underground Cable	Okonite	14 weeks	3.96	15,000	$59,400.00		**No[1]**
Item 2 Ground Wire	Service Wire	Stock to 4 weeks	1.875	15,000	$28,125.00		**Yes**
						$87,525.00	
Stuart C. Irby Company							
Item 1 Underground Cable	Okonite	14 weeks	$4.45	15,000	$66,750.00		**Yes[2]**
Item 2 Ground Wire	Okonite	14 weeks	$1.85	15,000	$27,750.00	$94,500.00	**Yes[2]**
WESCO Distribution, Inc.							
Item 1 Underground Cable	LS Cable	30 weeks	$4.06	15,000	$60,900.00		**Yes[3]**
Item 2 Ground Wire	LS Cable	30 weeks	$1.60	15,000	$24,000.00	$84,900.00	**No[3]**

[1]The "Alternate" cable offered by Hurley is non-filled strand and it is compact. RMLD uses filled strand, not non-filled.

[2]Irby included escalation clauses for both items which means that at time of delivery pricing could be higher.

[3]RMLD has used LS Cable previously and our experience is that it is of poor quality and difficult to work with. Lead time is very long. The Ground Wire quoted was not XHHW per the spec sheet and as required by RMLD.

RMLD Reading Municipal Light Department
RELIABLE POWER

October 13, 2021

Town of Reading Municipal Light Board

Subject: RFQ 2021-18 Pick-Up Truck with Dump Body and Material Spreader with Trade-Ins

Pursuant to M.G.L. c. 30B, on September 7, 2021, a Request for Quotes (RFQ) was sent to six (6) Statewide Contract VEH98 Vendors requesting quotes for a new Pick-Up Truck with Dump Body and Material Spreader Attachment with Trade-Ins. No quote submittals were received in response to the RFQ.

One vendor, Liberty Chevrolet, offered the RMLD an alternative quote per their cooperative contract with the Greater Boston Police Council, which the Town of Reading is a member.

The quote was reviewed, analyzed, and evaluated by staff and recommended to the General Manager.

> Move that RFQ 2021-18 for a Pick-Up Truck with Dump Body and Material Spreader Attachment with Trade-Ins be awarded to: **Liberty Chevrolet for Net Delivered Price of $65,774.00 ($68,774.00 minus $3,000.00 for trade-ins),** pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder, on the recommendation of the General Manager.[1]

[1]See attached quote spreadsheet.

The 2021 Capital Budget amount for this item is $85,000.

Paul McGonagle (Oct 14, 2021 08:49 EDT)
Paul McGonagle

John McDonagh

Hamid Jaffari (Oct 14, 2021 09:19 EDT)
Hamid Jaffari

coleen obrien (Oct 15, 2021 14:05 EDT)
Coleen O'Brien

File: RFQ 2021-18 Pick-Up Truck with Dump Body and Material Spreader Attachment with Trade-Ins

RFQ 2021-18 Pick-Up Truck with Dump Body and Material Spreader with Trade-Ins

One (1) 2022 Chevrolet Silverado 3500

Total Delivered Price (includes Chassis Factory Options and Customer Requested Options)	**68,774.00**
Less Total Trade-in Values	(3,000.00)
NET DELIVERED PRICE	**65,774.00**

Analysis - Substation Spare Equipment
IFP 2021-20

Proposer	*Manufacturer*	*Delivery Date*	*Unit Cost*	*Qty*	*Total Cost*	*Total Cost Awarded*	*Meet Specification Requirement*
Item 5 Replacement for Pennsylvania Transformer 13Kv Transformer Bushing	**Electro Composite/ Hubbell Power**	**8-10 weeks**	**$3,478.00**	**2**	**$6,956.00**	**$6,956.00**	**yes**
Item 6 Replacement for General Electric, Type U, Catalog # 7B532-BB	Electro Composite/ Hubbell Power	8-10 weeks	$2,690.00	1	$2,690.00		
Item 7 ABB Type V, 38Kv, 1200 Amp, 25KA, 200Kv BIL Vacuum Breaker	ABB	16-17 weeks	$31,855.00	1	$31,855.00		
					$57,253.00	$6,956.00	
Harp Services, Inc.							
Item 1 Replacement for Catalog # 211330				3	$0.00		
Item 2 Replacement for McGraw – Edison Serial # C54947				1	$0.00		
Item 3 ABB, O plus C, 1200 Amp, style # 034Z0412UT	PCORE Electric	8-10 weeks	$3,346.20	2	$6,692.40		
Item 4 Replacement for Lapp Catalog # B-81394-10-70	PCORE Electric	12-14 weeks	$3,506.00	2	$7,012.00		
Item 5 Replacement for Pennsylvania Transformer 13Kv Transformer Bushing				2	$0.00		
Item 6 Replacement for General Electric, Type U, Catalog # 7B532-BB	PCORE Electric	8-10 weeks	$3,346.20	1	$3,346.20		
Item 7 ABB Type V, 38Kv, 1200 Amp, 25KA, 200Kv BIL Vacuum Breaker				1	$0.00	$0.00	
					$17,050.60	$0.00	

Analysis - Substation Spare Equipment
IFP 2021-20

Proposer	***Manufacturer***	***Delivery Date***	***Unit Cost***	***Qty***	***Total Cost***	***Total Cost Awarded***	***Meet Specification Requirement***
Mitsubishi Electric Power Products, Inc.							
Item 1 Replacement for Catalog # 211330				3	$0.00		
Item 2 Replacement for McGraw – Edison Serial # C54947				1	$0.00		
Item 3 ABB, O plus C, 1200 Amp, style # 034Z0412UT				2	$0.00		
Item 4 Replacement for Lapp Catalog # B-81394-10-70				2	$0.00		
Item 5 Replacement for Pennsylvania Transformer 13Kv Transformer Bushing				2	$0.00		
Item 6 Replacement for General Electric, Type U, Catalog # 7B532-BB				1	$0.00		
Item 7 ABB Type V, 38Kv, 1200 Amp, 25KA, 200Kv BIL Vacuum Breaker		16-20 weeks	$45,996.00	1	$45,996.00		
					$45,996.00	$0.00	
					Total cost for all of the lowest unit price items	**$56,829.98**	

MATERIALS AVAILABLE BUT NOT DISCUSSED

From:	Erica Morse
To:	Erica Morse
Subject:	AP and Payroll Questions for the 21-11-17 Board of Commissioners Book
Date:	Monday, November 15, 2021 11:08:44 AM

AP

From September 10, 2021, through November 5, 2021, there were no Commissioner questions.

Payroll:

From August 30th through November 8, 2021, there were no Commissioner questions.

Town of Reading, Massachusetts
Municipal Light Department
Statement of Net Assets
8/31/2021

	2021	2020
ASSETS		
Current:		
Unrestricted Cash	$ 20,578,843	$ 23,214,083
Restricted Cash	29,188,322	31,979,569
Restricted Investments	2,691,351	1,366,416
Receivables, Net	8,005,224	8,385,368
Prepaid Expenses	1,725,817	1,957,412
Inventory	1,864,161	2,176,421
Total Current Assets	64,053,718	69,079,268
Noncurrent:		
Investment in Associated Companies	874,497	802,481
Capital Assets, Net	84,571,936	82,087,084
Total Noncurrent Assets	85,446,432	82,889,565
Deferred Outflows - Pension Plan	5,360,409	8,102,116
TOTAL ASSETS	154,860,559	160,070,949
LIABILITIES		
Current		
Accounts Payable	6,216,591	11,141,628
Accrued Liabilities	401,949	532,791
Customer Deposits	1,452,246	1,381,379
Advances from Associated Companies	200,000	200,000
Customer Advances for Construction	2,486,188	1,889,911
Total Current Liabilities	10,756,975	15,145,709
Non-current		
Accrued Employee Compensated Absences	1,968,355	2,471,374
Net OPEB Obligation	7,166,506	7,094,569
Net Pension Liability	12,054,935	14,610,001
Total Non-current Liabilities	21,189,796	24,175,944
Deferred Inflows - Pension Plan	2,652,103	1,964,276
TOTAL LIABILITIES	34,598,874	41,285,929
NET POSITION		
Invested in Capital Assets, Net of Related Debt	84,571,936	82,087,084
Restricted for Depreciation Fund	9,261,798	11,151,072
Restricted for Pension Trust	4,459,696	6,365,431
Unrestricted	21,968,257	19,181,433
TOTAL NET POSITION	120,261,686	118,785,020
Total Liabilities and Net Assets	$ 154,860,559	$ 160,070,949

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
8/31/2021

	Month Current Year	Month Last Year	Year to Date Current Year	Year to Date Last Year	Percent Change
Operating Revenues					
Base Revenue	$ 2,643,901	$ 3,113,653	$ 18,566,623	$ 18,659,239	(0.5%)
Fuel Revenue	2,508,579	2,899,426	17,227,829	16,854,351	2.2%
Purchased Power Capacity & Transmission	2,999,597	3,565,793	21,959,071	22,003,347	(0.2%)
Forfeited Discounts	77,482	88,596	524,722	553,136	(5.1%)
Energy Conservation Revenue	61,965	71,544	434,562	433,578	0.2%
NYPA Credit	(36,263)	(79,541)	(733,563)	(777,166)	(5.6%)
Total Operating Revenues	8,255,259	9,659,471	57,979,244	57,726,484	0.4%
Expenses					
Power Expenes:					
547 Purchased Power Fuel	2,905,082	2,063,894	19,082,951	17,799,190	7.2%
555 Purchased Power Capacity	1,387,702	1,813,844	11,406,339	12,884,831	(11.5%)
565 Purchased Power Transmission	1,573,212	1,803,844	10,413,869	9,131,502	14.0%
Total Purchased Power	5,865,996	5,681,582	40,903,159	39,815,523	2.7%
Operations and Maintenance Expenses:					
580 Supervision and Engineering	89,675	85,366	676,507	675,365	0.2%
581 Station/Control Room Operators	40,583	36,286	318,356	321,032	(0.8%)
582 Station Technicians	43,837	33,642	390,630	269,473	45.0%
583 Line General Labor	44,242	39,352	385,698	372,408	3.6%
586 Meter General	14,331	7,256	112,821	91,305	23.6%
588 Materials Management	32,201	32,293	272,802	283,918	(3.9%)
593 Maintenance of Lines - Overhead	40,692	19,672	219,332	256,157	(14.4%)
593 Maintenance of Lines - Tree Trimming	112,867	77,900	393,436	321,179	22.5%
594 Maintenance of Lines - Underground	(1,507)	23,204	17,963	43,987	(59.2%)
595 Maintenance of Line - Transformers	16,551	4,872	98,869	92,398	7.0%
598 Line General Leave Time Labor	30,517	37,002	218,894	252,308	(13.2%)
Total Operations and Maintenance Expenses	463,988	396,845	3,105,309	2,979,530	4.2%
General & Administration Expenses:					
903 Customer Collections	116,045	107,978	711,161	826,794	(14.0%)
904 Uncollectible Accounts	8,750	8,750	70,000	70,000	0.0%
916 Energy Audit	66,263	33,173	487,071	409,080	19.1%
916 Energy Conservation	111,989	84,598	932,496	556,307	67.6%
920 Administrative and General Salaries	159,156	135,567	1,257,970	1,376,740	(8.6%)
921 Office Supplies and Expense	758	587	9,590	4,483	113.9%
923 Outside Services - Legal	66,889	19,550	266,574	214,296	24.4%
923 Outside Services - Contract	9,469	59,119	181,518	218,374	(16.9%)
923 Outside Services - Education	555	-	12,176	26,390	(53.9%)
924 Property Insurance	33,111	29,739	295,744	264,428	11.8%
925 Injuries and Damages	800	287	22,719	31,123	(27.0%)
926 Employee Pensions and Benefits	189,756	276,103	2,296,728	2,677,873	(14.2%)
930 Miscellaneous General Expense	13,280	10,463	247,562	145,618	70.0%
931 Rent Expense	13,874	32,249	136,864	149,376	(8.4%)
933 Vehicle Expenses	36,711	22,022	231,701	136,364	69.9%
933 Vehicle Expenses - Capital	(32,561)	(27,576)	(233,447)	(218,872)	6.7%
935 Maintenance of General Plant	17,804	25,080	340,703	391,330	(12.9%)
935 Maintenance of Building & Garage	77,506	47,388	542,641	797,137	(31.9%)
Total General & Administration Expenses	890,153	865,074	7,809,770	8,076,841	(3.3%)

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
8/31/2021

Other Operating Expenses:					
403 Depreciation	406,980	391,601	3,255,837	3,132,805	3.9%
408 Voluntary Payments to Towns	137,953	133,917	1,103,624	1,071,340	3.0%
Total Other Expenses	544,933	525,518	4,359,461	4,204,144	3.7%
Operating Income	490,189	2,190,452	1,801,545	2,650,446	(32.0%)
Non Operating Revenues (Expenses):					
415 Contribution in Aid of Construction					
419 Interest Income	6,522	7,221	114,008	215,313	(47.1%)
419 Other	78,338	211,059	695,174	903,841	(23.1%)
426 Return on Investment to Reading	(206,709)	(206,709)	(1,653,671)	(1,653,671)	(0.0%)
426 Loss on Disposal	-	-	-	-	
431 Interest Expense	(3,783)	(2,358)	(30,182)	(39,855)	(24.3%)
Total Non Operating Revenues (Expenses)	(125,632)	9,214	(874,672)	(574,372)	52.3%
Change in Net Assets	364,557	2,199,666	926,873	2,076,074	(55.4%)
Net Assets at Beginning of Year	119,334,812	116,708,946	119,334,812	116,708,946	2.2%
Ending Net Assets	$ 119,699,370	$ 118,908,612	$ 120,261,686	$ 118,785,020	1.2%

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Budgeted Revenues, Expenses and Changes in Fund Net Assets
8/31/2021

	Actual Year to Date	BUDGET Through Aug 2021	Over/(Under) Budget $	Over/(Under) Budget %
Operating Revenues				
Base Revenue	$ 18,566,623	$ 18,861,992	$ (295,369)	(1.6%)
Fuel Revenue	17,227,829	18,596,303	(1,368,474)	(7.4%)
Purchased Power Capacity & Transmission	21,959,071	23,643,699	(1,684,628)	(7.1%)
Forfeited Discounts	524,722	619,337	(94,615)	(15.3%)
Energy Conservation Revenue	434,562	435,996	(1,434)	(0.3%)
NYPA Credit	(733,563)	(762,383)	28,819	(3.8%)
Total Operating Revenues	57,979,244	61,394,943	(3,415,700)	(5.6%)
Expenses				
Power Expenses:				
555 Purchased Power Fuel	19,082,951	17,833,920	1,249,031	7.0%
555 Purchased Power Capacity	11,406,339	11,791,579	(385,240)	(3.3%)
565 Purchased Power Transmission	10,413,869	11,852,120	(1,438,251)	(12.1%)
Total Purchased Power	40,903,159	41,477,619	(574,460)	(1.4%)
Operations and Maintenance Expenses:				
580 Supervision and Engineering	676,507	762,129	(85,622)	(11.2%)
581 Station/Control Room Operators	318,356	331,957	(13,601)	(4.1%)
582 Station Technicians	390,630	298,677	91,954	30.8%
583 Line General Labor	385,698	705,840	(320,142)	(45.4%)
586 Meter General	112,821	128,011	(15,191)	(11.9%)
588 Materials Management	272,802	303,976	(31,174)	(10.3%)
593 Maintenance of Lines - Overhead	219,332	372,534	(153,201)	(41.1%)
593 Maintenance of Lines - Tree Trimming	393,436	612,566	(219,130)	(35.8%)
594 Maintenance of Lines - Underground	17,963	53,930	(35,967)	(66.7%)
595 Maintenance of Line - Transformers	98,869	151,554	(52,685)	(34.8%)
598 Line General Leave Time Labor	218,894	298,585	(79,692)	(26.7%)
Total Operations and Maintenance Expenses	3,105,309	4,019,758	(914,449)	(22.7%)
General & Administration Expenses:				
903 Customer Collection	711,161	646,259	64,902	10.0%
904 Uncollectible Accounts	70,000	70,000	-	0.0%
916 Energy Audit	487,071	400,946	86,124	21.5%
916 Energy Conservation	932,496	809,357	123,139	15.2%
920 Administrative and General Salaries	1,257,970	1,500,681	(242,711)	(16.2%)
921 Office Supplies and Expense	9,590	13,333	(3,743)	(28.1%)
923 Outside Services - Legal	266,574	331,333	(64,759)	(19.5%)
923 Outside Services - Contract	181,518	338,933	(157,416)	(46.4%)
923 Outside Services - Education	12,176	171,881	(159,705)	(92.9%)
924 Property Insurance	295,744	326,467	(30,723)	(9.4%)
925 Injuries and Damages	22,719	38,035	(15,317)	(40.3%)
926 Employee Pensions and Benefits	2,296,728	2,444,003	(147,275)	(6.0%)
930 Miscellaneous General Expense	247,562	337,527	(89,965)	(26.7%)
931 Rent Expense	136,864	141,333	(4,470)	(3.2%)
933 Vehicle Expense	231,701	259,067	(27,366)	(10.6%)
933 Vehicle Expense - Capital Clearing	(233,447)	(236,363)	2,916	(1.2%)
935 Maintenance of General Plant	340,703	309,183	31,519	10.2%
935 Maintenance of Building & Garage	542,641	622,316	(79,675)	(12.8%)
Total General & Administration Expenses	7,809,770	8,524,293	(714,524)	(8.4%)

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Budgeted Revenues, Expenses and Changes in Fund Net Assets
8/31/2021

Other Operating Expenses:				
403 Depreciation	3,255,837	3,277,563	(21,726)	(0.7%)
408 Voluntary Payments to Towns	1,103,624	1,102,973	650	0.1%
Total Other Expenses	4,359,461	4,380,537	(21,076)	(0.5%)
Operating Income	1,801,545	2,992,736	(1,191,191)	(39.8%)
Non Operating Revenues (Expenses):				
415 Contribution in Aid of Construction	-	200,000	(200,000)	(100.0%)
419 Interest Income	114,008	333,333	(219,326)	(65.8%)
419 Other Income	695,174	590,000	105,174	17.8%
426 Return on Investment to Reading	(1,653,671)	(1,720,337)	66,667	(3.9%)
426 Loss on Disposal	-	-	-	
431 Interest Expense	(30,182)	(30,000)	(182)	0.6%
Total Non Operating Revenues (Expenses)	(874,672)	(627,004)	(247,668)	39.5%
Net Income	$ 926,873	$ 2,365,732	$ (1,438,859)	(60.8%)

From: Maureen Sullivan
To: Erica Morse
Cc: Paula O"Leary; Jeanne Foti
Subject: Surplus Update - September 2021
Date: Friday, October 1, 2021 9:49:59 AM

Good morning Erica,

I am sending this email to inform you that there were NO Surplus Items of Substantial Value that were disposed of in September 2021.

Thank you,
Maureen

Maureen Sullivan
Assistant Materials Manager
Reading Municipal Light Department (RMLD)
230 Ash Street
Reading, MA 01867

Tel. No. 781-942-6441
Email: msullivan@rmld.com

From: Maureen Sullivan
To: Erica Morse
Cc: Paula O"Leary; Jeanne Foti
Subject: Surplus Update - October 2021
Date: Monday, November 1, 2021 8:32:57 AM

Good morning Erica,

I am sending this email to inform you that there were NO Surplus Items of Substantial Value that were disposed of in October 2021.

Thank you,
Maureen

Maureen Sullivan
Assistant Materials Manager
Reading Municipal Light Department (RMLD)
230 Ash Street
Reading, MA 01867

Tel. No. 781-942-6441
Email: msullivan@rmld.com