



RMILD

**READING MUNICIPAL
LIGHT DEPARTMENT**

**CITIZENS' ADVISORY BOARD
REGULAR SESSION MEETING**

THURSDAY OCTOBER 5, 2023



Town of Reading Meeting Posting with Agenda

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2023-10-05

Time: 5:30 PM

Building: Reading Municipal Light Building

Location: Winfred Spurr Audio Visual Room

Address: 230 Ash Street

Agenda:

Purpose: General Business

Meeting Called By: Vivek Soni, 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:

ON MARCH 29, 2023, GOVERNOR HEALEY SIGNED INTO LAW A SUPPLEMENTAL BUDGET BILL WHICH, AMONG OTHER THINGS, EXTENDS THE TEMPORARY PROVISIONS PERTAINING TO THE OPEN MEETING LAW TO MARCH 31, 2025.

THIS MEETING WILL HELD IN PERSON AND REMOTELY ON ZOOM.

FOR REMOTE AND/OR PUBLIC PARTICIPATION

Please email rmldevents@RMLD.com. Please include your full name, address, and phone number. Comments and questions will be monitored during the meeting.

1. Call Meeting to Order – V. Soni, Chair
2. CAB Secretary Appointment – V. Soni, Chair
 - Secretary Nominations
Suggested Motion: Move to appoint ___ as Secretary to the RMLD Citizens' Advisory Board to be effective immediately after the vote.
3. Approval of Citizens' Advisory Board Meeting Minutes (attachment 1) – V. Soni, Chair
Suggested Motion: Move that the RMLD Citizens' Advisory Board approve the October 27, 2022, December 8, 2022, and January 18, 2023, open session meeting minutes, as presented, on the recommendation of the General Manager and the Board Secretary.
4. Annual Report (attachment 2)– G. Phipps, General Manager
5. RMLD Strategic Plan (attachment 3) – G. Phipps, General Manager
6. Finance & Accounting Report (attachment 4) – B. Bloomenthal, Director of Finance and Accounting

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



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7. NEPPA 2023 Annual Conference Report (attachment 5) – G. Phipps, General Manager
8. General Manager’s Report – G. Phipps, General Manager
9. Scheduling – V. Soni, Chair

Subsequent CAB Meetings

Date	Time	Location
Wednesday, October 25, 2023	6:00 PM	North Reading
Wednesday, November 15, 2023	5:30 PM	RMLD AV Room
Wednesday, December 13, 2023	5:30 PM	RMLD AV Room

Subsequent BoC Meetings & CAB Rotation

Date	Time	Location	CAB Coverage
Wednesday, October 25, 2023	6:00 PM	North Reading	n/a
Wednesday, November 15, 2023	7:00 PM	RMLD AV Room	Small
Wednesday, December 13, 2023	7:00 PM	RMLD AV Room	Kelley

10. Executive Session –V. Soni, Chair

Suggested Motion: Move that the RMLD Citizens’ Advisory Board go into Executive Session pursuant to Massachusetts G.L. c.164 section 47D, exemption from public records and open meeting requirements in certain instances, to consider the purchase, exchange, lease or value of real property relative to Maple Meadow and Route 125 in Wilmington, if the chair declares that an open meeting may have a detrimental effect on the negotiating position of the public body, and return to regular session, for the sole purpose of adjournment. Note: Roll call vote required.

11. Adjournment **ACTION ITEM**

Suggested Motion: Move that the RMLD Citizens’ Advisory Board adjourn regular session. Note: Roll call vote required.

BOARD MATERIALS AVAILABLE BUT NOT DISCUSSED

Financials June 2023

ATTACHMENT 1
APPROVAL OF MEETING MINUTES



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2022-10-27

Time: 6:00 PM

Building: Lynnfield Town Hall

Location: Joe Maney Meeting Room

Address: 55 Summer Street, Lynnfield MA

Session: Open

Purpose: General Business

Session Version: Draft

Attendees: **Members - Present:**

Vivek Soni, Chair (Reading); Ken Welter, Vice Chair (Lynnfield); George Hooper (Wilmington); Dennis Kelley (Wilmington); Jason Small (North Reading).

Members - Not Present:

Others Present:

RMLD Board of Commissioners Representative: Marlena Bitá, Chair

RMLD Staff: Gregory Phipps, Interim General Manager; Hamid Jaffari, Director of Engineering & Operations; Benjamin Bloomenthal, Director of Finance & Accounting; Kathleen Rybak, Operational Assistant.

Minutes Respectfully Submitted By: Vivek Soni, Chair

Topics of Discussion:

All meeting materials can be found in the RMLD CAB Meeting Packet on the RMLD website.

Call Meeting to Order

Chair Soni called the meeting of the Citizens' Advisory Board (CAB) to order at 6:00 PM and noted the meeting was being audio recorded.

Approval of Minutes

Materials: Citizens' Advisory Board Packet (attachment 1)

The minutes of the April 4, 2022, and June 1, 2022, meetings were approved as written.

Mr. Hooper made a **motion**, seconded by Vice Chair Welter, that the Citizens' Advisory Board approve the minutes of the April 4, 2022, and June 1, 2022, meetings as written.

Motion Carried: 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

Interim General Manager's Report

Materials: Citizens' Advisory Board Packet (attachment 2)

Gregory Phipps, Interim General Manager, provided an update to the CAB.



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Benjamin Bloomenthal, the new Director of Finance and Accounting, was introduced. Mr. Bloomenthal brings direct experience, external perspective, and knowledge of grant applications and management.

Mr. Phipps discussed RMLD's efforts to attract new customers and encourage load growth, noting that there is particular interest from large load customers in the Wilmington area. Mr. Phipps expressed that an additional two customers near Ballardvale in the Upton area are expected to bring in loads ranging from 10 MWs (megawatts) to 30 or 40 MWs by 2025.

Mr. Phipps emphasized that RMLD's responsiveness, access to key team members, and reliable, low-cost, non-carbon energy offers a competitive value proposition over Investor-Owned Utilities (IOUs) such as National Grid and Eversource.

Mr. Phipps stated that additional load is beneficial for both RMLD and the ratepayers. There will be some additional investment to accommodate the new loads, but increased kWh (kilowatt hour) sales will add more revenue against the fixed cost base.

Mr. Phipps provided an update on union negotiations. Negotiations were completed with all three unions last month. Two unions have ratified MOUs (memorandum of understanding), and the collective bargaining agreements are being updated. The last union contract should be finalized by the end of November.

Mr. Phipps reported on RMLD's recent Mutual Aid activities. The RMLD team assisted the Northeast Public Power Association (NEPPA) in recovery efforts following Hurricane Ian in Florida, receiving positive feedback from the Town of Bartow. Mechanical breakdown issues with RMLD's truck during the trip identified a need to accelerate the replacement cycle of equipment. This vehicle is not included in the current budget.

Chair Soni asked a question about the recent outage in Reading center in the context of the budget and planning. Mr. Jaffari explained that an outage occurred at a gas station due to a loose connection of the neutral wire to the transformer, which caused voltage fluctuations.

Mr. Jaffari added that RMLD's 7-point maintenance program (included in the budget), covers manhole inspections, aged transformer replacement, and secondary maintenance services. The affected equipment was last checked in 2020.

The infrastructure will undergo upgrades as part of a plan to address aging equipment. This includes transformers, cables, and wires. The upgrades are reviewed annually and are prioritized based on information and age.

Mr. Phipps reiterated that there is no change required in the current budget plan because of the outage, and cited examples of relative items in the operating and capital budgets.

2023 Budget Presentation

Materials: Citizens' Advisory Board Packet (attachment 3)

Mr. Phipps and Mr. Jaffari presented the 2023 RMLD Budget Presentation to the CAB.

Chair Soni raised a concern about the increased capital budget this year, and indicated a need for understanding how the budget will be financed. Chair Soni suggested that it would be beneficial to know upfront how the budget will be funded, in addition to what RMLD plans to spend and what has been spent.

Mr. Phipps discussed the context and overview of the 2023 budget, emphasizing that the capital budget for 2023 has increased twofold compared to 2022.



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Taking a broader view, the evaluation of both the capital and operating budgets is intrinsically linked with the commitment to RMLD's Charter of reliable, low-cost, non-carbon energy.

A notable percentage of the capital projects concentrate on reliability, which is RMLD's primary goal. The focus on non-carbon energy mirrors the provisions of the 2021 climate bill, which established non-carbon compliance metrics. There is also a significant variable relating to the volatility of the power supply, which is a large portion of the operating budget.

Mr. Phipps shared insights on RMLD's budget positioning, including the fact that the actual budget rarely matches the projections. RMLD typically has not fully spent the capital budget in any given year. Like 2022, the 2023 actuals will differ from the budget. This is due to various factors such as labor limitations and supply chain issues.

Mr. Phipps noted RMLD is committed to fulfilling the capital projects to the furthest extent possible and the \$24m projected for the 2023 budget is an upper limit of RMLD's planned spending.

In response to Mr. Soni's question about the budget's funding source, Mr. Phipps stated that the budget is funded from existing cash and forecasted revenues for 2023. In 2024, external funding, such as bonding and grants, will likely be necessary according to the current projects and analysis.

Mr. Phipps committed to providing a snapshot of the balance sheet for next year's budget to help the CAB and BoC understand RMLD's financial position better.

Capital Budget

Materials: Citizens' Advisory Board Packet (attachment 3)

Mr. Jaffari presented the Capital Budget to the CAB.

Wilmington Substation construction (slide 4; project 105, line 21, page 63)

Mr. Jaffari discussed the need for an additional substation in the Ballardvale area to accommodate load growth. It was confirmed that the RMLD recently purchased the 326 Ballardvale land for \$4m.

Mr. Jaffari reviewed the anticipated substation construction schedule. Substation construction will commence in 2023, the station will be operational by Q3 2025, and the full load transfer will occur by end of 2026.

Mr. Jaffari discussed the project cost and components, as outlined on slide 4. Mr. Jaffari reviewed the pre-construction activities and noted that 2023 is slated for land clearing, excavation, and foundation construction for transformers, switch gears, and the drainage system.

Currently, RMLD is navigating the permitting process, zoning, and planning stages. The Department will present to the Wilmington planning board for zoning approval in November.

Mr. Jaffari expressed appreciation for the support from the Town of Wilmington, particularly CAB members Mr. Hooper and Mr. Kelley.



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Mr. Jaffari discussed the procurement process. Following civil construction, RMLD will issue RFPs. A meeting with designers is planned to facilitate this process. The goal is to send out RFPs for items with long lead times, such as transformers, by Q1 2023.

Mr. Jaffari discussed the industry-wide challenges with supply chain disruptions and cited the example of transformers (30-45 weeks to 50-60 weeks). Market instability and potential cost fluctuations are expected to result in significant cost increases.

RMLD's Regional Network System (RNS) status approval (pending) will result in an estimated annual return of \$300k-\$400k. There is a five-year payback period on the \$2m investment specific to the PTF component of the substation project. Following this period, the credits would effectively cover the cost of the substation over a 10-15-year timeframe.

Mr. Hooper asked if there were concerns about handling additional load before the new substation is operational. Mr. Jaffari confirmed that the Wildwood substation will be maintained and transformed into a switching station to provide system reinforcement. This and other downstream transformers will act as buffers for the additional load.

Mr. Phipps stated that current customer discussions are conservative, especially in relation to the anticipated load in August 2024. A strategy was proposed to manage high load periods, such as asking customers to run 2nd or 3rd shift during high-temperature, high-load weeks, specifically in August.

Mr. Kelley asked a question on how relocating the substation to North Wilmington might impact Analog. Mr. Jaffari clarified there would be no impact as Analog is fed from station 4.

Mr. Jaffari added that an aggressive maintenance program is in place for the existing substation until 2025. The maintenance schedule is now being performed annually instead of every three years.

Chair Soni inquired about the potential for a substation location on Route 125, as discussed during the Board of Commissioners meeting.

Mr. Phipps affirmed that the default plan is to construct the new substation at 326 Ballardvale. Route 125 was evaluated in the past but was not feasible at that time due to various factors. With changes in RMLD's perspective and Wilmington's ownership of the Route 125 land, the location is under reconsideration.

If the property on Route 125 can be secured by next summer, RMLD may relocate the substation construction there instead, while the equipment and interconnect study for 326 Ballardvale will remain valid. If Route 125 becomes the substation site, 326 Ballardvale could be repurposed for a larger battery storage facility, providing financial benefits to RMLD and the ratepayers.

Chair Soni sought clarification on the budget, asking if the proposed \$15m would cover both possible scenarios.

Mr. Phipps clarified that the budget assumes the substation will be located at 326 Ballardvale and doesn't include the \$4m land purchase. If the substation is built at the Route 125 location, RMLD would save on construction costs, and the budget would likely reduce by at least \$1-2m.

Mr. Phipps acknowledged that additional land acquisition costs may arise, which are not currently included in the budget. Chair Soni confirmed that such costs would require further approval from Boards.



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Mr. Phipps confirmed that RMLD is not seeking to spend another \$4m for Route 125 and will aim to create a scenario beneficial for both the Town of Wilmington and RMLD.

In response to Mr. Small's query, Mr. Phipps affirmed the need to acquire more land to support network growth, including the addition of storage facilities. If RMLD decides to acquire land on Route 125, a separate request for additional capital funding would be made in 2023.

AMI Mesh Network Expansion &, Meter Replacement & MDM (slide 5; project 112, line 25, page 73)

Mr. Jaffari explained that MDM is a system for housing and processing meter data and conducting data analytics.

Mr. Jaffari discussed the project scheduling and costs, as outlined on slide 5.

A meter evaluation study was conducted in 2020 and found that RMLD's current meter technology is outdated and nearing the end of its useful life. This outdated technology will not support RMLD's future operational needs and cost-saving measures for customers.

RMLD plans to replace all 32,000 existing meters with new technology. To accomplish this, RFPs will be issued for the new technology, with the help of PSE, an engineering firm hired to assist with project management.

Mr. Jaffari referenced the procurement process timeline, outlined on slide 5.

The MDM will be installed first, which will enable business operations to continue while the new metering system is being developed. Once the new system is in place, the old system will be disconnected.

The MDM will provide capabilities for load forecasting and data analytics, enabling RMLD to work towards the goal of being carbon-free by 2050. The new system will improve connection and communication with field devices, meters, and SCADA, leading to better customer service and quicker outage resolution.

Supply chain disruptions may cause a delay of a year or more due to market uncertainties and cost increases. RMLD will attempt to mitigate these disruptions to the best of their abilities.

Vice Chair Welter confirmed the project includes the installation of all-new meters and equipment.

Ms. Bitá asked about a mobile app mentioned in line 10, to which Mr. Jaffari clarified is a separate app. Ms. Bitá commented on the price disparity, and Mr. Jaffari explained that the project app would provide customers with detailed information about their usage, load, outages, etc.

Chair Soni inquired about the existing network, and Mr. Jaffari confirmed that RMLD has a fixed Mesh network, ITRON, and another mesh network with the EATON system. These existing investments will be integrated into the new system until they reach the end of their useful life.

Grid Automation, Modernization & Optimization (slide 6; project 103, line 24, page 65)

Mr. Jaffari discussed the use of smart switches as part of the Fault Detection Isolation and Restoration (FDIR) process. These switches communicate with each other to detect outages, isolate them, and subsequently restore power. This technology could drastically reduce



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troubleshooting time from 40-45 minutes to mere seconds. System reliability will be increased due to this project.

Mr. Jaffari expanded on the technologies used, including software integration. RMLD plans to complete the technology roadmap over a span of fifteen years. Each year contributes to a piece of the roadmap, making the system more resilient.

Mr. Jaffari highlighted the project costs and associated challenges, outlined on slide 6.

Mr. Jaffari detailed RMLD's procurement strategy for the project, which will result in significant time and cost savings.

RMLD has established direct contracts with vendors and manufacturers. This allows RMLD to purchase directly from these entities, eliminating the need for a lengthy bidding process, stabilizing prices (2% yearly escalation), and saving money for the ratepayers. RMLD is committed to increasing such activities to create savings and reduce operational complexities.

Reliability Projects (slide 7; projects 458;107;106;742;668; lines 31-35, pages 83-91)

Mr. Jaffari discussed the annual reliability projects outlined on slide 7. Investments in these projects reinforce the reliability and resiliency of the system and increase plant value. Increasing the plant value also increases the funds for future infrastructure investment through the 3% depreciation rate.

RMLD conducted a system reliability study in 2015, resulting in the creation of a roadmap which outlines infrastructure reinforcement and improvement areas.

Mr. Jaffari noted the total project cost for 2023, and discussed the specific initiatives included (slide 7).

Mr. Jaffari highlighted that The 13.8kV upgrades improve system efficiency and waste reduction, resulting in ratepayer savings. The Underground Facilities Upgrades relate to a maintenance program prioritizing subdivision upgrades based on age and load.

Mr. Jaffari discussed the Aged/Overload Transformer Replacement Program, noting that 1/3 of system transformers have been replaced since its start in 2015.

Project challenges include supply chain issues, implementation of public easements and issues with Verizon's pole ownership, leading to service delays.

It was noted that RMLD and Verizon have 50/50 ownership of the poles in the territory. RMLD has custodial ownership of North Reading and half of Reading, while Verizon has custodial responsibility the rest of the communities are Verizon.

Mr. Phipps and Mr. Jaffari discussed ongoing and long-term negotiations with Verizon to purchase their poles to have total control of the system. Vice Chair Welter asked a clarification question on RMLD pole ownership. Mr. Phipps discussed the process and benefits of purchasing poles from Verizon and leasing them back to enhance responsiveness and cost-effectiveness.

Ms. Bitá asked a question related to the Auburn Street Water Tower Project. Mr. Phipps confirmed that the budget does not specifically allocate funds for the project, but unforeseen projects can be financed from the general construction budget under maintenance.

Mr. Kelley and Mr. Phipps discussed the customer perception challenges associated with system outages due to pole damage where Verizon has custodial responsibility, emphasizing RMLD's commitment to reliability and quick restoration of services.



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Mr. Jaffari explained the three criteria of reliability enforcement. This includes load growth accommodation through larger wires and transformers in anticipation of increased demand due electrification and the increase of electric vehicles.

Transformers and Capacitors (slide 8; project 116, line 30, page 81)

Mr. Jaffari highlighted the importance of transformers and capacitors, referring to them as the "bread and butter" of RMLD's business. There is a separate budget bucket for transformers where all transformer costs are drawn from.

Mr. Jaffari noted the significant cost increase in 2023 from the typical budget amount of ~\$1.5m to ~\$5m. This increase is due to the need for more transformers and the price surges driven by supply chain disruptions, reducing overall availability of transformers for the industry.

RMLD is proposing to increase the inventory now, of pole mount transformers as prices are expected to continue rising. This will secure RMLD's position and meet the Department's need for additional transformers. Mr. Jaffari referenced the items to be bid in 2023 for purchase, outlined on slide 7.

Chair Soni sought clarification about the budget cost, and Mr. Jaffari confirmed that the total cost of ~\$5m includes a bid of ~\$4.4m in 2023 and a carryover of ~\$1.3m from 2022. The \$4.4 million is for new transformers, with the understanding that delivery within the same year may not be possible.

Ms. Bitá asked a question about the recent notice of delivery delays resulting in an additional ~\$1.2m carry-over to 2023. Mr. Phipps clarified that this amount is a carryover from the 2022 budget now shifted to the 2023 budget and not included in the ~\$5m. Mr. Small noted that with the additional ~\$1.2m, the 2023 budget should now reflect \$7 million. Mr. Phipps agreed, but emphasized that the budget is a cap, not a definitive spending plan.

Chair Soni, Mr. Small and Mr. Phipps discussed the possibility of the capital expense increasing to ~\$7m, considering the lead times. Mr. Phipps stressed that the budget is subject to change due to the dynamic nature of business operations and global economic conditions.

RMLD's budgeting strategy is not to spend money for the sake of spending, but to maintain the network and invest in necessary projects. Mr. Phipps confirmed that even if the entire ~\$24m is spent to maintain the network, RMLD would remain cash flow positive due to existing funds in the operating statement and balance sheet.

Mr. Kelley noted that if price increases continue, RMLD might not be able to purchase as much equipment as planned.

Mr. Phipps pointed out that a transformer has a minimum lifespan of 20 years, so the increased budget is a long-term investment. Mr. Phipps further emphasized the importance of maintaining the replacement of transformers, a task that had been neglected in the past.

Mr. Bloomenthal stated that the investments being made are critical for reducing the backlog of necessary repairs and enhancing the reliability of the system. The goal is to hit the ~\$5.7 million budget limit, which is the spending capacity for the fiscal year.

Electric Vehicle Supply Equipment (EVSE) (slide 9; project 099, line 7, page 31)

Mr. Jaffari discussed the EVSE annual budget amount and inclusions for 2023, as outlined on slide 9. There will be a carry-over from the 2022 budget due to supply chain disruptions, especially with rapid technology changes.



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Vice Chair Welter asked about the projection of expenditures in the coming years. Mr. Phipps responded that the budget is forecasted to stay the same, ~\$1m for the next couple of years, and then decrease. By 2028, there will be a total of ~ 80 public chargers across all four towns.

Chair Soni and Mr. Kelley asked why RMLD should own these chargers and if there was a revenue stream. Mr. Phipps explained that the goal is for the chargers to pay for themselves and owning the chargers is the least expensive way to deliver the service to the customers.

Mr. Phipps emphasized that grants are critical to the project. RMLD will pursue grant dollars, especially for the DC fast chargers, which are very expensive. It was noted that this project has been affected by supply-chain disruptions.

Mr. Small asked if the budget included any grant money. It was clarified that the ~\$963K does not include the \$100K grant, which will be reflected in a different line item on the summary page, titled Bond Proceeds and Other Funding Sources."

Rolling Stock Replacement (slide 10; project 118, line 6, page 27)

RMLD's annual budget includes upgrading trucks and vehicles that have reached ten years in service. Mr. Jaffari discussed the project inclusions and carry-over from 2022, as outlined on slide 10.

Mr. Kelley asked if the electric pickup trucks would be able to hold their charge during a storm throughout the night. Mr. Phipps confirmed that the trucks are expected to hold a charge for long periods, since the average mileage driven is relatively low.

Mr. Kelley asked a follow-up question about the battery drain from auxiliary operations like heating and lighting. Mr. Phipps acknowledged this concern but pointed out that such loads are relatively small, but we need to learn first-hand, hence, the purchase of these initial EV trucks.

Mr. Phipps added that since the Town of Reading is trying to be part of the Green Communities initiative, RMLD must electrify its light duty fleet over many years. The Department needs to move towards more electric vehicles and gain experience with them.

Chair Soni asked about potential monetary returns from the Green Communities program. Mr. Phipps confirmed this and stressed the importance of RMLD learning from this transition to electric vehicles.

Vice Chair Welter asked about the manufacturer selection process. The delivery schedule, among other factors, will be key considerations in the selection process. The use of different power sources for truck functions, and how this might evolve with time and technology changes was discussed.

Security Upgrades – all sites (slide 11; project 11, line 5 page 25)

Mr. Jaffari discussed the NERC (North American Electric Reliability Corporation) cybersecurity and physical security mandates. In 2021, a study was initiated by the consulting firm, Burns and McDonnell, to ensure compliance with these requirements. The total estimated cost is ~\$1m over the next few years.

The initial review and final recommendations are slated to be discussed next week, with the implementation schedule provided thereafter. Mr. Jaffari noted examples of specific recommendations and the RFP timeline as outlined in slide 11.

Chair Soni confirmed that the project timeline spans two years, with ~ \$650K allocated for technology upgrades and physical security enhancements between 2023 and 2024.



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Vice Chair Welter inquired about potential impacts of building upgrades at 230 Ash Street, considering the Town of Reading's interest in the property. Mr. Phipps responded that the goal is to minimize investments in the current facility as a potential relocation would occur no sooner than five years out. The investments made in the existing facility are being considered with this timeframe in mind, especially in terms of the video gear lifespan.

Mr. Jaffari noted that RMLD will aim to fully utilize the technology lifespan. Compliance with NERC mandates is required and not optional. The aim is to ensure a seamless security audit without over or under spending, while meeting all necessary compliance requirements

Other 2023 Budget Items (slide 12)

Mr. Jaffari referenced the proposed budgets for the various departments and projects as outlined on slide 12.

The 2023 IT budget item is to cover expenses related to software upgrades, licenses, hardware upgrades, communications, switches, and other infrastructure elements that require updating (lines 8-12).

The 2023 Facilities budget item is for office upgrades and rearrangements (lines 1-6).

The Force Account budget item will be credited for a project with the state. Mr. Jaffari highlighted several project examples, including upcoming work on Wilmington Route 38. It was clarified that the total budget amount would be reimbursed upon actual costs of the project, even if the actual costs differ from the budget (lines 27-29).

The Routine Construction budget item is the financial reserve for unanticipated and unforeseen items. Mr. Jaffari discussed examples of such events, including a pole getting hit causing subsequent damage to other wires and poles (line 40).

Budget Summary (slide 13)

Mr. Jaffari presented the budget summary for CY2023-CY2028 as outlined on slide 13.

The budgets for CY2023 and CY2024 are significantly higher than normal. This is due to 2023 and 2024 being peak years for building the new Wilmington Substation, the AMI MDM project, and annual maintenance projects such as transformers and reliability upgrades. The majority of the funds for these two years are directed towards the new Wilmington Substation and MDM AMI Mesh network.

Mr. Jaffari discussed the Force Account Credits expected to be received from CY2023 to CY2026, noting that Force Accounts facilitate upgrades and reinforce the systems.

In response to Chair Soni's inquiry, Mr. Jaffari confirmed that Force Account credits are credits received from the State. Line items 27, 28, and 29 are for the state projects.

When asked about grants, Mr. Phipps clarified that grants are separate from Force Account Credits. About \$100K worth of grants are projected from the 2023 budget.

Mr. Phipps emphasized the proactive role of the engineering and purchasing teams in pursuing grant applications. An additional role will be added to the purchasing team to accelerate the process.

In response to Mr. Small's question about the high grant value, Mr. Phipps explained that the entire AMI MDM system qualifies for grants, constituting a large portion of the grant amount.

Operating Budget



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Materials: Citizens' Advisory Board Packet (attachment 3)

Mr. Phipps presented the Operating Budget to the CAB.

2023 Operating Budget Context (slide 15)

Mr. Phipps discussed the operating costs and power supply of RMLD. Power supply forms approximately two-thirds of RMLD's operating costs. In contrast, for typical IOUs (Investor-Owned Utilities) in our region like National Grid or Eversource, the ratio is usually 50/50. This shows that RMLD is more efficient from an operating cost perspective, evidence that RMLD operations cost are 25%-30% of the total cost stack.

RMLD actively manages operating costs, which include salary, building, labor, trucks, fuel, and other daily expenses. Operating costs are primarily labor-driven.

Mr. Phipps emphasized that RMLD pays very close attention to managing its power supply as part of its strategic objectives. Power supply components include energy, transmission, capacity, and certificates.

Transmission costs, paid to operators like National Grid and Eversource, are rising significantly. Capacity charges are currently flat but are projected to rise again in 2026-2027. RMLD only incurs capacity and transmission costs for power purchased outside of its territory, not power purchased within territory.

RMLD is exploring opportunities for within-territory generation, to avoid additional capacity and transmission charges. Currently, 8 MW of solar PV within the RMLD territory contributes to ~2% of total purchases. The goal is to dramatically increase this amount over time.

Mr. Phipps emphasized that a single peak hour of load in a year drives 20% of RMLD's cost structure. The aim is to reduce the load during these peak hours using storage systems and existing generators. Every MW reduction during the peak hour is equal to ~\$150K savings in capacity and transmission costs.

Mr. Phipps discussed RMLD's carbon-neutral approach to power supply. RMLD is committed to purchasing non-carbon energy and associated certificates. Approximately 50% of RMLD's power supply was non-carbon in 2023, and the Department retired certificates equal to 29% of its kWh sales. It was confirmed that the ~\$4m from certificates sales in 2023 is not included in the current budget.

2023 Power Supply (slide 16)

Mr. Phipps discussed RMLD's 2023 power supply. Power supply remains a moving target, with RMLD budgeting for 0.6% load growth while striving to maintain a conservative stance to avoid unwarranted expenditure.

The net \$/kWh line on slide 16 provides a sense of what customers are charged on average, with ~15 cents per kWh for the calendar year 2022.

Mr. Phipps provided a brief analysis of a 10%, 13%, and 15% rate increase scenarios.

- 10% would result in a \$14 increase per month for the average residential customer bill (from the current \$135) with a total of \$958K to the bottom line.
- 13% would result in a \$18 increase per month for the average residential customer bill (from the current \$135) with a total of \$3.2m to the bottom line.



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- 15% would result in a total of \$5.2m to the bottom line.

A forecasted 10% rate increase is included in the presented 2023 budget, which remains much more beneficial for RMLD customers as compared to IOU customers that are witnessing 30%-70% rate hikes.

The objective to avoid 'rate shock' for customers and reduce the need for a \$12m bond in 2024 remains. RMLD's intention is to apply for grants for the AMI / MDM system.

RMLD's energy costs are now being influenced by international events, particularly in Europe and Asia. Energy costs were budgeted at approximately \$25m for 2022, but the estimate now stands around \$32.5m-\$34m due to current market conditions.

Despite the volatile market, RMLD continues to aim high on the cost side and low on the revenue side to benefit the Department's financial strategy.

Mr. Phipps discussed power supply adjustments and hedging. Monthly power supply adjustments are made based on forecasted kWh and costs to avoid significant fluctuations for customers. In 2023, 86% of energy is hedged through long-term contracts, providing a cushion against the volatile open market prices. Despite only a 14-15% non-hedged portion, due to the stark difference in contracted and open market prices, the ~15% of MWHs purchased in the open market could account for 1/3 of the total energy cost.

The key driver for the 12% increase from the CY2022 estimated amount to the CY2023 budgeted amount relates to the rise in transmission costs. Although the budget currently assumes a 10% increase in rates, a higher increase might be suggested in December to manage costs effectively.

Statement of Budgeted and Actual Revenues and Expenses (page 107)

Mr. Phipps referenced the key column titled "CY22 Budget/Actual % Change".

Mr. Phipps highlighted the following:

- The 9.02% total purchased power change represents the difference of the total power supply at the end of the year, largely driven by events in Russia and Ukraine.
- The total operating and maintenance expense was 5.14% lower than budgeted with a probable year-end spend of \$6.2m.
- The general and administrative expenses were lower by 15.28% against a budgeted \$15.5m, amounting to \$13.2m spent.

Statement of Budgeted Revenues and Expenses (page 109)

Mr. Phipps highlighted the following:

- There was a 17% increase in total operating revenues from CY22 to CY23.
- The total operating and maintenance expenses show an expected 9.88% increase in 2023 compared to 2022. The chart does not account for the fact that RMLD spent 5% less in 2022.

Mr. Phipps emphasized that even if RMLD spends the entire budget, there will still be ~\$1m in net income after accounting for all capital revenue and expenses. Historically, RMLD has not spent the entire budget.



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Vice Chair Welter asked if capital expenditures show up on the depreciation line. Mr. Phipps replied yes and elaborated on the interconnection between the operating and capital budget.

Mr. Phipps reiterated the impact of rate increases on revenue, as noted on page 10 of the meeting minutes.

Mr. Phipps discussed the increase in the mix of non-carbon power supply in 2023, leading to a rise in costs. This is normal and expected, and not solely due to geopolitical issues such as the Ukraine-Russia war.

2023 Operating Costs and Rates (slide 17)

Mr. Phipps highlighted the drivers of the 2023 budget increases, as outlined on slide 17.

The increase in the total general and administrative expense as well as the operating and maintenance expense for CY2023 is primarily driven by personnel costs, such as the costs associated with hiring for all 99 positions.

A labor-related cost increase is due to the new union contracts that decrease the non-sick time buyback provision but increase the cost-of-living allowance (COLA) in 2022 and 2023.

RMLD continues to improve network reliability, with a focus on investing in design work roles, additional personnel, and filling open positions. Twelve new hires have been made in the past four months.

Mr. Phipps highlighted the key initiatives around labor and staffing for 2023.

- The implementation of a Geographic Information System (GIS) to maintain and update a digital footprint of field operations, aiming to reduce dependency on a few individuals.
- The introduction of a new senior role, the Director of Enterprise Data, with two subordinates. This role is important as the company is becoming more data-intensive with ongoing load growth and the introduction of time-of-use rates.
- Plans to use data analysis for predictive alerts in the network, like heating transformers or out-of-circuit amperage, for preemptive maintenance.
- Strategies for sourcing intermittent non-carbon energy (wind, hydro, and solar).
- Large projects like the Advanced Metering Infrastructure (AMI) program will allow more efficient operation of the network.

The increase in employee-related expenses constitutes the largest part of the overall budget, with a roughly \$1m increase between 2022 and 2023.

Chair Soni asked about the increase in Admin Gen Salary and noted that the rise would be closer to 50%, not 30% as predicted in the 2022 actuals.

Mr. Phipps acknowledged that if all positions are filled, the increase could be as high as 50% from 2022 actuals to 2023 budget. The intent of these new roles is to improve operational efficiency and align with the company's goal of reliable, low-cost, non-carbon energy provision.



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The company is currently in growth mode, undergoing a major transition in network operation and supply, and aiming to heavily automate various processes while recognizing the continuing labor-intensive nature of the business.

Mr. Phipps discussed the budget changes related to energy efficiency and electrification.

- Increased activity in efficiency and electrification, such as a push for more within-territory generation, resulted in a significant increase in the 2023 budget compared to 2022.
- Efficiency and electrification represent ~ \$1m spend in the budget, with expected spending reaching ~ \$3m and a projected ~\$2.1m in collections.
- RMLD is anticipating an adjustment to the Energy Efficiency Charge (EEC) potentially reducing incentives for either solar installations or heat pumps.

Mr. Phipps discussed customer bills and rates.

Mr. Phipps emphasized the importance of framing discussions on rates within the context of overall customer bills (rate x usage). Usage varies among customers and seasons. Monthly rate adjustments, such as the Capacity and Transmission (PPCT) adjustments, are communicated in the context of their impact on customer bills.

Mr. Phipps reiterated that if the full budget is achieved, the company expects to generate approximately \$930k in net income, which can be allocated to capital investments.

Mr. Phipps stressed the need for future planning, considering the \$24m capital budget for 2024 and the necessary \$12m funding. Some of this funding may be secured through certificates, additional collections, and grants. RMLD is trying to avoid relying on bonding for the 2024 budget. Instead, the Department is looking to use grant dollars and funding already within the 2023 budget.

As of September, \$4.7m has been spent out of the \$13m capital budget for 2022, plus \$4m for land, totaling \$8.7m. It is estimated that \$12m will be spent by the end of the year, with \$1.2m rolling over to the next year.

Mr. Phipps emphasized that the 2023 budget, as proposed, requires no external funding and holds together internally consistent.

Chair Soni asked a question about the ~\$22.8m capital spending and its source. Mr. Phipps explained that \$8m would be pulled from the operating fund (from the balance sheet) and advised checking the updated balance sheets at the back of each monthly board book.

Mr. Small suggested considering raising the depreciation rate from 3-5%, which would give back net income, though not as much as 10% rate increase.

Mr. Phipps acknowledged the various levers that could be pulled for financial adjustments and emphasized support for the conservative case currently presented. Adjustments could be made to be more aggressive, if required.

Chair Soni asked a question about the payment to the towns, which Mr. Phipps confirmed is included in the operating budget.

Mr. Kelley and Mr. Phipps discussed potentially changing this arrangement in the future, acknowledging the difficulty of amending the existing 20-year agreement. Ms. Rybak



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mentioned that the agreement had been renewed for another ten years. Mr. Phipps acknowledged the need to revisit the agreement and emphasized RMLD's charter to take care of all four towns.

Mr. Small recommended looking at alternative ways to make up the \$12m gap in 2024 and reiterated the suggestion to adjust the depreciation rate to 5%. Mr. Phipps mentioned that this suggestion could be applied in 2024, but not for 2023.

Mr. Phipps expressed support for the necessity of a 10% increase in rates, noting that this seems to be a reasonable approach based on customer feedback.

Vice Chair Welter and Mr. Kelley requested comparisons of RMLD rates to other communities. Mr. Jaffari shared that his bill in an IOU area is going up by 35%.

Mr. Phipps explained that RMLD's residential rates are mid-range, while commercial and industrial rates are the least expensive. However, any rate adjustments should reflect actual costs, not comparisons to other MLPs.

Mr. Phipps provided a breakdown of the \$22.8m capital spending for Chair Soni and summarized that the 2023 capital budget could result in a dramatic drain from all capital fund balances but expects the situation to remain positive under the conservative case presented.

In planning for 2024, Mr. Phipps projected a need for \$12m in bonds or grants to fund the budget but clarified that the meeting was only voting on the CY23 budget. Mr. Phipps emphasized the importance of budgeting up front to set up potential projects, as funds must be budgeted before bids can be sought.

Mr. Phipps acknowledged the board's right to take 30 days to digest the information before making a recommendation to the Board of Commissioners. Ms. Rybak clarified that the 30-day period commences on October 1, and the CAB is required to make a recommendation by the start of the fiscal year, November 1.

Mr. Hooper commended RMLD's presentation and expressed confidence in the estimated expenditure.

Mr. Phipps agreed to provide three different rate numbers and run analyses in the coming weeks.

Mr. Kelley acknowledged the high quality of the presentation and the information provided. Mr. Kelley noted that he isn't fond of rate increases but recognizes them as a business necessity.

Mr. Small clarified that the budget includes a proposed 10% increase and asked if RMLD will present a final proposal to the CAB in November or December. Mr. Phipps confirmed Mr. Small's understanding and stated the increase would be at least 10%.

Discussion occurred relative to the need for a vote on the 10% rate increase implied in the budget. It was decided that the suggested motion would be revised to approve the budget as presented, including the tentative 10% rate increase, so the rate increase can be formally approved when presented in December.

Mr. Hopper made a **motion**, seconded by Vice Chair Welter that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2023 Operating Budget with a Net Income of \$958,514 as presented, to include a tentative 10% rate



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increase. **Motion Carried:** 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

Vice Chair Welter made a **motion**, seconded by Mr. Kelley, that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2023 Capital Budget in the amount of \$22,849,979, as presented. Any significant changes are to be submitted to the CAB for review and recommendation. **Motion Carried:** 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

Scheduling

There will be no CAB meeting in November 2022.

The next CAB meeting will be held on December 8, 2022, at 6:00 PM.

The CAB discussed potentially looking into new iPads to be utilized at future meetings.

Adjournment

Vice Chair Welter made a **motion** to adjourn, seconded by Mr. Kelley. **Motion Carried:** 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

The CAB meeting adjourned at 9:23 PM.



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Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2022-12-08

Time: 6:00 PM

Building: Reading Municipal Light Building

Location: Winfred Spurr Audio Visual Room

Address: 230 Ash Street

Session: Open Session

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

Vivek Soni, Chair (Reading); Ken Welter, Vice Chair (Lynnfield); Dennis Kelley (Wilmington); Jason Small (North Reading).

Members - Not Present:

George Hooper (Wilmington)

Others Present:

RMLD Board of Commissioners Representative: Marlena Bitá, Chair

RMLD Staff: Gregory Phipps, Interim General Manager; Benjamin Bloomenthal, Director of Finance & Accounting; Julie Blackley, Communications Manager; Kathleen Rybak, Operational Assistant.

Minutes Respectfully Submitted By: Vivek Soni, Chair

Topics of Discussion:

All meeting materials can be found in the RMLD CAB Meeting Packet on the RMLD website.

Call Meeting to Order

Chair Soni called the meeting of the Citizens' Advisory Board (CAB) to order at 6:00 PM and noted the meeting was being audio recorded.

Chair Soni commended Chair Small for his outstanding leadership as chair.

Approval of Minutes

Materials: Citizens' Advisory Board Packet (attachment 1)

The minutes of the May 23, 2022, meeting were approved as written.

Mr. Hooper made a **motion**, seconded by Vice Chair Welter, that the Citizens' Advisory Board approve the minutes of the May 23, 2022, meeting as written. **Motion Carried:** 4:0:1:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Abstained; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

General Manager's Report

Gregory Phipps, General Manager, provided an update to the CAB.

RMLD security



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Mr. Phipps referenced a recent incident in Moore County, North Carolina, where vandals shot rifles at two substations, subsequent damage causing outages. Mr. Phipps linked this incident to a similar one that occurred in California eight years ago, highlighting the vulnerability of substations.

RMLD prioritizes cyber security and physical security, including any physical damage to the substations. Mr. Phipps underscored the importance of substations in providing reliable, low-cost, non-carbon electricity, and expressed the company's commitment to maintaining their operations. While substations are not manned 24/7, all of them are equipped with video camera systems.

The RMLD team is strategizing and preparing for potential threats to the new Wilmington substation and existing substations. There will be a follow-up report on the team's progress at the next meeting.

Vice Chair Welter asked about feasible precautions to prevent vandalism. Greg explained the current surveillance set-up, with cameras facing inwards. After the recent incident, which was executed from the outside, modifications were suggested to the camera system to better monitor external threats.

Mr. Phipps detailed three main categories of threats to substations: mischievous individuals, intentional minor damage, and serious acts of terrorism. RMLD is evaluating how to deter these threats.

Mr. Phipps noted a few proactive measures already under consideration: collaboration with local police departments, placing cameras along the roadways adjacent to substations, and awareness signage such as "you're on camera".

Chair Soni and Vice Chair Welter introduced the idea of physical barriers for substation security. Mr. Phipps confirmed that physical barriers, similar to sound barriers seen along interstates, are being considered. This is part of a larger plan to discourage and minimize damage from persistent threats.

Mr. Phipps added that immediate and longer-term actions are being considered. Efforts are underway to brainstorm and implement measures starting the following week. The company's approach will be public, reinforcing the deterrent factor and providing confidence to customers about the security measures in place.

Chair Soni brought up the issue of potential social media activity by those involved in the recent vandalism, which is a more complex area of threat monitoring. Mr. Phipps referred to the potential for coordination with local police departments in monitoring such activity. Mr. Phipps reiterated the overall goal of deterring such actions within RMLD's territory.

Infrastructure Update

Mr. Phipps provided an update regarding the new Wilmington substation.

The Wilmington substation will be built at 326 Ballardvale, and the project is advancing as planned. The ultimate objective is to have the substation fully commissioned so that load transfers can start in 2025.

RMLD is conducting meetings with the Town of Wilmington to ensure the proper permitting process is being followed. Mr. Phipps noted that equipment orders for the project have been initiated.



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An impact study was submitted to ISO New England in early November and is currently under process, estimated to take approximately six months. The impact study is crucial as it must be completed before any significant work can commence on the site.

The plan is to begin site preparation and work in the latter part of the summer or early fall of next year, once all permit approvals, final designs, and the ISO New England study are completed.

Mr. Phipps discussed alternative land acquisition plans. An alternative plan to construct the substation off of Route 125 is being pursued in parallel to the work on the 326 Ballardvale site. The go/no-go decision on this approach will be made in the August/September timeframe before physical work commences.

The alternative Route 125 plan is also being considered in addition to the Maple Meadows solar PV plan. The team presented these plans to the Wilmington select board back in October. Despite these concurrent plans, the default plan remains on track and is progressing as expected.

Mr. Phipps emphasized that Load growth, related to infrastructure, is being considered as part of the budget process and ongoing planning for power supply and infrastructure build-out.

Load growth is analyzed across different customer classes, with a particular focus on residential customers. The residential sector contributes to approximately 40% of the total load (total load nearly 680,000 MWh) and is expected to grow by 1-1.5% annually.

Air source heat pumps (ASHP) are a significant driver of load during winter months. Similarly, Electric Vehicle (EV) adoption is also expected to increase residential load. Residential load growth is driven more by the adoption of ASHPs and EVs rather than population growth or housing units.

Commercial load, which is 27% of the total load, is also expected to increase slightly as commercial establishments transition to ASHPs.

The industrial sector represents approximately 30% of total load, with residential, commercial, schools, and municipal buildings accounting for the remainder. There has been significant activity in the industrial space, with potential new customers that could materially increase the load.

One new prospect, tentatively beginning operations in the territory by late 2023, will represent approximately a 6 MW load by 2025, constituting 6% of total load, which averages about 100 MW. Another existing customer within the territory is looking to expand their business and will potentially add an additional 6 MW load. A third prospect is expected to bring a load growth of 15-16 MW by 2025, and potentially 36 megawatts shortly after.

Increased load is beneficial for the economic development of Wilmington, for RMLD's ability to better utilize the network, and it also helps to reduce upward pressure on rates.

RMLD's network's current capacity utilization stands at about 46%. By adding more load, this can be improved.

All growth projections and related investments are planned with a 20-30 year horizon, taking into account the life duration of the equipment. Therefore, planning efforts focus on not only current load, but anticipated load through 2040.

Mr. Phipps noted that supporting this load growth is a challenge, especially given that some new customers plan to start production in 2024, a year before the new substation, critical for handling current and new loads, is completed.



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RMLD is exploring ways to distribute loads across existing substations to handle some of the load in 2024.

Mr. Phipps noted that RMLD's charter of reliable, low-cost, non-carbon energy is an attractive proposition for manufacturers.

RMLD's current industrial rates average 12.2 cents per KWh. A proposal will be presented to increase these rates to about 14.2 cents per KWh. Despite this increase, rates remain competitive, particularly compared to Investor-Owned Utility (IOU) territories.

RMLD's strategy includes being responsive to customer requests and maintaining an ongoing dialogue with potential new industrial customers.

Chair Soni asked about the capacity for the new substation. Mr. Phipps confirmed that it is being designed for a capacity of 100 MWs. The substation will be designed with resiliency in mind, ensuring capacity in case of any single point of failure.

Mr. Phipps noted that portions of the RMLD network currently run at 13.8 KV and other sections at 34.5 KV. Given the expected load growth, it was concluded that a larger part of the network might need to operate at 34.5 KV.

The network is being redesigned to a ring configuration, which will allow for greater reliability in case of a fault.

Mr. Phipps highlighted that RMLD is engaged in addressing the challenge of growth after a decade of flat or no growth, and the potential issues related to EV load. The plan is to increase the capacity of all substations to 100 MW within the next five years.

Mr. Phipps noted that current peak load capacity might increase from the current 200 MW to closer to 300 MW, which significantly affects network design.

Mr. Phipps mentioned that Mr. Bloomenthal will talk about how the network expansion will be financed, noting that there are no external sources of funds except for potential bonding, and that grant opportunities will be explored.

The intention is to maintain a reliable, low-cost network that is non-carbon compliant, while also attracting business and preventing rate shocks to customers.

In response to Vice Chair Welter's question, Mr. Phipps confirmed that industrial load growth is a key near-term driver of network load. The industrial sector will see a higher percentage growth in rates due to this load growth, despite remaining lower than residential rates due to cost allocation and the nature of the industrial load. Residential rates are usually higher due to the expansive nature of residential load and the associated cost to serve it.

Personnel Update

Mr. Phipps stated that over the past two months, five internal promotions have been made, reflecting the organization's commitment to recognizing individual growth and hiring from within when possible.

Two new hires will be joining the organization shortly, including the new Director of Human Resources. The current Director of HR will transition to a role as internal Counsel, with a focus on land-related issues and continuing in the role of Labor Relations.

A strong emphasis will be placed on recruitment, as there are over 20 positions projected to be open in January, and just under 15 positions currently open.

RMLD has completed an internal employee survey, the first of its kind in recent times. The survey aimed to gauge levels of communication within the organization and to garner feedback on potential changes.



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Rather than being anonymous, employees were asked to include their names alongside their submissions, with the assurance that only the General Manager would review them. This was aimed at ensuring transparency and building trust.

Mr. Phipps highlighted that of 72 potential responses, 65 employees participated, indicating high engagement levels, a good thing.

Customer Survey

Mr. Phipps noted that the first meeting to initiate an external customer survey was held today. The intention is to conduct the survey in January and provide feedback by March.

Great Blue, a company based in Connecticut and specializing in MLP surveys, was selected through the appropriate bid process to conduct the survey. Special attention will be given to the phrasing of the survey questions, given their influence on the results.

Grants Report

Mr. Bloomenthal, Director of Finance & Accounting, provided an update on grants to the CAB. This topic was not included on the original posted agenda.

Mr. Bloomenthal introduced the grant programs that RMLD is working on.

Mr. Bloomenthal highlighted the grant opportunities for MLPs arising from the recently passed Infrastructure Investment Bill:

- The Grid Resiliency program (Section 40101)
- The Innovative Grid Resiliency program (Section 40103)
- The Smart Grid program (Section 40107)

RMLD will submit a \$20m concept paper to the Department of Energy (DOE) for the grid modernization program, which includes grid optimization (FDIR project and VVO project), the AMI MDM program, and related communication systems.

The Innovative Grid Resiliency program aims at seeking additional funding for the Maple Meadows project's capital items. The concept paper is due in January.

The Section 40101 program is administered through the state executive office of energy and environment. Projects under consideration include transformers, poles, and other core capital projects.

Mr. Bloomenthal has reached out to the Northeast Homeland Security Regional Advisory Council (NARAK) regarding resiliency projects and security hardening programs through the Homeland Security Grant Program (HS GP).

Chair Soni asked whether the grant applications include expenses for substation hardening. Mr. Phipps acknowledged the point, and mentioned that RMLD hasn't explicitly added it, but will consider physical security along with cyber security.

Chair Soni offered to connect the team with the Massachusetts Clean Energy Center for additional funding options.

Mr. Phipps highlighted RMLD's aggressive innovation strategy and willingness to explore various introductions and potential partnerships. The goal is to establish innovative projects for funding, primarily to bring economic benefits to customers and push the utility to the leading edge of industry transformation.

Chair Soni asked about geothermal projects. Mr. Phipps acknowledged and elaborated on the Department's explorations into low-temperature geothermal with UMASS Amherst. Mr.



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Phipps also mentioned interest from the Massachusetts Department of Energy Resources (DOER) and potential federal funds.

Mr. Kelley pointed out a Wall Street Journal article discussing deep-drilling technology.

Mr. Phipps asked the CAB to consider people in their networks who may be seeking exciting opportunities in the energy sector, specifically pointing to roles like data analysts.

Communications Update

Materials: CAB board packet (attachment 2)

Julie Blackley, Communications Manager, provided a communication update to the CAB.

Ms. Blackley reported the successful reception of the historical calendars, which have received considerable social media attention.

Mr. Blackley noted that the RMLD newsletter was redesigned and released in November, aiming to better suit the large audience of over 20,000 residential customers. The newsletter currently has an open rate of 55%, well above the industry average of 27%.

Ms. Blackley discussed recent media coverage, outlined in attachment 2.

Ms. Blackley provided a social media update, highlighting that RMLD's "we're hiring" graphic was the most engaging post last month.

Ms. Blackley referenced the recent joint press release with the Town of Reading and expressed interest in replicating this model with the other communities.

Ms. Blackley discussed the customer survey, which will be sent to both residential and commercial customers simultaneously and is scheduled to be completed in March.

The communication component is significant, as this will encourage participation in the study. Customers will be informed about upcoming phone calls and emails.

A Home Energy Audit Webinar is planned for January to inform customers about home energy audits and ways to save on their energy bills during the high bill period in winter.

Ms. Blackley reported on the website updates outlined in attachment 2. Ms. Blackley added that after conducting an analysis and comparison with partner websites, it was found that there's room to simplify the site and make it more user-friendly. The web team is scheduled to begin working on these improvements for early 2023.

Mr. Phipps added that the website updates aim to make it easier for customers to self-serve, easing the load on the in-person customer service team.

The mobile app (approved in last month's budget meeting) will also benefit from a more mobile-friendly website. Julie is leading the team to work with the external hosts to improve the website and make it better suited to customer needs.

Mr. Phipps emphasized that the ultimate goal is to give customers more control over their energy use in anticipation of increasing electric bills due to electrification and energy mix changes.

Mr. Phipps noted that plans to promote time-of-use rates more aggressively are in the pipeline to allow customers better management of their costs, starting from 2023.

Integrated Resources Report

Materials: RMLD CAB Board Packet (attachment 3)

Mr. Phipps presented the Integrated Resources Report to the BoC.



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RMLD Strategic Direction Highlights (slide 3)

Mr. Phipps reported on the materializing load growth in both the residential and commercial sectors, noting that industrial growth is occurring faster than anticipated.

Mr. Phipps discussed the importance of matching power supply to load growth. Mr. Phipps mentioned RMLD's efforts to incorporate more battery storage into the territory, which are typically used for short term time shifting. However, RMLD is in discussions with a group that could potentially offer longer-term storage.

Mr. Phipps highlighted the importance of within-territory generation to manage power supply costs. The current within-territory generation is only 8 MW out of a total 100 MW load, primarily sourced from community solar programs.

Mr. Phipps referenced the Maple Meadows project and other initiatives aimed at increasing within-territory generation to 30-40 MWs. Unless there are significant advances in panel efficiency, RMLD will be unable to produce more than 40 MWs due to physical space limitations.

RMLD is pursuing investment tax credits via the Inflation Reduction Act, which will assist in managing power supply costs. RMLD's 2023 power supply is 86% hedged, with the remaining 15% open market and subject to price volatility.

Mr. Phipps mentioned the potential downward pressure on prices due to geopolitical issues in Europe and a forecasted mild winter. Mr. Phipps emphasized the importance of vigilance in the volatile wholesale market and stated confidence in the company's preparedness for the winter months.

RMLD's portfolio is at about 22-25% Hydro for 2023, which is a significant increase from two years ago. Mr. Phipps mentioned potential wind projects and the need for a diverse supply mix.

Maple Meadows Project (slide 4)

Mr. Phipps provided a detailed update on the Maple Meadow project, a potential 8-10 MW solar array at a historical landfill site.

This project has support from the Town of Wilmington, local community groups, and environmental authorities, but there are still regulatory and liability challenges to navigate.

The estimated cost of the project is ~\$25m. If completed, the power generated would cost around \$50/MWh vs \$100/MWh for RMLD's total portfolio, making it economically beneficial.

The project may be eligible for up to \$12 million in grant funding due to its environmentally beneficial nature and status as a landfill site.

Maple Meadows is being pursued from a resiliency and reliability perspective and includes plans for partnering with long-term storage providers.

Chair Soni asked about capital expenditures, to which Mr. Phipps responded that the \$25 million is only for solar, without any storage included.

Chair Soni raised concerns about potential flooding. Mr. Phipps clarified that the primary environmental concern was the Maple Meadow Stream, which RMLD plans to protect.

Ms. Bitá asked about nearby residences, and Mr. Phipps clarified that mostly businesses surround the lower third of the site, with some residences further north.

Ms. Bitá further inquired about the exact location of the site. Mr. Phipps explained that it's in the southwest corner of Wilmington, near the Wilmington/Woburn line.



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2023 Regional Winter Resiliency – notes (slide 5)

Chair Soni reiterated the need to talk about regional winter resiliency, an issue discussed previously.

Mr. Phipps noted that concerns stem from the fact that about half of the energy produced within New England comes from natural gas. However, New England only has two major pipelines supplying it. Despite a 15% capacity increase seven years ago, there has been no new gas supply mechanism.

Chair Soni expressed concern about potential issues related to heating gas and oil availability and whether these might complicate energy reliability in winter.

Mr. Phipps elaborated on the multifaceted issue, mentioning the intertwined roles of natural gas and oil. Mr. Phipps discussed natural gas supply issues due to LNG tankers which typically could be scheduled to supply Boston terminals, but now are being predominantly scheduled for Europe, leading to potential shortages. The priority for natural gas in winter is to heat buildings, with electrical generation being a lower priority.

Many generators can burn oil as well as natural gas. However, oil reserves, typically around 52%, are currently only about 42% full. This is partly due to the forecasted future dip in the price of oil, causing generators to be cautious about overstocking, which could result in financial losses.

Mr. Phipps discussed the potential concern about weather-dependent and ISO-NE mandated rolling blackouts, as outlined on slide 5. Mr. Phipps noted that if such an event occurs, warnings would be given well in advance. This decision wouldn't be made by the RMLD but would be a load reduction mandate from ISO New England. The situation is driven by especially cold weather and is most likely to occur in January or February, influenced by the availability and cost of fuel.

2023 Rates

Materials: RMLD CAB Board Packet (attachment 4)

Mr. Phipps presented the 2023 rates to the RMLD CAB.

Mr. Phipps noted that the 2021 rate class study and the previous year's work was taken into consideration in this process.

Rates – goals and objectives (slide 3)

Mr. Phipps discussed the primary goals and objectives as outlined on slide 3.

Mr. Phipps provided a context of the specific rate changes. The costs associated with different rate classes vary due to factors such as geography and concentration.

Mr. Phipps highlighted the ASHP (air source heat pump) program's success, which has gained momentum over the last year. ~300 out of 1200 furnaces are being replaced annually with ASHPs in the territory. RMLD's goal is to reach ~ 500 replacements in the next few years by increasing communication and involving more contractors, rather than changing the rate of incentive.

The current incentive is \$1K a ton, with an average rebate of \$3.3K per system installed, with the average price of a system roughly between \$18K to \$20K.

Vice Chair Welter asked about gas customers' eligibility for the ASHP incentive. Mr. Phipps clarified that as of last spring, natural gas customers, even those who weren't National Grid electric customers, could be eligible for RMLD's ASHP program, due to National Grid eligibility changes.



Town of Reading Meeting Minutes

Mr. Phipps noted that while RMLD wants customers to have either one of the benefits, we want to discourage double-dipping into both incentives as these are customer funds.

Desired outcomes (slide 4)

Mr. Phipps outlined the desired outcomes of RMLD's rates which also include cost coverage and customer behavior influence.

Mr. Phipps indicated that further discussion on RMLD's "EV1" or "A3" rate, specifically designed to influence EV adoption, would be postponed until the next meeting.

2023 Context (Slide 5)

Mr. Phipps contextualized the budget recommendations and anticipated rate changes.

Mr. Phipps acknowledged that the proposed 14% increase is substantial but emphasized the necessity given the growing cost structures and the operational demands.

Mr. Phipps referenced the significant increase in 2023 energy costs with hedged power supply averaging \$41/MWH and open market prices averaging \$125/MWH.

Mr. Phipps noted that other Municipal Light Plants (MLPs) are generally experiencing similar rate increases, ranging from 10-15%.

Investor-Owned Utilities (IOUs) like Eversource and National Grid are facing significantly higher increases due to both controllable and uncontrollable factors such as regulatory structures. Mr. Phipps referenced the quotes on slide five.

Mr. Phipps cited the ongoing geopolitical issues between Ukraine and Russia as one factor that led to an ~ 90% increase in wholesale power supply costs than initially forecasted. This resulted in the average residential customer rate being 17 cents per KWH for 2022, which is still considerably lower than National Grid's rate of 29 cents per KWH for 2022.

Mr. Phipps said that the proposed rate for residential customers will be 19 cents per KWH, an increase of just under 15%, while National Grid's is expected to be 49 cents per KWH.

Mr. Phipps reaffirmed RMLD's cognizance of the impact a 14-15% rate increase can have on the customers. Mr. Phipps also emphasized the relevance and necessity of this increase in ensuring operational efficiency and maintaining the value provided to the customers.

Mr. Phipps attributed a significant part of the increase to the escalating wholesale costs and a part of it to operational costs.

Summary of monthly bill changes – March 2023 (slide 6)

Mr. Phipps reasserted that RMLD's rates and rate increases are lesser than the surrounding counterparts.

Chair Soni sought clarification on the initial assumption made to which Mr. Phipps replied that the budget assumed a 10.9% rate increase.

The budget, under these assumptions, generates a net income of ~ \$958K, but necessitates raising ~\$12m for new grants and bonds in 2024.

Despite RMLD's aggressive efforts to secure grants, the proposed 14% increase (which translates to an additional \$20/month for residential customers) is expected to provide a more robust financial buffer for 2024.

Chair Soni asked if RMLD's concern about forward energy prices has worsened since the budget was put together, to which Mr. Phipps responded that it had not. The key reason for the proposed 14% rate increase, as confirmed by both Mr. Phipps and Chair Soni, was to plan for better financial stability in 2024.



Town of Reading Meeting Minutes

Ms. Bitz posed a hypothetical scenario of not preparing for 2024. Mr. Phipps explained that RMLD would have to pay ~12m for 2024 at some point. The aim is to distribute the financial burden between 2023 and 2024.

The discussion moved towards other possible strategies, such as adjusting the depreciation rate and bonding. Mr. Small noted that raising the depreciation rate from 3% - 5% could potentially help generate up to \$8m of the required \$12m. However, this would also lead to higher rates. Leveraging good government interest rates through bonding was also mentioned as a potential strategy.

Chair Soni and Mr. Phipps both recognized that several different levers could be pulled to manage the increased costs. An in-depth examination of these options would be beneficial.

Mr. Phipps highlighted that the two main factors driving increased costs are the power supply and the deliberate shift to more non-carbon energy sources.

It was reconfirmed that the basis of the discussion was to evaluate how to financially prepare for 2024.

Chair Soni asked for big-picture options for the organization's financial strategy relative to the proposed rate increases.

Mr. Small explained the impact of the depreciation rate on the operating budget, highlighting that it's a non-cash event but ultimately affects the rates due to its place as a line-item expense.

Mr. Small emphasized that the depreciation rate is 3% of net plant, resulting in a significant chunk of capital. The depreciation rate could be increased to 5%, but it would require justification to the DPU. This could fund significant capital projects but would also result in an increase in the rates.

Chair Soni summarized the options as having a higher rate increase, an increased depreciation rate, or more bonding. All options, as Mr. Phipps and Mr. Small confirmed, would impact the rates. It was further clarified that the organization needs a certain chunk of cash, and the question is how to obtain it.

Mr. Small highlighted that the rate increase would be roughly 4% more than what was stated at the time of the budget.

Mr. Phipps emphasized that the proposal is to make the rate change effective from March 1st, as opposed to January 1st, due to higher usage in the colder months of January and February. This move is intended to avoid shocking customers with an increase at a time of higher usage. The percentage increase would be ~14%, but with the delay to March.

Mr. Kelley raised a point about customer understanding of the rate change, and suggested that spreading the increase might allow customers to adjust without feeling the immediate impact. Mr. Phipps stated that RMLD has already laid out this information on the website to help people understand usage versus rates, focusing on the impact on monthly bills.

Returning to the alternative funding options, Mr. Phipps confirmed that RMLD is open to bonding for large projects like the Maple Meadow project. However, RMLD's preference is to pay for operating costs as they come.

Mr. Phipps noted that RMLD will look at the depreciation rate but warned against hastily changing it due to the potential effects on other areas of the business.

Mr. Phipps noted that the recommendation is for an additional 4% increase (14%) to set the stage for avoiding a bond in 2024.



Town of Reading Meeting Minutes

Mr. Kelley questioned how the 14% increase would affect net profit as RMLD can make up to 8% net plant. It was clarified that with the 14% proposed rate increase, that net income is forecasted to be below 4%, which is below that 8% net income that DPU prefers.

Chair Soni questioned the possibility of another rate increase next year. Mr. Phipps confirmed that there likely would be another increase. Mr. Phipps stressed the need to set RMLD up for 2024 and give a buffer by proposing a 14% increase rather than a 10% increase.

Vice Chair Welter asked about the segregation of electrification and efficiency charges based on customer type. Mr. Phipps explained that RMLD segregates funds into two buckets: commercial/industrial and residential. This is a historical practice, and RMLD has not considered potential alternatives.

Vice Chair Welter queried about the possibility of a flat dollar charge per hour as opposed to a flat rate. Mr. Phipps expressed uncertainty about RMLD's ability to change the model due to the regulatory environment of the Department of Public Utilities (DPU), though he was unsure about the specific restrictions.

Mr. Phipps mentioned the Green Communities charge, which applies only to Reading and amounts to ~ 40 cents a month, billed on KWHs, which leads him to believe RMLD may not be able to modify the model. Mr. Phipps committed to look further into this issue.

Vice Chair Welter questioned whether cash outflows are matched with inflows. Mr. Phipps confirmed this, citing the example of the ASHP initiative, where RMLD didn't spend as much due to installation difficulties. Vice Chair Welter asked if rates could increase with more activity. Mr. Phipps responded yes; more spending would have occurred with more activity.

At Chair Soni's request, Mr. Phipps summarized three main points:

- The overall rates would average around a 14 percent net increase across average customers' bills.
- The new rates would be effective from March 2023.
- RMLD is aiming for a ~3.5 percent rate of return, ~ 2% lower than typical, but sufficient.

Mr. Phipps further explained that the original proposition of ~\$900k for net income was too low and not prudent. This rate adjustment helps to reduce the amount RMLD would need to bond in 2024. The objective is to do more this year to ease the bonding requirements in 2024.

The verbiage "Replace 292 Efficiency and Electrification Charge with 306" was removed from the suggested motion, as no changes are needed.

Mr. Small made a **motion**, seconded by Vice Chair Welter that the Citizens' Advisory Board recommend that the Board of Commissioners vote to accept the General Manager's recommendation to replace the following MDPU rates effective for billings on or after March 1, 2023:

- Replace 296 Residential Schedule A with 301
- Replace 299 Residential Time of Use Schedule A2 with 302
- Replace 297 Commercial Schedule C with 303
- Replace 298 Industrial Time of Use Schedule I with 304
- Replace 300 School Schedule SCH with 305

Motion Carried: 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.



Town of Reading Meeting Minutes

Scheduling

The next CAB meeting will be held on January 19th at 6:00 PM.

Adjournment

Mr. Kelley made a **motion** to adjourn, seconded by Mr. Small. **Motion Carried:** 5:0:0:0 (5 in favor, 0 opposed, 0 abstained, 0 absent). *Roll Call: Chair Soni, Aye; Vice Chair Welter, Aye; Mr. Hooper, Aye; Mr. Kelley, Aye; Mr. Small, Aye.*

The RMLD CAB meeting adjourned at 8:00 PM.

DRAFT



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2023-01-18

Time: 7:30 PM

Building: Reading Municipal Light Building

Location: Winfred Spurr Audio Visual Room

Address: 230 Ash Street

Session: Joint Meeting

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

Vivek Soni, Chair (Reading); Ken Welter, Vice Chair (Lynnfield); George Hooper (Wilmington); Dennis Kelley (Wilmington); Jason Small (North Reading)

Members - Not Present:

Others Present:

Refer to Board of Commissioners Minutes for January 18, 2023

Minutes Respectfully Submitted By: Vivek Soni, Chair

Topics of Discussion:

JOINT MEETING WITH RMLD BOARD OF COMMISSIONERS

**Refer to the RMLD Board of Commissioners
Meeting Minutes
for January 18, 2023**

ATTACHMENT 2
ANNUAL REPORT

RMLD



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS



2022 ANNUAL REPORT

TRAILBLAZING TOWARD A NON-CARBON FUTURE

Reliable | Low-Cost | Non-Carbon

Address

230 Ash Street
Reading, MA 01867-0250

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rmld.com

Call Us

(781) 942-6598

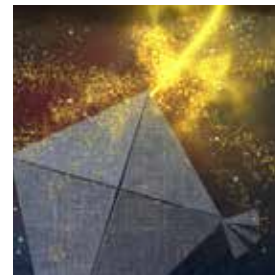
Email Us

info@rmld.com



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READING MUNICIPAL LIGHT DEPARTMENT

<p>Towns Served</p> <p>Lynnfield Center North Reading Reading Wilmington</p>	<p>Residents Served</p> <p>70,000+</p>	<p>Service Area</p> <p>51 sq. miles</p>
<p>Network Uptime</p> <p>99.9%</p>	<p>Meters Supported</p> <p>31,500+</p>	<p>Customer Service Calls Answered</p> <p>240,000</p>
<p>Average Cost</p> <p>\$0.153 kWh</p>	<p>kWh Delivered</p> <p>654,041,390</p>	<p>Peak Load</p> <p>164,640 kW August 8, 2022</p>

- **319 New services**
- **2,264 Trouble calls answered**
- **137 Poles installed/replaced**
- **234 Routine meter replacements**
- **6,186 Underground facility locations marked out**



READING MUNICIPAL LIGHT DEPARTMENT

Founded in 1894, RMLD is the largest (in terms of electrical load) of 41 Massachusetts municipal light utilities and is not-for-profit, locally owned, and locally controlled.

A Citizens' Advisory Board is comprised of representatives from the communities RMLD serves. The Citizens' Advisory Board makes recommendations to the Board of Commissioners. The five-member Board of Commissioners, elected by Reading voters, governs the utility.

BOARD OF COMMISSIONERS



Marlena Bitá
Chair



Philip Pacino
Vice Chair



David Talbot
Commissioner

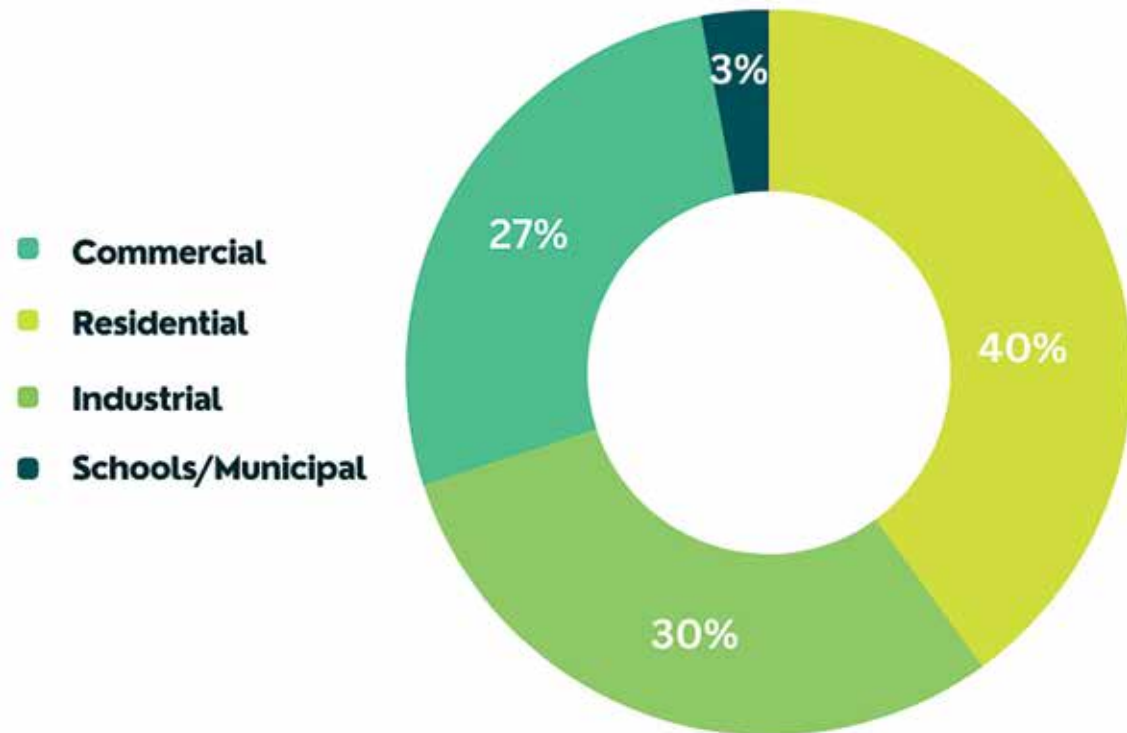


John Stempeck
Commissioner



Robert Coulter
Commissioner

Load Profile by Customer Type



CITIZENS' ADVISORY BOARD



Jason Small, Chair
North Reading



Vivek Soni, Vice Chair
Reading



George Hooper,
Secretary
Wilmington



Dennis Kelley
Wilmington



Ken Welter
Lynnfield



RMLD CUSTOMERS:

2022 was a year of significant changes, including changes in strategy, energy costs, and RMLD leadership. Despite these changes, our charter remains the same: delivering reliable, low-cost, and non-carbon electricity to you. The way we accomplish this is changing rapidly, primarily due to numerous external changes in the wholesale energy market and associated legislation at both the state and federal levels.



As such, we are trailblazing new strategies to better serve you, our customers, across Lynnfield Center, North Reading, Reading, and Wilmington.

The RMLD team began blazing a new trail in 2022, toward a non-carbon future while maintaining our high standard of reliability and keeping our rates low for our customers. RMLD is charting its path to fulfill compliance mandates that require the power sold by municipal light plants to be

sourced from resources that are 50% non-carbon by 2030, 75% non-carbon by 2040, and net-zero carbon by 2050.

This 2021 Climate Bill Legislation is driving a seismic shift in customer behavior towards electrification, as we continue to see steady growth in both heat pump and EV adoption. We also installed three public EV charging stations in Reading and two in Wilmington with installations in North Reading and Lynnfield on the horizon. RMLD launched our Renewable Choice program for residential and commercial customers, which allows them to source their power from non-carbon emitting sources above RMLD’s annual non-carbon energy targets.

RMLD has accelerated non-carbon generation in its power supply portfolio. In addition, RMLD is pursuing within territory generation and energy storage.

In the near-term, RMLD will source energy from the regional wholesale market and will continue to use long-term supply contracts to manage risk and dampen price volatility. However, our New England regional market is now influenced by energy costs in Europe due to LNG shipping of natural gas to Europe. Natural gas is used to generate ~50% of electricity in New England, so natural gas prices in Europe influence natural gas prices in New England. The Ukraine War dramatically affected energy costs in Europe in 2022 and the upward pressure was felt here in New England.



Infrastructure improvements are underway to prepare for a fully increased electrified future. We are now aggressively pursuing state and federal funding to contribute to our investment in distribution upgrades and expansion to handle electrification load growth. We are blazing our own trail toward becoming a non-carbon utility and are energized and excited for the journey ahead.

With Appreciation,

Greg Phipps

General Manager of the Reading Municipal Light Department

RMLD YEAR IN REVIEW

RMLD Launches Renewable Choice Program for Residential Customers to Support More Renewable Energy

In January, RMLD announced the launch of its voluntary Renewable Choice program that allows residential customers to support additional renewable energy resources above and beyond RMLD’s annual non-carbon energy targets. The program was made available to commercial customers in April.

Customers can choose to contribute at one of three levels to bring their monthly electricity usage to 50%, 75%, or 100% renewable/non-carbon. The Renewable Choice charge is based on the participating customer’s monthly kilowatt hour (kWh) usage and will be added as a line item on the customer’s monthly electric bill. These customer funds contributed to the program were used to retire NEPOOL GIS compliant renewable certificates, starting with Mass Class 1 certificates which are in addition to RMLD’s compliance retirements of 26% in 2022 and increasing 3% each year, resulting in 100% (net zero) noncarbon by 2050.





RMLD YEAR IN REVIEW

RMLD Completes Installation of Five New Public EV Charging Stations



RMLD installed five dual-port level 2 electric vehicle (EV) charging stations in its service territory to increase the availability of public charging infrastructure. The installations were partially funded through a Massachusetts Electric Vehicle Incentive Program (MassEVIP) Public Access Charging (PAC) grant through the Massachusetts Department of Environmental Protection (MassDEP), which was awarded to RMLD in July 2021. Three of the stations are located in Reading and two are located in Wilmington.

RMLD plans to install additional charging stations across its service area in 2023.

RMLD Hosts Electric Car Show

RMLD hosted a free Electric Car Show in conjunction with the Wilmington Farmers Market.



A variety of plug-in electric vehicle models were on display from area auto dealerships and local EV owners. Attendees learned about the various makes and models and talked to EV owners about their experiences. Information on home and public charging stations, electric vehicle incentive programs, and RMLD rebate programs were also available.

RMLD Holds Public Power Week Open House

After a two-year COVID-related hiatus, the RMLD Public Power Week Open House was back and better than ever.

The fun-for-all-ages event featured lineman demos, fun kids' activities, and education on electrical safety and conservation. Over 300 customers attended the event.

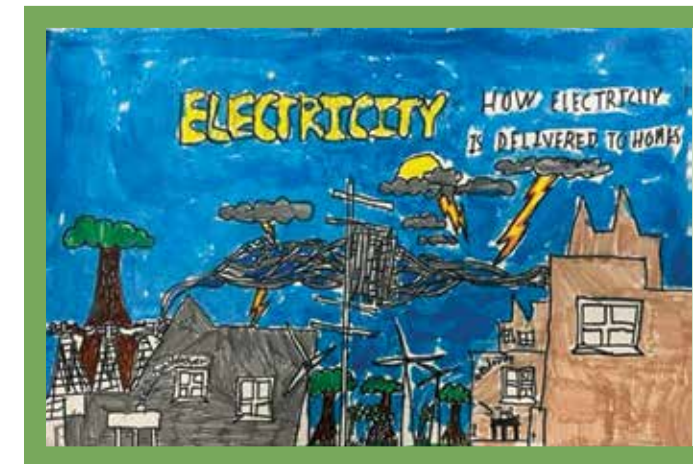


RMLD YEAR IN REVIEW

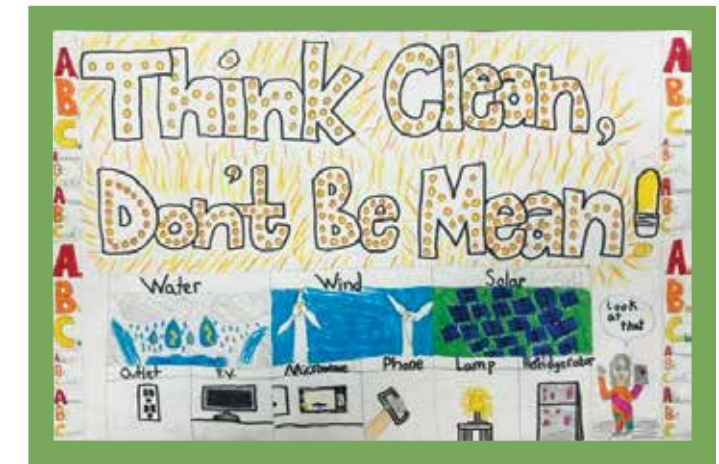
RMLD Hosts Elementary School and High School Art Contest

RMLD's annual Elementary Student Art Contest has been a consistent element of the elementary level curriculum in our towns for over 25 years. For the contest, fourth-grade students were asked to design a poster demonstrating their knowledge of topics presented in an educational video produced by the RMLD including electrical safety, how electricity gets to the home, and electricity and the sustainability. A first, second, and third-place winner was selected from each participating school based on the artwork and message. In 2017, RMLD launched its annual High School Student Art Contest as a means to engage high school age students within the communities we serve.

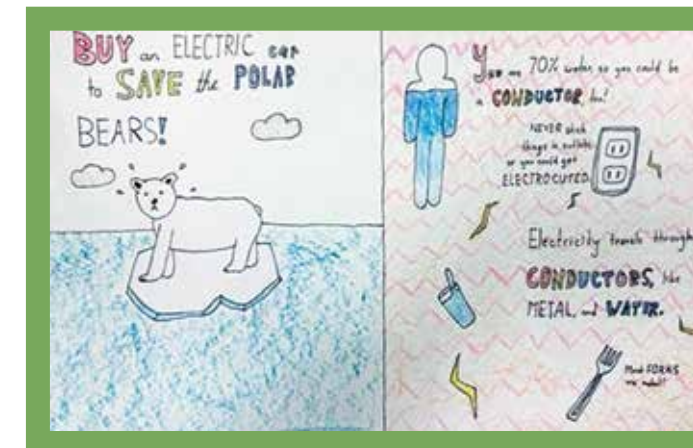
Here are some of the winners from the elementary school art contest, and the high school winners are featured on the next page.



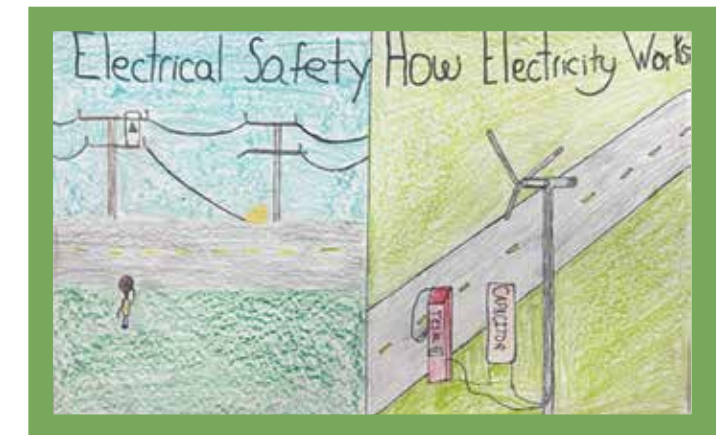
Andrew Taylor
Little Elementary School, North Reading



Lana Hays
Eaton Elementary School, Reading



Ivy Libby
Huckleberry Hill Elementary School, Lynnfield



Anthony Cooper
North Elementary School, Wilmington



HIGH SCHOOL ART CONTEST WINNERS

“SUSTAINABLY”

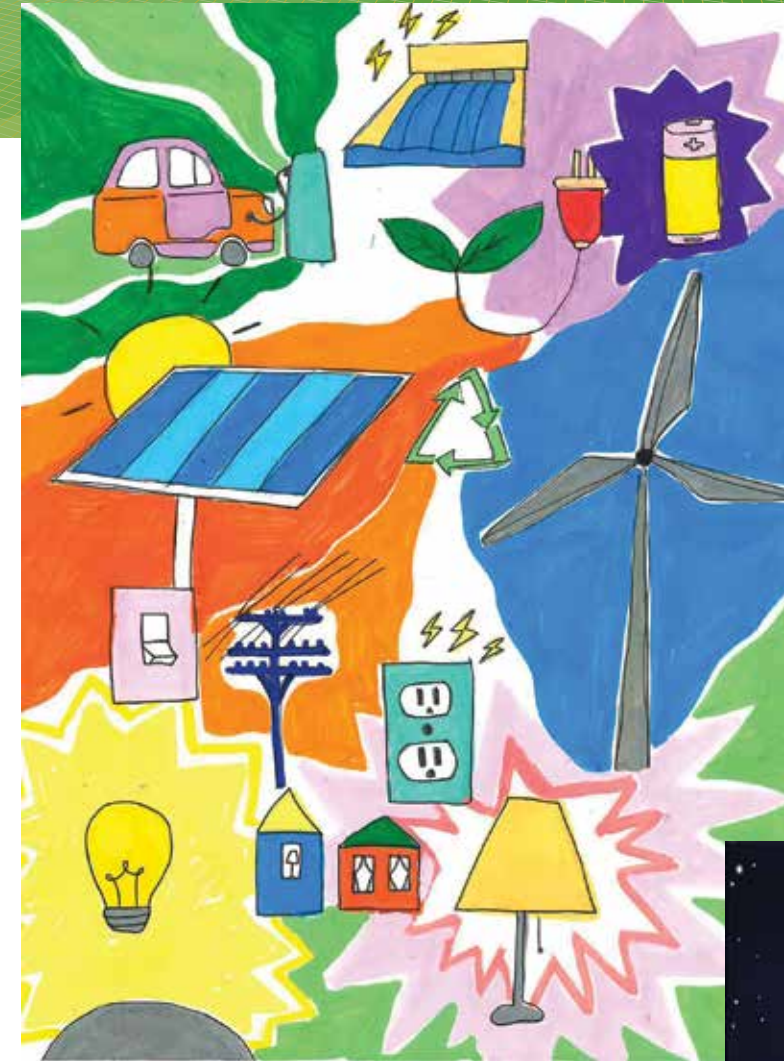


High School Art Contest - First-Place Winner
Chris Ferreira
Reading Memorial High School, Grade 12



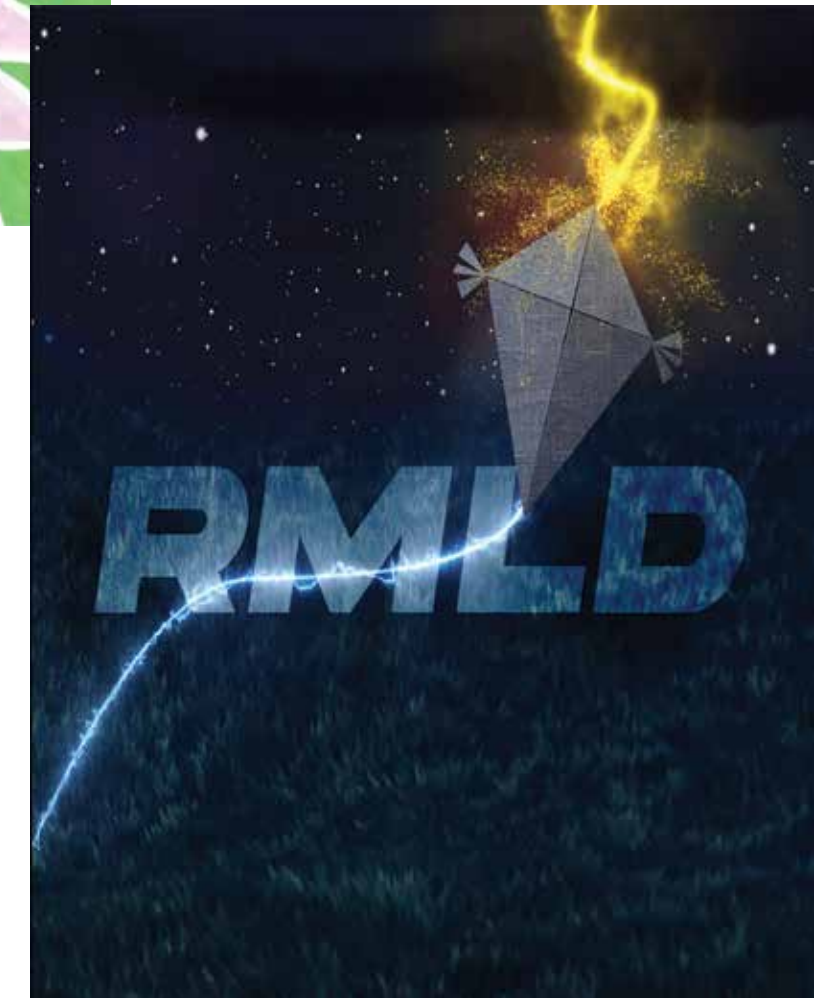
“NEW INVENTIONS”

High School Art Contest
Second-Place Winner
Astrid Puff
Reading Memorial High School
Grade 11



“A REVOLUTION FOR THE FUTURE GENERATIONS”

High School Art Contest
Second-Place Winner
Kurt Rothermund
Lynnfield High School
Grade 11



All submissions and student write-ups are posted on www.rmld.com.
Thanks to the students who participated for submitting their beautiful artwork!



“TRAIL BLAZING BEGINS BUT NEVER ENDS”

High School Art Contest
Third-Place Winner
Tim Sullivan
North Reading High School
Grade 10

RECOGNIZED FOR RELIABILITY

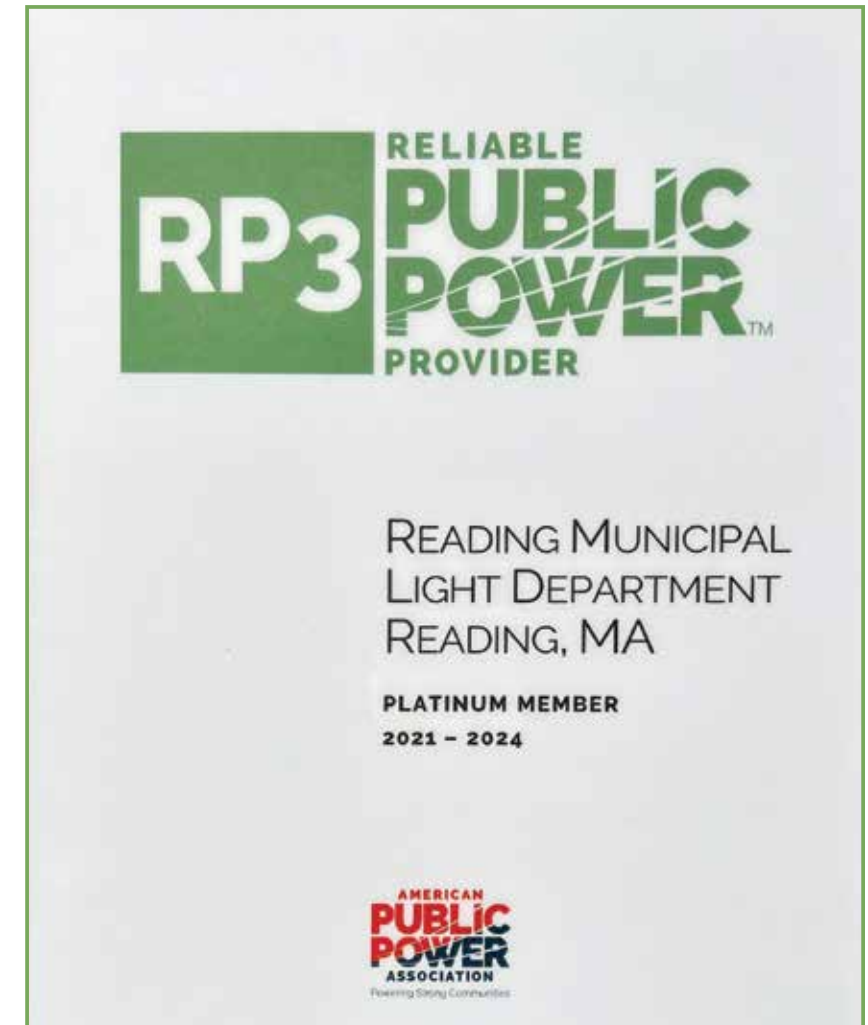


In 2022, RMLD earned the American Public Power Association (APPA) Certificate of Excellence in Reliability for the seventh consecutive year. The certificate signifies that RMLD is in the top 25 percent of utilities in the nation that substantially exceed the System Average Interruption Duration Index (SAIDI) when compared with national reliability data collected by the U.S. Energy Information Administration.

Some of the preventative maintenance initiatives that are critical to achieving award-winning reliability include a comprehensive tree trimming program, planned upgrades to distribution assets including poles, wires, and transformers, and regular substation maintenance.

In 2021, RMLD earned the prestigious Reliable Public Power Provider (RP3)[®] designation from the American Public Power Association (APPA) for providing reliable and safe electric service. The designation will last through 2024.

The RP3 designation recognizes public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development, and system improvement. Criteria include sound business practices and a utility-wide commitment to safe and reliable delivery of electricity. To be considered for the RP3 designation, utilities submit a detailed application with accompanying documentation which is reviewed and scored by a panel of nationwide utility experts. RMLD joined more than 275 (of the over 2,000) public power utilities nationwide that hold the RP3 designation.



“NOSEDIVE”

High School Art Contest
Fourth-Place Winner
Piper Kirwin
North Reading High School
Grade 11



All submissions and student write-ups are posted on www.rmld.com. Thanks to the students who participated for submitting their beautiful artwork!

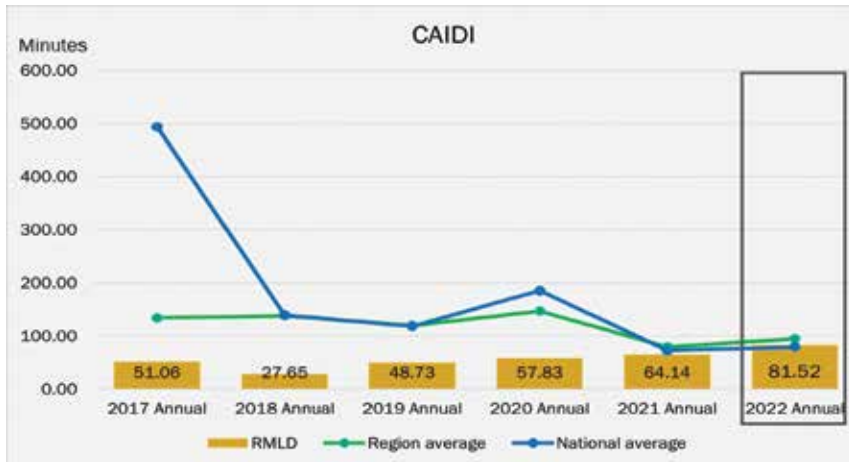
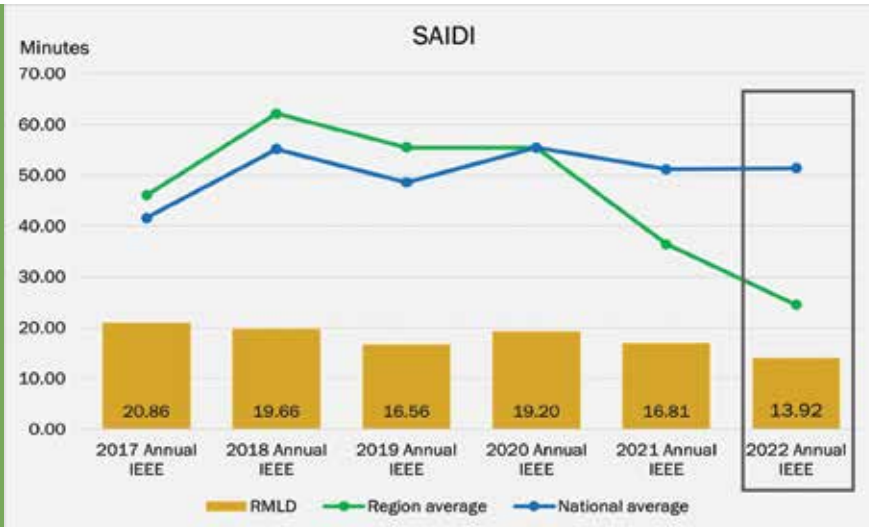


SYSTEM RELIABILITY INDICES

Key industry-standard metrics enable the RMLD to measure and track system reliability.

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

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

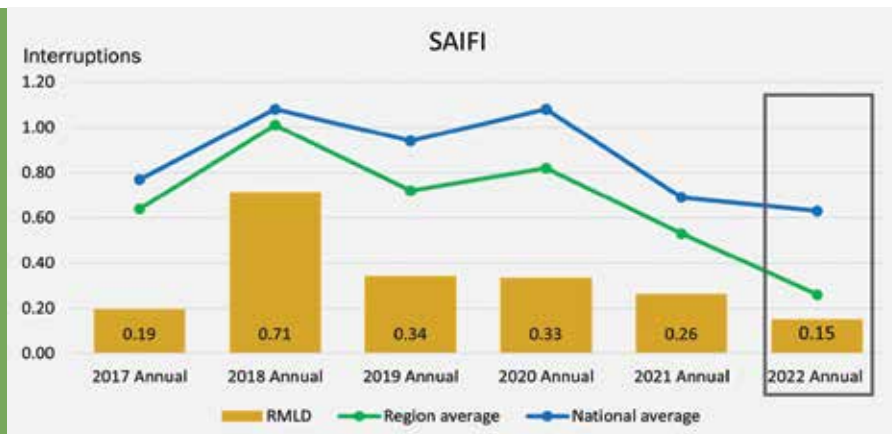


CAIDI (Customer Average Interruption Duration Index) is defined as the average duration (in minutes) of an interruption experienced by customers during a specific timeframe. Lower numbers are better.

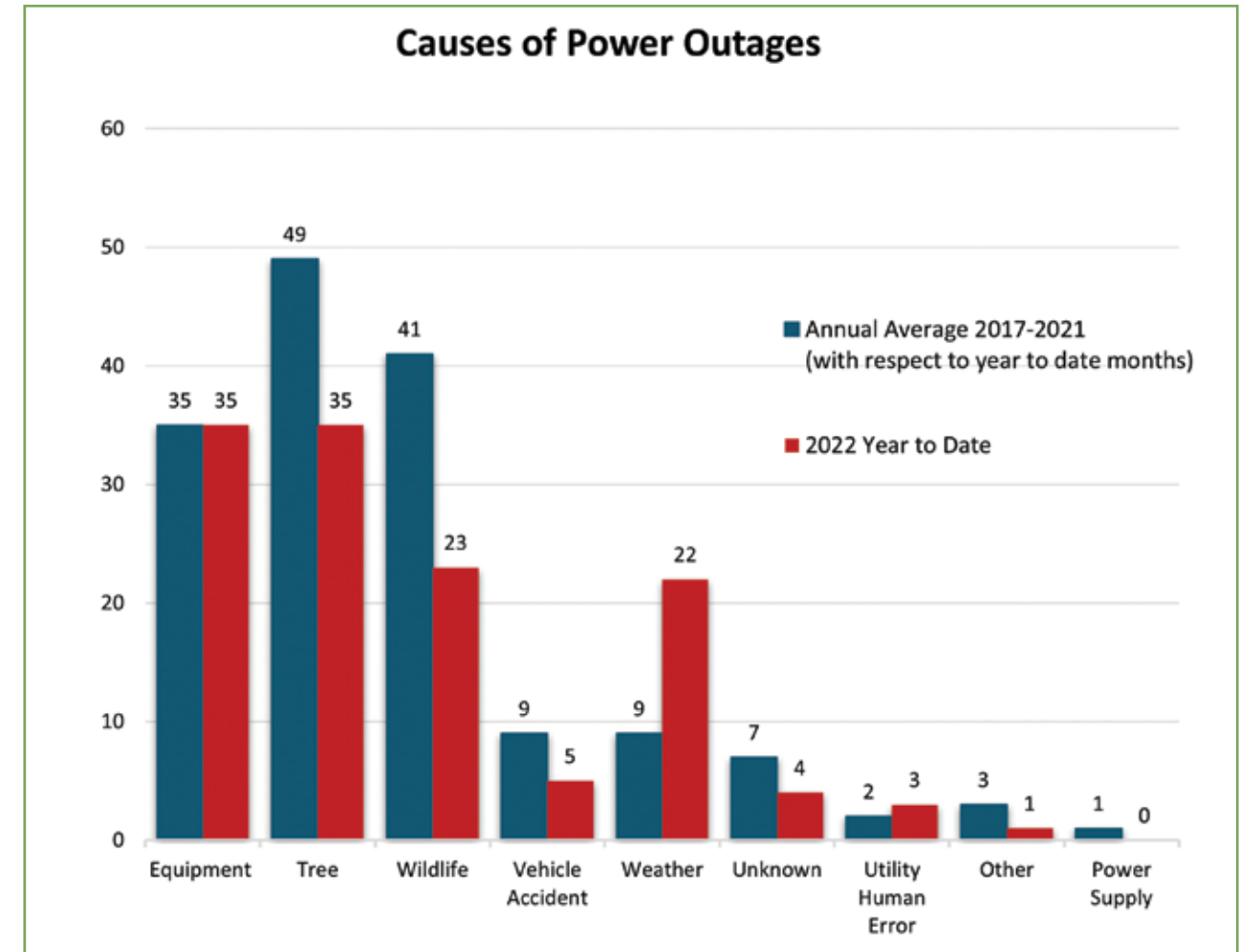
CAIDI = the sum of all customer interruption durations during that time period ÷ the number of customers that experienced one or more interruptions during that time period.

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

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



OUTAGE CAUSES





ENERGY EFFICIENCY AND ELECTRIFICATION

PROGRAM PARTICIPATION

Program	# of Customers
Cordless Electric Yard Equipment Rebates	291
Air Source Heat Pump Rebates	218
Electric Panel Upgrade Rebates	48
EV Charger Rebates - Residential	40
Energy Star Appliance Rebates - Residential	318
Heat Pump Water Heater Rebates - Residential	1
Online Store Rebates - Residential	178
Home Energy Assessments - Residential	146
Custom Rebates - Commercial	1
Holiday Lighting Rebates - Municipal	2

Total Annual Estimated Energy Saved: 678,892 kWh

Total Annual Estimated Carbon Reduction: 1,413,738 Lbs



PEAK DEMAND REDUCTION AND INSTALLED SOLAR

In 2022, RMLD continued efforts to offset wholesale power supply (capacity and transmission) costs related to peak demand. The following efforts produced a net savings of approximately \$1,000,000; these savings are passed directly to RMLD customers:

- Continued to optimally dispatch RMLD's 5 MW, 10 MWh lithium-ion Battery Energy Storage System (BESS) and 2.5 MW Distributed Generator located at Substation 3 to offset peak wholesale market costs resulting in savings of approximately \$980,000 in 2021.
- Promoted residential Shred the Peak Program and continued to enroll customers for email alerts (over 2,600 currently).
- Continued pilot Peak Demand Reduction (PDR) Program for our largest commercial, industrial, and municipal customers to effectively promote demand management and reward key accounts who achieve load shed during events.
- Solar Choice 1, with a rating of 1 MW AC, produced 1,571,239 kWh. Solar Choice 2, with a rating of 1.7 MW AC, produced 2,297,490 kWh. The output from these two community Solar Choice projects during peak demand hours saved a combined total of about \$87,011 in 2022; these savings were distributed amongst program participants.

INSTALLED SOLAR (AS OF END OF 2022)

Class	New Arrays	Total Arrays	Capacity (kW AC)
Residential	35	209	1,621
Commercial	0	19	2,154
Wholesale	0	3	4,709

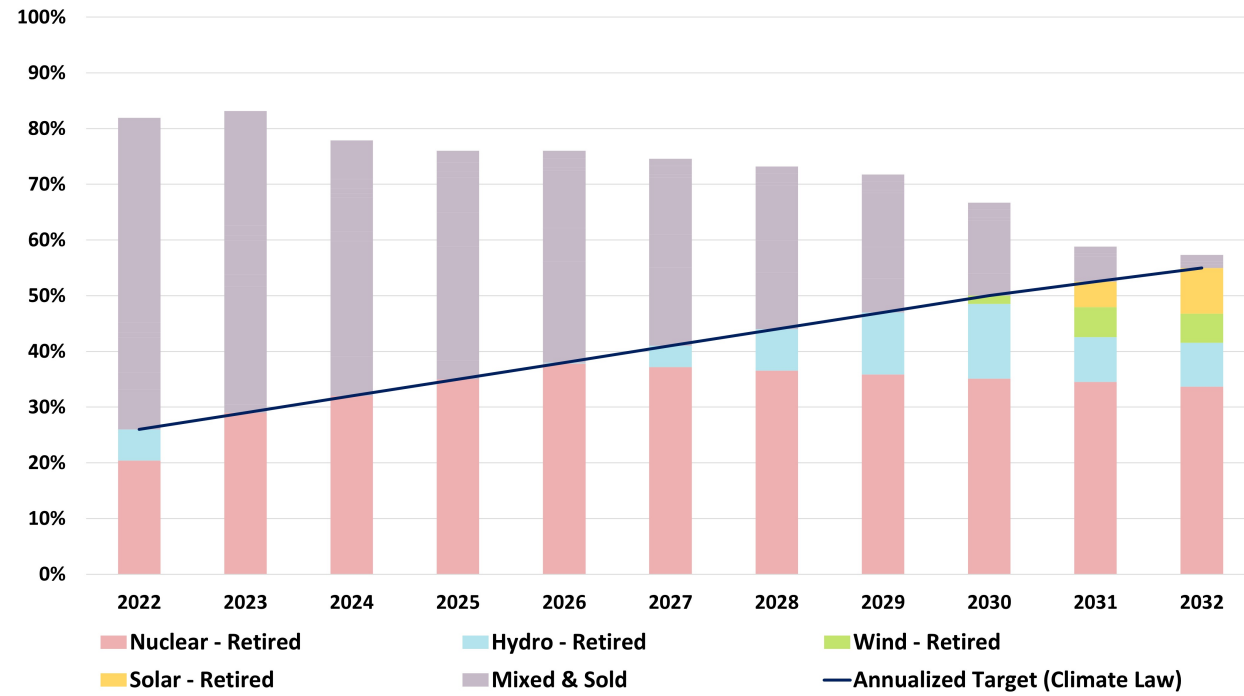
Total: 8,484 kW AC





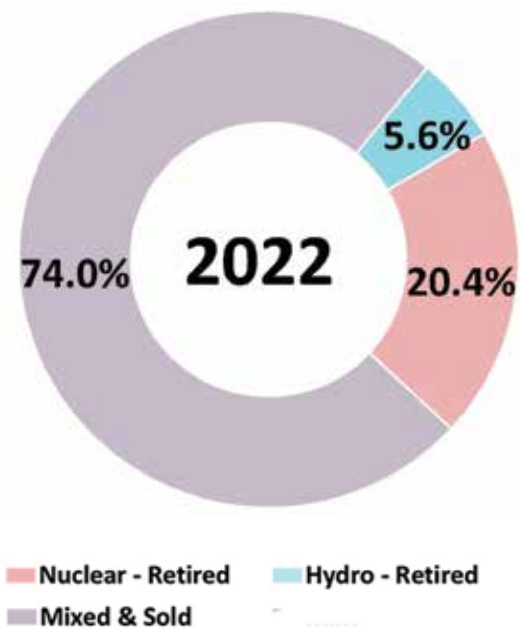
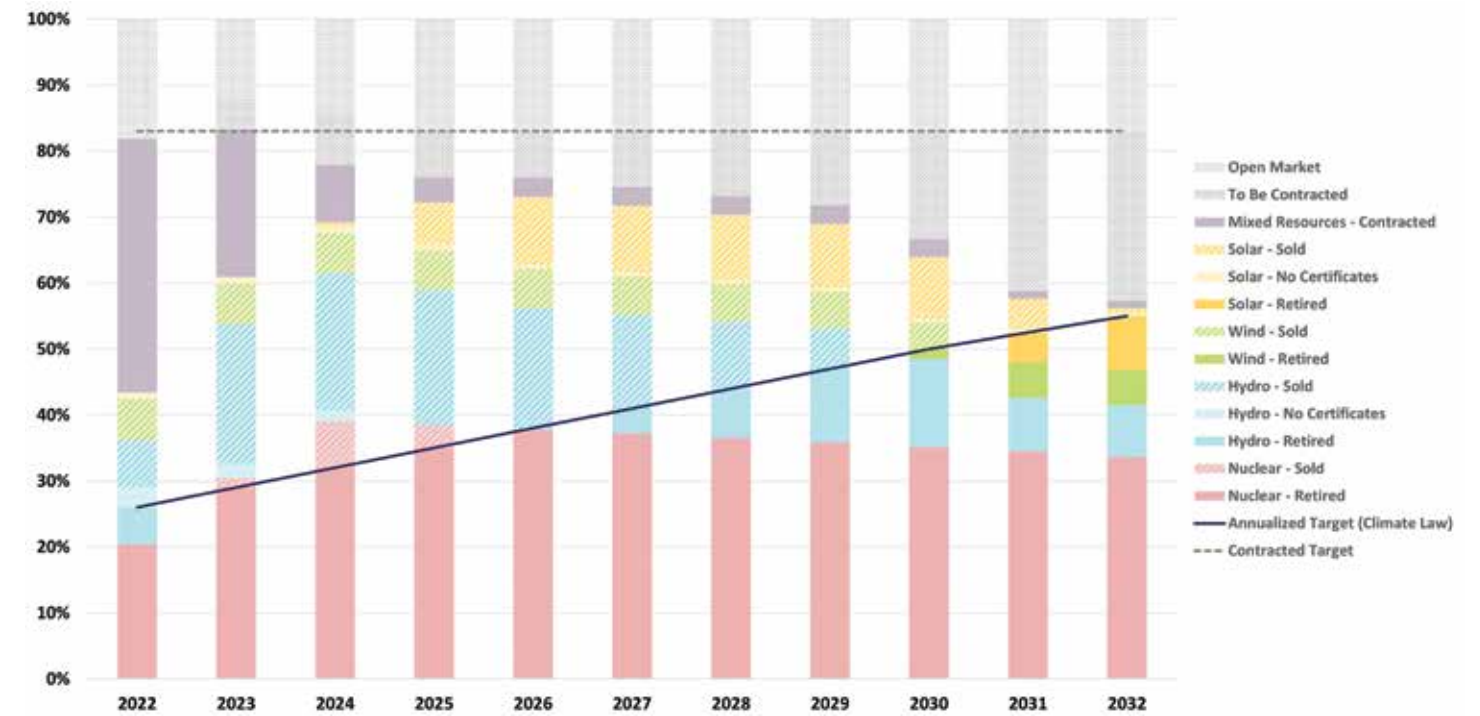
POWER SUPPLY CLIMATE BILL COMPLIANCE

OUTLOOK TO 2032



POWER SUPPLY TRANSACTION BY SOURCE

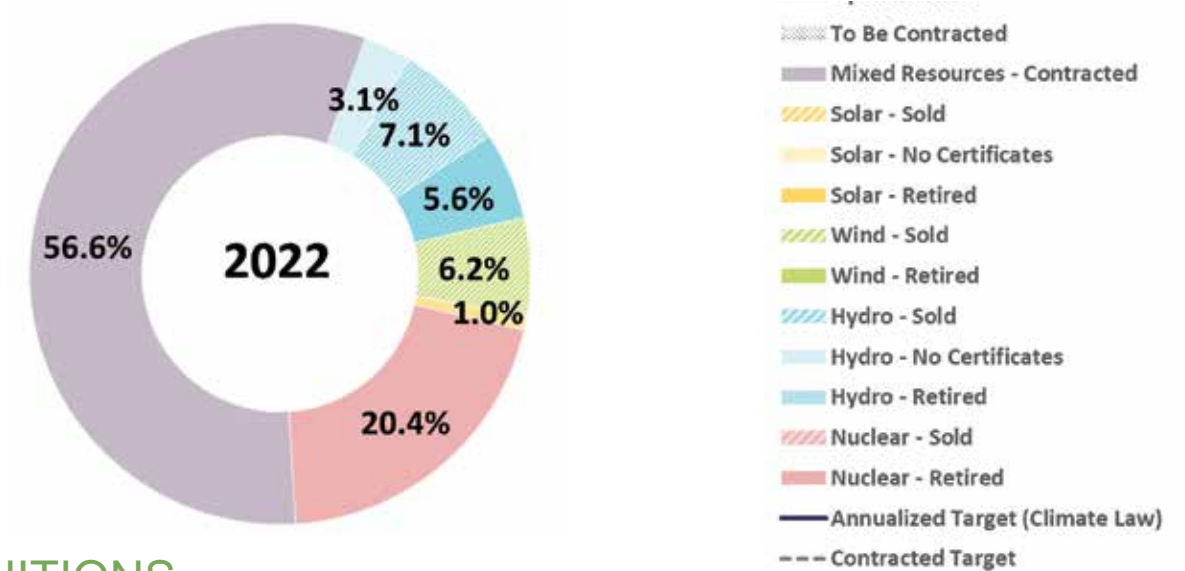
OUTLOOK TO 2032



DEFINITIONS

Climate Law – Massachusetts climate legislation which requires that the power sold by utilities be sourced from resources that are 50% non-carbon by 2030, 75% non-carbon by 2040, and net-zero carbon by 2050. To be considered a non-carbon resource, the associated energy certificates must be retired by the utility.

Mixed Sources and Certificates Sold – Contracts for non-specific power supply sources and day-ahead or real-time spot market purchases. These reflect the fuel mix of the New England grid and are assumed to be primarily carbon-emitting.



DEFINITIONS

Certificate Management – RMLD retires certificates up to the annualized line then sells the balance which are typically higher value to help reduce power supply costs. The cross-hatched portions of the charts above represent actual certificate sales in 2022 and planned certificate sales going forward.



POWER SUPPLY BY CONTRACT

Name	Type	Duration	MWH	%
Millstone	Nuclear	1986-2045	36,512	5.38%
Seabrook	Nuclear	1990-2050	69,360	10.22%
	Nuclear	Total:	105,872	15.60%
NYPA	Hydro	2002-2025	26,062	3.84%
Aspinook	Hydro	2016-2022	10,335	1.52%
Collins	Hydro	2013-2028	4,966	0.73%
First Light	Hydro	2019-2023	35,284	5.20%
Hosiery Mills	Hydro	2014-2024	2,085	0.31%
Indian River	Hydro	2011-2026	1,517	0.22%
Pepperell	Hydro	2011-2026	4,456	0.66%
Pioneer	Hydro	2013-2028	4,807	0.71%
Turner's Falls	Hydro	2011-2026	1,771	0.26%
Woronoco	Hydro	2011-2026	5,671	0.84%
Quinebaug	Hydro	2020-2030	4,818	0.71%
Dahowa	Hydro	2022-2045	6,409	0.94%
	Hydro	Total:	108,183	15.94%
Kearsage	Solar	2017-2037	2,293	0.34%
Altus Power	Solar	2017-2037	1,624	0.24%
GSRP	Solar	2015-2025	3,195	0.47%
	Solar	Total:	7,112	1.05%
Jericho	Wind	2015-2035	5,748	0.85%
Saddleback	Wind	2015-2035	12,861	1.90%
Rox Wind	2021-2041	2021-2041	21,833	3.22%
	Wind	Total:	40,441	5.96%
Nextera	Bilateral Mixed	2016-2025	293,429	43.24%
ISO	Bilateral Mixed	Ongoing	100,105	14.75%
	Bilateral Mixed	Total:	393,533	57.99%
StonyBrook Intermediate	Gas/Oil Peaker	Life of Unit	15,039	2.22%
StonyBrook Peaking	Gas/Oil Peaker	Life of Unit	1,180	0.17%
Braintree Watson	Gas/Oil Peaker	2009-2029	3,477	0.51%
	Gas/Oil Peaker	Total:	19,696	2.90%
RMLD Generator	Natural Gas	N/A	499	0.07%
	TOTAL		675,338	100%
	TOTAL W/O RMLD GENERATOR		674,839	

CONSTRUCTION HIGHLIGHTS

Line construction throughout the system is performed to provide reliability enhancement, to connect new load, or to address areas needing upgrades. This work includes both overhead and underground cable installation, service installation and upgrades, installation and removal of poles, transfer of electrical equipment, and work related to Massachusetts highway projects.

READING

- MassDOT Force Account Project – Main and Hopkins Streets – RMLD replaced three poles, Verizon replaced eight poles and set four new poles, RMLD transferred existing spacer cable, secondary cable, services and streetlights to new poles. RMLD also upgraded four pole-mounted transformers.
- Lakeview Ave performed an area upgrade.
- John Street, Phase -1: Verizon replaced twelve poles on the southern section of John Street. RMLD transferred existing spacer cable and single-phase primary cables, pole-mount transformers, secondary cable, services, streetlights and the RMLD fiber optic cable
- Carnation Circle replaced transformers and provided oil clean up.
- Purchased direct replacement CCVT’s that were installed on the existing structures at the Bulk Electric Supply Station 4. These replacements consist of two sets of three CCVT’s on each supply line and seven individual CCVT’s on each of 115Kv bus sections.
- Summit Towers – Replaced aged switchgear with new solid dielectric unit and replaced two aged transformers.
- Green Street, R – Verizon replaced seven poles. The RMLD transferred the existing spacer cable, transformers, secondary cable, services and streetlights to the new poles.
- RMLD upgraded the 5kV step-down area of Willow St, Reading to the nominal system voltage of 13.8kV. We replaced seven poles and reconducted primary lines, replaced three transformers, and upgraded the primary metering rig for Austin Prep. This was done in conjunction with Austin Prep upgrading their internal electrical facilities.
- Archstone – Replaced two aged switchgears with new solid dielectric units.
- Woburn St– Replaced aged switchgear with new solid dielectric unit.
- Reading Woods – Replaced aged switchgear with new solid dielectric unit.

Notable examples of new service additions or upgrades:

- 1312 Main Street, R – new commercial service - Reading Animal Hospital
- 292 Grove Street, R – new commercial service – Meadowbrook Country Club



CONSTRUCTION HIGHLIGHTS (CONTINUED)

WILMINGTON

- Bigger and Ring Street received an area upgrade
- Allenhurst Way received an underground subdivision upgrade and replaced the leaking transformer.
- Fletcher and Morgan St – Reconductored 1,500 feet of underground primary cable and neutral.

New Wilmington Substation:

- Upton Drive – Pole relocations/replacements – replace eight poles and set two new poles along the easement. Transferred existing spacer cable circuit, secondary cable, fiber optic cable and replaced a gang operated switch.
- 2022 saw the purchase of the land on Ballardvale St in Wilmington which will be the site of the new substation. This will include two 60 MVA transformers and 15kV switchgear with 8 (or more if needed) feeder breaker positions.

Notable examples of new service additions or upgrades:

- 207 Lowell Street, W – service upgrade – Lubrizol
- 100 Eames Street, W – new commercial service – Gerrity Stone
- 99 Fordham Road, W – new commercial service – Amazon

NORTH READING

- Magnolia Drive – Stepdown conversion, replaced poles 5, 6, 10 and 11 and converted area to a 15 kV
- Aldersgate Road – Underground Subdivision upgraded two padmount transformers.
- 108 Haverhill St and 51 Main St RMLD replaced poles and installed IntelliRupter in each location.
- P/106 North St – RMLD replaced a typical gang-operated switch with a Scada-Mate Switch as part of our Distribution Automation project.
- Installed Scada Mate Switch and Under Arm Disconnects on Pole #31 North Street, North Reading
- Demetri Way, Haverhill St, and Peter Road- Underground Subdivision Upgrade
- Sand Iron Way replaced aged transformers and replaced two position switchgear with the same.
- 300 Riverpark Dr – Completed upgrade of transformer.
- Completed 3W18 Gateway Improvements, installed new underground cable from Substation 3 to previously installed riser. Performed all overhead line work to time in new riser to existing circuit.
- Notable examples of new service additions or upgrades:
- 303 Main Street, NR – new commercial service – North Reading DPW

LYNNFIELD

- Heritage and Windsor – Reconductored 2,500 feet of underground primary cable, neutral and replaced/upgraded four transformers.
- Center Village – Underground subdivision Upgrades – replaced one ages transformer.

EV CHARGERS BY THE NUMBERS (CY 2022)

RMLD owns and operates 21 dual-port Level 2 charging station within its service area.

- 14 level 2 charging stations are located at the Analog Device campus in Wilmington
- 2 level 2 charging stations are located at the RMLD offices at 230 Ash Street in Reading
- 3 level 2 charging stations were installed in Reading in June 2022 through the MasseVIP Public Access Charging (PAC) Program
- 2 level 2 charging stations were installed in Wilmington through the MassEVIP Public Access Charging (PAC) Program

91,694

Dispensed Energy (kWh)

\$18,371

Total Revenue

30,565

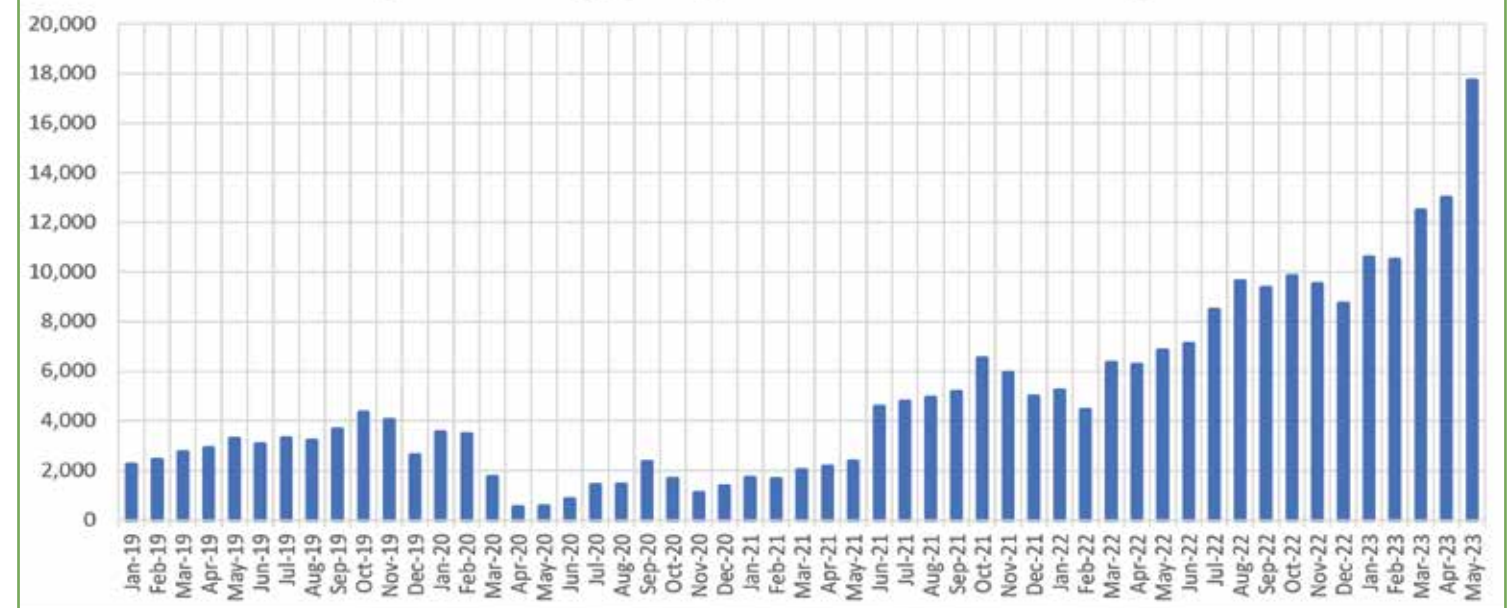
Estimated Gasoline Miles Offset

5,649

Charging Sessions



Dispensed Energy (kWh) for RMLD Owned EV Chargers



RMLD



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

ATTACHMENT 3
RMLD STRATEGIC PLAN





RMLD Strategy Overview

02 October 2023 update

RMLD



Reading Municipal Light Department
RELIABLE POWER

<h1>Outline</h1>		<ul style="list-style-type: none">Mission and VisionStrategy - executive summaryContext – seismic changesOwned generation and storageDistribution networkKey Milestones <p data-bbox="1226 1360 1404 1386">RMLD  Reading Municipal Light Department RELIABLE POWER</p>
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RMLD Mission and Vision - Updated

mission (what we do) → vision (where we are going) → strategy (how we get there) → goals (milestones)

Mission

RMLD's team mission is to serve our customers with reliable, low cost, and increasingly non-carbon energy.

Vision

RMLD's team vision is to innovatively support electrification and sensibly facilitate the required non-carbon transition, with customer involvement.

The following strategy overviews how the RMLD team will fulfill its Mission and Vision

Executive summary – RMLD strategy

RMLD serves Lynnfield Center, North Reading, Reading, and Wilmington with *reliable, low-cost, and non-carbon* electricity

- Reliability is a combination of proactively minimizing external and internal outages and quickly restoring when they occur

2021 Climate Bill is accelerating electrification as part of decarbonization; no softening of legislative targets is expected

- Hence, RMLD load will double, and demand will increase 75% by mid 2040's

Near-term, regional wholesale network supply reliability is increasingly fragile (and over 99% of RMLD energy is wholesale)

- Hence, RMLD needs significant investment (generation / storage assets, data analytics, distribution network, supporting systems (MDM/AMI metering, IT, ...), where asset life ranges from 10 – 40 years
- Energy is a scale business and RMLD should look for ways to gain scale

Wholesale energy and transmission costs are increasing and are highly volatile near-term

- Hence, RMLD costs will increase to support load growth and associated buildout

RMLD has new access to tax credits and numerous grants (new funding sources)

In-territory generation and energy storage require creativity, piloting, and investment

RMLD needs land parcels across service territory to support growth and the associated buildout

RMLD will accelerate investment in its employee team (new skills, process efficiency, data, recruiting, ...)

Context – external to RMLD

Electrification compliance requires 2X to 3X of regional generation capacity by 2050

- Natural gas generation represents half of current mix
- Nat gas generation capacity utilization will drop from 50% to less than 15% (upward cost pressure)
- Massive transmission investment required to support more distributed generation
- Renewable energy is intermittent (no solar PV at night)

Non-carbon energy generation is intermittent and expensive relative to current sources

New England's wholesale energy network is becoming more fragile

- LNG now economically can ship to Europe (EU energy affects US energy; increased volatility)
- Mystic generation (1,600 MW) shuts in May 2024
- Everett LNG Marine Terminal at risk when Mystic closes
- Mass offshore wind (up to 17,000 MWs) significantly delayed and likely more expensive
- Several New England solar PV projects delayed, cost increased, or cancelled; land limited

MLP's, including RMLD, have access to new state and federal incentives and grants

Technology improvements enabling electrification (ASHPs, EVs, V2G, carbon capture, ...)

Context – internal within RMLD

Power supply portfolio solid for current load

- Nearly 90% hedged; compliant with RMLD Policy 30 and already exceeds 2021 Climate Bill goals through 2035
- Weather trends, electrification, and business growth are key load drivers
- More generation and new supply contracts will be required to support growth

Given current daily and seasonal RMLD load shape, RMLD network has capacity of ~220 MW and ~40% capacity utilization and peak load at ~168 MW

RMLD is a unique MLP, having two 115 kV wholesale tie points with Eversource and National Grid

Our core distribution network is primarily 13.8 kV but many poles carry multiple circuits

RMLD has 9 MW of in territory solar generation (none owned; 2% of purchases) and 2.5 MW peak shaving generation

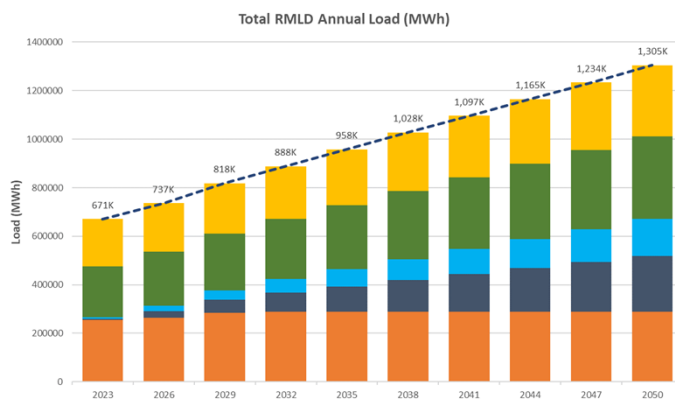
Our 5 MW 2 hour battery storage system will grow to 30 MW 3 hour by early 2025 (reliability enhancement)

RMLD is engaging several long duration (time shifting) and alternate chemistry pilot storage projects

RMLD metering systems have limited capability and replacement is in process (prerequisite MDM scheduled for 2024)

RMLD cost structure enables low rates (70% power supply and 30% operations)

Annual load (MWh) nearly doubles by 2050



RMLD Total 2.5% cagr (2022 – 2050)

- **Industrial 1.5% cagr** – small scale local manufacturing and local distribution
- **Commercial 1.8% cagr** – ASHP adoption
- **ASHP Residential 12% cagr** – majority (75%) conversion by 2050
- **EV Residential 17% cagr** – nearly full (97%) adoption by 2050
- **Base Residential 0.5% cagr** – limited living unit additions; lower efficiency reductions

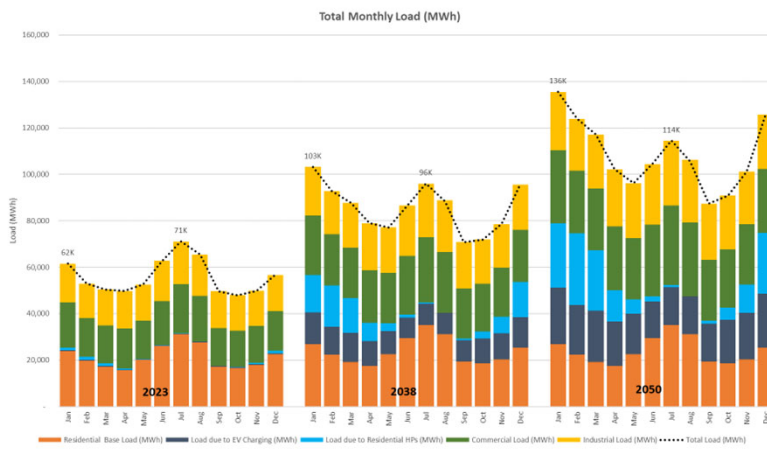
Electrification (especially EV) is primary load driver

7

Source: long-term-forecast 2023-10-02; 2023 CELT; RMLD analysis; actual RMLD 2022 is base year and cagr is compound annual growth rate



Monthly load changes significantly



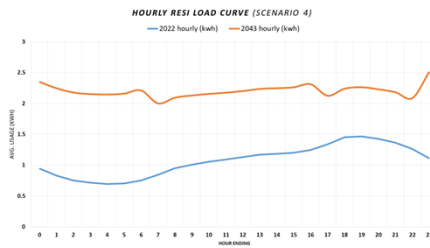
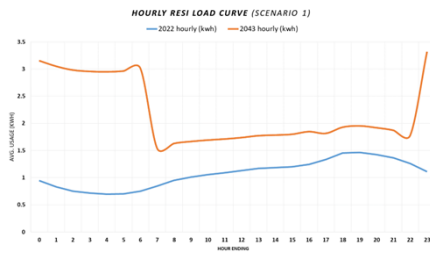
Winter load doubles by 2050
Summer load 60% higher by 2050
Winter (January) highest load beginning in 2030's primarily due to ASHP and EV load additions

EV unit load slightly higher in colder winter months compared to summer months

8 Source: long-term-forecast 2023-10-02; 2023 CELT; RMLD analysis; actual RMLD 2022 is base year



Dramatic daily load shape changes possible



9 Source: RMLD-avg-house 2023-09-25 JP; RMLD analysis; actual RMLD 2022 is base year

Daily loads shown are average over 365 days

Hence, blue 2022 line looks flat despite 2x range

Weather and season significantly affects daily load curves

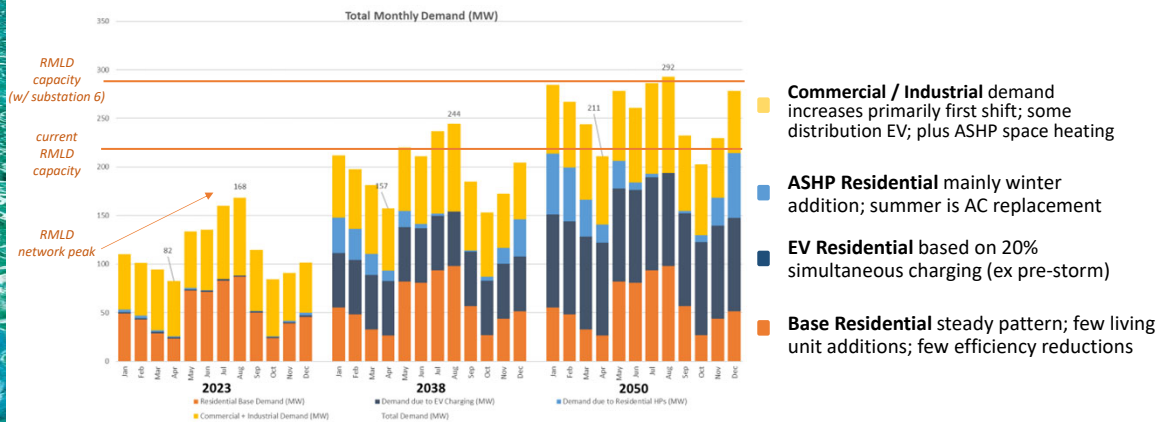
Scenario 1 – 80% 10 pm to 6 am; illustration of what can happen if not thought through

Scenario 4 – 45% overnight; flatter load yields higher utilization; then overlay hour energy pricing

More importantly, time of use rate schedule is critical to influence timing of charging (suggests a customer controlled and RMLD managed expert system)

Discharging (V2G) likely an option to dampen EV load while reducing participating customer monthly bills

Demand (MWs) 75% higher by 2050



- Commercial / Industrial demand** increases primarily first shift; some distribution EV; plus ASHP space heating
- ASHP Residential** mainly winter addition; summer is AC replacement
- EV Residential** based on 20% simultaneous charging (ex pre-storm)
- Base Residential** steady pattern; few living unit additions; few efficiency reductions

*Demand growth requires distribution network buildout
Network increasingly bi-directional to support w/in territory generation and storage*

10 Source: long-term-forecast 2023-10-02

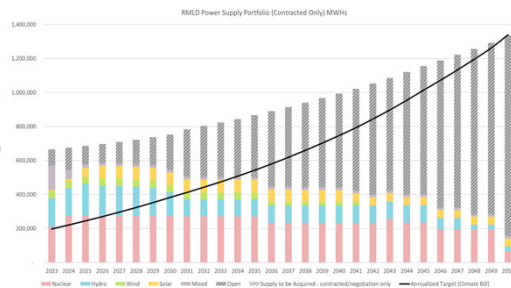
Power supply

Load increasing (MWhs growing 2% annually, 30% larger by 2030, 2X larger by 2050)

Non-carbon supply compliance by 2050 (compliant through 2036; non-carbon intermittent; storage needed)

Wholesale supply incurs capacity / transmission costs (~37% of total RMLD costs and increasing)

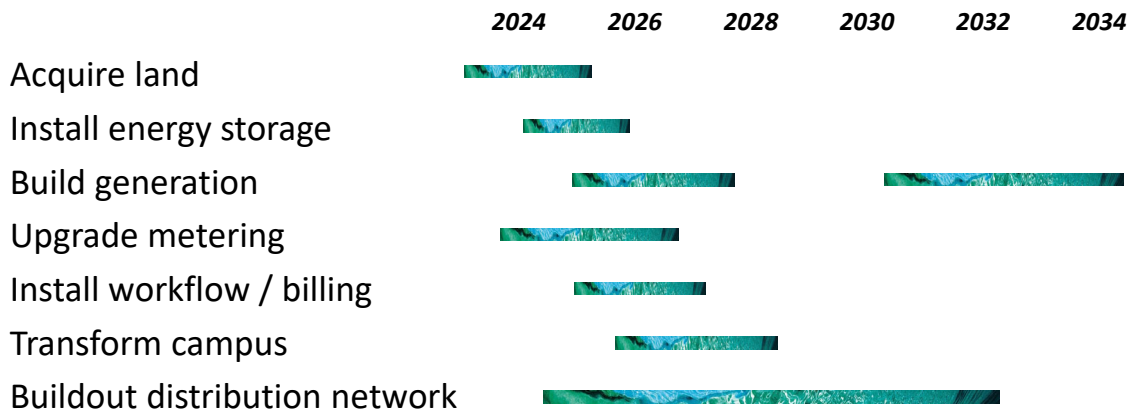
W/in territory timing affects **wholesale contracting** in 2030's



*Power supply decisions driven by reliability, low cost, and non carbon (all three)
 Solar PV w/in territory limited by land / roofs and capacity factor (but needs doing)
 Other generation options are few (tradeoffs and timing)*

11 source: Energy Position MASTER 2X load 2023-04-10

Investment timing – key initiatives



Thank You
from the RMLD Team



RMLD



Reading Municipal Light Department
RELIABLE POWER

Department
of Public Works

ATTACHMENT 4
FINANCE & ACCOUNTING REPORT



RMLD Reading Municipal Light Department
RELIABLE POWER

Financial Update
Through 6/30/2023
Presented to CAB October 5, 2023

Finance and Accounting Milestones



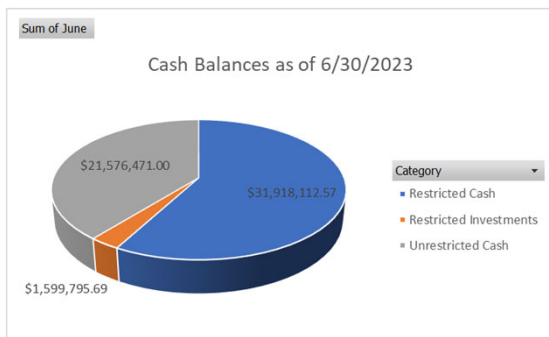
- CY2024 Budget is being finalized
- Staffing Update
 - Promoted internally two staff members
 - Senior Accountant promoted to Manager of Accounting
 - Staff Accountant promoted to Senior Accountant
 - Hired a new Staff Accountant
 - To backfill Staff Accountant position
- Above-the-Line Payment (per 20-Year Agreement) issued totaling \$913,304 processed in June:
 - Lynnfield Center - \$61,110
 - North Reading - \$167,808
 - Reading - \$190,735
 - Wilmington - \$493,651
 (This consists of 2% Net Plant Payments to all four towns)
- Below-the-Line Payment to Town of Reading totaling \$1.263M processed in June
- Next Above and Below the Line Payments to be processed in December.



1

10/5/2023

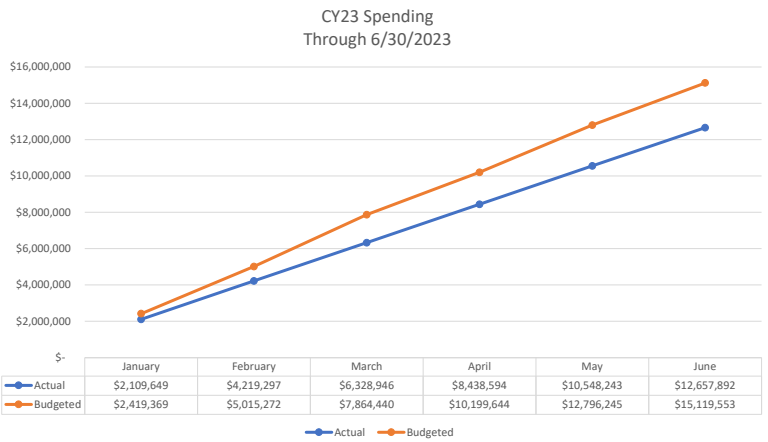
Preliminary Cash Balances – As of 6/30/2023



Row Labels	Sum of June
Restricted Cash	\$ 31,918,112.57
Cash-Construction Fund	\$ 1,960,599.80
Cash-Customer Deposits	\$ 1,748,591.08
Cash-Deferred Fuel Reserve	\$ 7,149,719.01
Cash-Depreciation Fund	\$ 9,639,518.91
Cash-EEC Reserves	\$ 2,169,528.42
Cash-Hazard Waste Fund	\$ 750,000.00
Cash-Operating Fund Payable to Town	\$ 1,814,187.50
Cash-Rate Stabilization	\$ 7,160,739.71
Cash-Reserve Uncollectible Accounts	\$ 200,000.00
Cash-Sick Leave Benefits	\$ (674,778.43)
Pension Trust Restricted Cash	\$ 6.57
Restricted Investments	\$ 1,599,795.69
Sinking Fund-MKT Valuation - Sick	\$ 1,599,795.69
Unrestricted Cash	\$ 21,576,471.00
Cash-Misc. Cash Reserve	\$ -
Cash-Operating Fund	\$ 21,572,971.00
Cash-Petty Cash	\$ 3,500.00
Grand Total	\$ 55,094,379.26



Preliminary Operating Budget vs. Actuals Through 6/30/2023

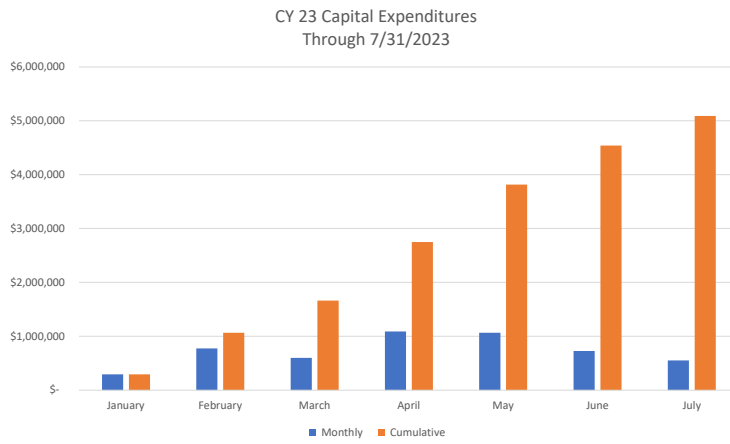


- June Financials have been finalized.
- Operating and Maintenance costs trending lower due to open positions.
- We continue to manage our expenses against current budget.
- We expect our forecasted expenses to be below budget for the year.



9/28/2023

Capital Expenditures Through 7/31/2023



- Baseline Capital Budget - \$22.85M
- \$5.1M expended through 7/31/2023
- Capital Spending continues grow steadily
- Projecting end of year Capital Spending projected to be \$12M - including expected transformer deliveries by 12/31/2023.

9/28/2023



4

DOE Awards as of 9/1



- On September 1st, RMLD was authorized to receive up to \$25,000 in rebates through December 31, 2024 (this year)
- Program is for Transformers
- This is the first award to RMLD from the \$20 million the new infrastructure bill.

9/28/2023



5

Thank you!

9/28/2023



6

ATTACHMENT 5
NEPPA 2023 ANNUAL CONFERENCE
REPORT



Summary Notes

NEPPA 2023 Annual Conference

*Presented to the
Board of Commissioners and
Citizens' Advisory Board*

28 September 2023

Outline

Gordon van Welie - Keynote

Mike Zenker – Fuels Futures & Market Analytics

Michael O’Conner – Nuclear Carbon Free Gen

John Parsons – MIT Pathways to NetZero

Gordon van Welie - Keynote

Key Points

Key Themes – **legislation, energy mix, winter peaking, winter reliability**

New England States pushing non-carbon (use and source)

PV Generation is well funded, but wind and transmission are not

First 6,000 MW of wind can be brought offshore with existing assets

Natural gas remains critical fuel source, but utilization will drop below 15%

Adequacy (reliability) is critical issue between 2027 and 2032

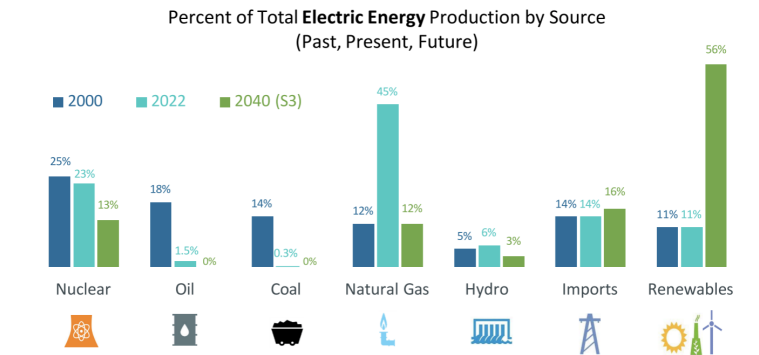
Transmission, capacity, and energy costs are increasing

Implications for RMLD

- Address reliability (adequacy) with energy storage and generation (both w/in territory)
- Build distribution network for winter peaking and dramatic load increases
- Expect EV and heating (ASHP) to be major load drivers (look at load profiles)

Dramatic Changes in the Energy Mix

New England made a major shift from coal and oil to natural gas over the past two decades, and is shifting to renewable energy in the coming decades

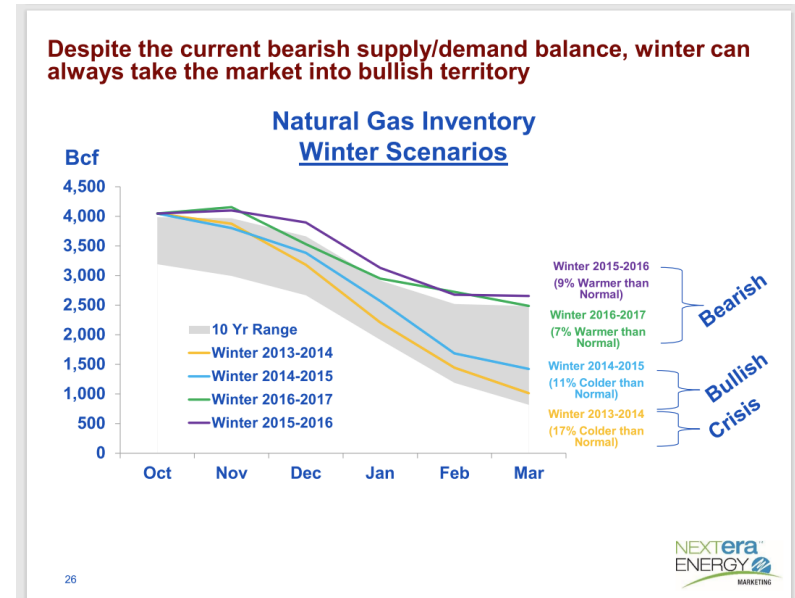


Source: ISO New England [Net Energy and Peak Load by Source](#); data for 2022 is preliminary and subject to resettlement; data for 2040 is based on Scenario 3 of the ISO New England [2021 Economic Study: Future Grid Reliability Study Phase 1](#).
Renewables include landfill gas, biomass, other biomass, wind, grid-scale solar, behind-the-meter solar, municipal solid waste, and miscellaneous fuels.

Mike Zenker – NE Regional Energy Outlook

Key Points

- Natural gas drive NE electric wholesale prices
- Natural gas price volatility increases in 2025
- LNG for export represents nearly all demand growth
- EU natural gas demand halving while US exports doubling
- Small nuclear reactors “could” be viable in 15 years (scale)
- Nat gas will be more plentiful and stable in early 2030’s



Implications for RMLD

- NE wholesale prices dramatically more volatile; keep high fuel reserve for next several years
- Consider keeping contracts highly hedged for next several years (insurance against cost spikes)

Mike O'Connor- Millstone Nuclear

Key Points

- Millstone is largest carbon-free energy source in NE
- 16-17 million MWHs per year
- Millstone focused on maintaining excellent safety record
- Millstone connected to regional high-voltage transmission network
- Nuclear output firm (flat, always on (except fueling))
- State of Connecticut primary customer through 2029
- Millstone 2 (823 MW) licensed to 2035 (extension planned)
- Millstone 3 (1,233 MW) license to 2045

Implications for RMLD

- Continue to find way to contract more energy from Millstone (w/ EFEC's starting 2030)
- Additional 10 MW of Millstone will help balance source risk; and lower average energy costs

Millstone Power Station Is the Foundation for a Clean, Affordable, and Reliable Electric Grid

- Millstone is a **2,100 MW** nuclear power station that produces 16 to 17 million megawatt-hours of **carbon-free** electricity each year
 - Represents the largest carbon-free resource in New England
 - Accounts for more than 90 percent of the carbon-free power produced in Connecticut
 - Prevents more than four million tons of carbon dioxide from being released into the atmosphere each year



Note: In 2021, total retail sales of electricity in Connecticut were roughly 28 million megawatt-hours. <https://www.eia.gov/electricity/states/Connecticut/>.

4

January 2023

Source: https://www.iso-ne.com/static-assets/documents/2022/04/2022_celt_report.xlsx

John Parsons – MIT Pathways to Non-Carbon

Key Points

Supply curve of energy coming down HQ2 is flat (similar to nuclear)

But HQ supply can be adjusted (throttled)

Nat gas generators will be valued for back-up capacity

Capacity payments must increase since operating hours will drop

Upfront capital costs are more important future consideration than operating costs for low capacity factor generators

Economic volatility for nat gas generators will increase, pushing cost of nat gas generation up

Implications for RMLD

- a) Explore Hydro Quebec as storage / balancing resource (leverage RMLD ownership rights)
- b) Design new RMLD system as bi-directional and think out of the box to ensure reliability
- c) If nat gas is part of RMLD owned generation then must be base load (always run)

Deep Decarbonization and Economic Change

- Power system will increasingly rely on capital intensive investments and less on the consumption of fuel.
- Greater up front costs, lower ongoing, variable costs.
- Changing distribution of the hourly value of electric energy.
 - Many hours of very, very low prices.
 - A very few hours of extremely high prices.
 - Interannual variability in profitability – many years of losses, and a few years of large profits.

MITe MIT

Thank You

**MATERIALS AVAILABLE BUT NOT
DISCUSSED**

Town of Reading, Massachusetts
Municipal Light Department
Statement of Net Assets
6/30/2023

	2023	2022
ASSETS		
Current:		
Unrestricted Cash	\$21,576,471.00	\$17,654,029.58
Restricted Cash	31,918,112.57	31,991,531.72
Restricted Investments	1,599,795.69	2,102,783.64
Receivables, Net	10,068,690.65	8,657,390.22
Prepaid Expenses	2,389,109.02	2,411,489.19
Inventory	2,797,301.40	2,034,504.13
Total Current Assets	70,349,480.33	64,851,728.48
Noncurrent:		
Lease Receivable	1,993,598.99	0.00
Investment in Associated Companies	990,147.15	964,340.19
Construction in Progress	825,568.27	716,488.89
Capital Assets, Net	93,231,919.66	86,328,064.39
Total Noncurrent Assets	97,041,234.07	88,008,893.47
Deferred Outflows	6,113,387.00	6,754,497.00
TOTAL ASSETS	173,504,101.40	159,615,118.95
 LIABILITIES		
Current		
Accounts Payable	8,010,243.29	8,740,181.08
Accrued Liabilities	544,863.04	432,240.52
Customer Deposits	1,748,591.08	1,585,739.65
Advances from Associated Companies	200,000.00	200,000.00
Contribution in Aid of Construction	3,179,943.21	2,585,965.72
Total Current Liabilities	13,683,640.62	13,544,126.97
Non-current		
Accrued Employee Compensated Absences	925,017.26	1,652,518.48
Net OPEB Obligation	4,269,089.00	4,158,698.00
Net Pension Liability	5,358,701.00	11,954,138.00
Total Non-current Liabilities	10,552,807.26	17,765,354.48
Deferred Inflows	9,802,917.99	4,327,923.00
TOTAL LIABILITIES	34,039,365.87	35,637,404.45
 NET POSITION		
Invested in Capital Assets, Net of Related Debt	93,231,919.66	86,328,064.39
Restricted for Depreciation Fund	11,600,118.71	11,684,771.69
Restricted for Pension Trust	6.57	6,790,787.92
Unrestricted	34,632,690.59	19,174,090.50
TOTAL NET POSITION	139,464,735.53	123,977,714.50
Total Liabilities and Net Assets	173,504,101.40	159,615,118.95

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
6/30/2023

	Month Current Year	Month Last Year	Year to Date Current Year	Year to Date Last Year	Percent Change
Operating Revenues					
Base Revenue	\$ 3,024,027	\$ 2,392,904	\$ 16,538,759	\$ 14,291,832	15.7%
Fuel Revenue	2,772,611	2,708,237	16,036,115	16,457,304	(2.6%)
Purchased Power Capacity & Transmission	2,817,395	2,155,356	15,382,742	14,579,457	5.5%
Forfeited Discounts	61,380	86,529	415,063	396,279	4.7%
Energy Conservation Revenue	212,160	152,134	1,092,633	926,649	17.9%
NYPA Credit	(73,784)	(86,883)	(845,102)	(598,827)	41.1%
Total Operating Revenues	8,813,789	7,408,277	48,620,209	46,052,693	5.6%
Expenses					
Power Expenses:					
547 Purchased Power Fuel	969,138	2,985,038	11,768,721	16,284,044	(27.7%)
555 Purchased Power Capacity	1,268,382	740,720	8,578,115	7,552,427	13.6%
565 Purchased Power Transmission	994,601	1,649,849	6,364,200	7,499,522	(15.1%)
Total Purchased Power	3,232,121	5,375,608	26,711,035	31,335,994	(14.8%)
Operations and Maintenance Expenses:					
580 Supervision and Engineering	114,888	98,958	634,333	546,726	16.0%
581 Station/Control Room Operators	48,792	47,344	329,845	241,359	36.7%
582 Station Technicians	54,868	36,418	206,090	247,497	(16.7%)
583 Line General Labor	72,426	48,750	506,603	367,768	37.8%
586 Meter General	15,627	23,202	87,999	97,523	(9.8%)
588 Materials Management	36,503	39,836	238,589	219,813	8.5%
593 Maintenance of Lines - Overhead	80,592	41,065	489,960	182,472	168.5%
593 Maintenance of Lines - Tree Trimming	143,485	162,193	451,035	419,911	7.4%
594 Maintenance of Lines - Underground	12,438	21,399	50,085	100,125	(50.0%)
595 Maintenance of Line - Transformers	1,347		24,300	45,845	(47.0%)
598 Line General Leave Time Labor	36,820	31,492	247,199	199,181	24.1%
Total Operations and Maintenance Expenses	617,784	550,660	3,266,038	2,668,218	22.4%
General & Administration Expenses:					
903 Customer Collections	138,597	97,538	684,405	553,833	23.6%
904 Uncollectible Accounts	3,333	5,000	20,000	30,000	(33.3%)
916 Energy Audit	89,640	88,474	324,518	405,200	(19.9%)
916 Energy Conservation	317,681	141,870	901,439	544,134	65.7%
920 Administrative and General Salaries	185,819	196,964	1,146,529	1,020,652	12.3%
921 Office Supplies and Expense	1,926	840	10,584	6,632	59.6%
923 Outside Services - Legal	48,088	41,655	191,092	206,465	(7.4%)
923 Outside Services - Contract	54,925	48,223	162,767	153,470	6.1%
923 Outside Services - Education	13,099	2,460	60,633	24,918	143.3%
924 Property Insurance	37,158	32,768	250,646	217,911	15.0%
925 Injuries and Damages	1,175	-	77,729	1,750	4341.6%
926 Employee Pensions and Benefits	(143,414)	20,711	2,170,215	1,876,111	15.7%
930 Miscellaneous General Expense	34,780	26,525	201,929	235,978	(14.4%)
931 Rent Expense	14,125	14,608	110,657	111,987	(1.2%)
933 Vehicle Expenses	33,210	32,415	150,722	121,046	24.5%
933 Vehicle Expenses - Capital	(29,465)	(39,067)	(206,065)	(206,806)	(0.4%)
935 Maintenance of General Plant	34,976	40,401	389,272	269,226	44.6%
935 Maintenance of Building & Garage	67,508	53,153	393,159	524,658	(25.1%)
Total General & Administration Expenses	903,161	804,538	7,040,229	6,097,165	15.5%

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
6/30/2023

	Month Current Year	Month Last Year	Year to Date Current Year	Year to Date Last Year	Percent Change
Other Operating Expenses:					
403 Depreciation	435,353	421,450	2,612,120	2,528,701	3.3%
408 Voluntary Payments to Towns	152,222	143,387	913,309	860,322	6.2%
Total Other Expenses	<u>587,576</u>	<u>564,837</u>	<u>3,525,429</u>	<u>3,389,023</u>	4.0%
Operating Income	3,473,147	112,634	8,077,478	2,562,293	215.2%
Non Operating Revenues (Expenses):					
419 Interest Income	67,505	3,812	421,358	70,606	496.8%
419 Other	(18,797)	33,004	324,448	564,333	(42.5%)
426 Return on Investment to Reading	(210,620)	(206,709)	(1,263,721)	(1,240,253)	1.9%
426 Loss on Disposal					0.0%
431 Interest Expense	(4,166)	(2,010)	(24,136)	(12,071)	100.0%
Total Non Operating Revenues (Expenses)	<u>(166,078)</u>	<u>(171,904)</u>	<u>(542,051)</u>	<u>(617,384)</u>	(12.2%)
Change in Net Assets	3,307,068	(59,270)	7,535,427	1,944,909	287.4%
Net Assets at Beginning of Year	131,929,309	122,032,806	131,929,309	122,032,806	8.1%
Ending Net Assets	<u>\$ 135,236,377</u>	<u>\$ 121,973,536</u>	<u>\$ 139,464,736</u>	<u>\$ 123,977,715</u>	12.5%

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Budgeted Revenues, Expenses and Changes in Fund Net Assets
6/30/2023

	Actual Year to Date	Budget Year to Date	OVER/UNDER \$	OVER/UNDER %
Operating Revenues				
Base Revenue	\$ 16,538,759	\$ 16,058,112	480,648	3.0%
Fuel Revenue	16,036,115	20,553,016	(4,516,902)	(22.0%)
Purchased Power Capacity & Transmission	15,382,742	17,257,994	(1,875,252)	(10.9%)
Forfeited Discounts	415,063	481,743	(66,681)	(13.8%)
Energy Conservation Revenue	1,092,633	1,000,500	92,133	9.2%
NYPA Credit	(845,102)	(581,000)	(264,102)	45.5%
Total Operating Revenues	\$ 48,620,209	\$ 54,770,365	(6,150,156)	(11.2%)
Expenses				
Power Expenses:				
555 Purchased Power Fuel	11,768,721	19,972,016	(8,203,296)	(41.1%)
555 Purchased Power Capacity	8,578,115	7,734,799	843,315	10.9%
565 Purchased Power Transmission	6,364,200	9,613,195	(3,248,995)	(33.8%)
Total Purchased Power	26,711,035	37,320,010	(10,608,975)	(28.4%)
Operations and Maintenance Expenses:				
580 Supervision and Engineering	634,333	489,219	145,114	29.7%
581 Station/Control Room Operators	329,845	254,048	75,798	29.8%
582 Station Technicians	206,090	668,729	(462,639)	(69.2%)
583 Line General Labor	506,603	300,377	206,226	68.7%
586 Meter General	87,999	135,122	(47,123)	(34.9%)
588 Materials Management	238,589	294,295	(55,706)	(18.9%)
593 Maintenance of Lines - Overhead	489,960	284,372	205,588	72.3%
593 Maintenance of Lines - Tree Trimming	451,035	794,894	(343,859)	(43.3%)
594 Maintenance of Lines - Underground	50,085	97,487	(47,402)	(48.6%)
595 Maintenance of Line - Transformers	24,300	177,520	(153,220)	(86.3%)
598 Line General Leave Time Labor	247,199	107,982	139,218	128.9%
Total Operations and Maintenance Expenses	3,266,038	3,604,044	(338,005)	(9.4%)
General & Administration Expenses:				
903 Customer Collection	684,405	649,804	34,601	5.3%
904 Uncollectible Accounts	20,000	37,500	(17,500)	(46.7%)
916 Energy Audit	324,518	535,715	(211,197)	(39.4%)
916 Energy Conservation	901,439	1,532,121	(630,682)	(41.2%)
920 Administrative and General Salaries	1,146,529	1,612,066	(465,538)	(28.9%)
921 Office Supplies and Expense	10,584	10,000	584	5.8%
923 Outside Services - Legal	191,092	392,900	(201,808)	(51.4%)
923 Outside Services - Contract	162,767	370,050	(207,283)	(56.0%)
923 Outside Services - Education	60,633	164,575	(103,942)	(63.2%)
924 Property Insurance	250,646	270,775	(20,130)	(7.4%)
925 Injuries and Damages	77,729	12,800	64,929	507.3%
926 Employee Pensions and Benefits	2,170,215	2,284,313	(114,098)	(5.0%)
930 Miscellaneous General Expense	201,929	300,700	(98,771)	(32.8%)
931 Rent Expense	110,657	106,000	4,657	4.4%
933 Vehicle Expense	150,722	194,500	(43,778)	(22.5%)
933 Vehicle Expense - Capital Clearing	(206,065)	(255,134)	49,069	(19.2%)
935 Maintenance of General Plant	389,272	334,384	54,889	16.4%
935 Maintenance of Building & Garage	393,159	495,779	(102,620)	(20.7%)
Total General & Administration Expenses	7,040,229	9,048,848	(2,008,619)	(22.2%)

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Budgeted Revenues, Expenses and Changes in Fund Net Assets
6/30/2023

	Actual Year to Date	Budget Year to Date	OVER/UNDER \$	OVER/UNDER %
Other Operating Expenses:				
403 Depreciation	2,612,120	2,722,500	(110,380)	(4.1%)
408 Voluntary Payments to Towns	913,309	886,220	27,089	3.1%
Total Other Expenses	<u>3,525,429</u>	<u>3,608,720</u>	<u>(35,447)</u>	<u>(1.0%)</u>
Operating Income	8,077,478	1,188,743	6,840,891	575.5%
Non Operating Revenues (Expenses):				
415 Contribution in Aid of Construction	-	25,000	(25,000)	(100.0%)
419 Interest Income	421,358	150,000	271,358	180.9%
419 Other Income	324,448	355,000	(30,552)	(8.6%)
421 Intergovernmental Grants	-	45,000	(45,000)	(100.0%)
426 Return on Investment to Reading	(1,263,721)	(1,274,486)	10,765	(0.8%)
426 Loss on Disposal	-	(5,000)	5,000	(100.0%)
431 Interest Expense	(24,136)	(5,000)	(19,136)	382.7%
Total Non Operating Revenues (Expenses)	<u>(542,051)</u>	<u>(709,486)</u>	<u>167,435</u>	<u>(23.6%)</u>
Net Income	<u>\$ 7,535,427</u>	<u>\$ 479,257</u>	<u>\$ 7,056,169</u>	<u>1472.3%</u>