RMLD Highlights

Presented to Town of Reading Select Board
21 November 2023

RMLD

Reading Municipal Light Department
RELIABLE POWER

Outline

Mission and vision

RMLD direction

Load – significant changes

Owned generation and storage

2024 customer bill estimates

Ash Street campus

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.

RMLD direction - highlights

2021 Climate Bill is accelerating **electrification** (decarbonization); targets unlikely to soften

Regional wholesale supply reliability increasingly **fragile**

Wholesale **costs are increasing** and highly volatile near-term

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

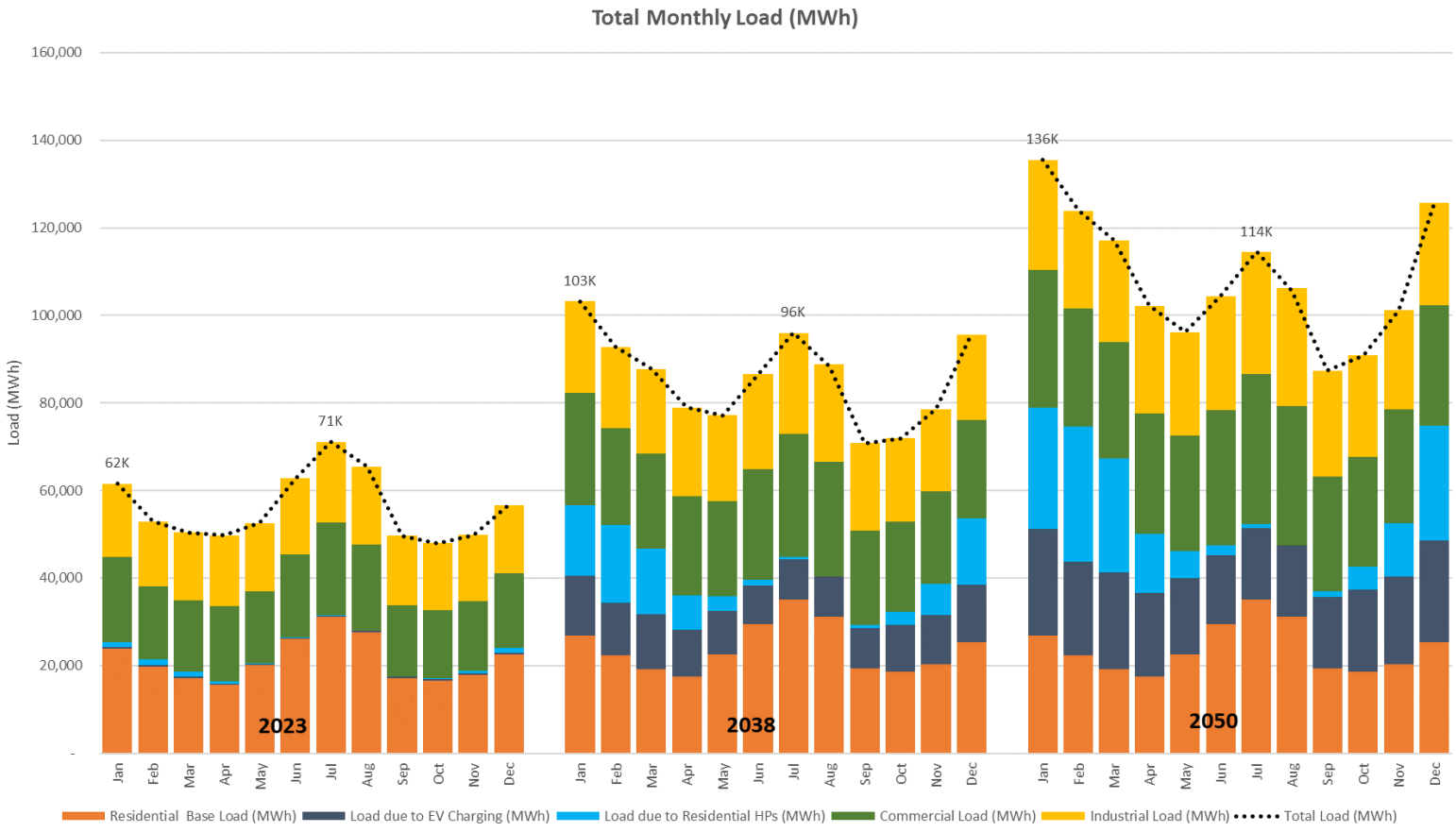
In-territory generation and energy storage require creativity, piloting, and investment

RMLD needs **land parcels** to support growth

RMLD accelerating investment in its **employee team** (new skills, process efficiency, data, recruiting, …)

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

Monthly load – significant changes



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

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

RMLD in territory generation

Favorable economics for in territory generation

- Wholesale costs increasing (energy, transmission, capacity, certificates)
- New funding sources (state / fed grants, tax credits, vendor contributions)
- RMLD has scale to implement

Reliability enhanced via in territory generation assets

- Regional wholesale more fragile
- More direct control (and responsibility)
- In territory generation targeted to support ~40% of load by 2040

Compliant (2021 Climate Bill → non-carbon electricity sales 50% by 2030, 75% by 2040, and net zero by 2050)

- Clean energy certificates produced by a fuel cell with >90% carbon capture provides compliance pathway in the near term
- Carbon captured fuel cells compliant for life of assets (>20 years)

Generation asset timing

- First 3 MWs of RMLD owned rooftop solar PV commissioned in 2026, then Maple Meadows solar PV (8 MW) in 2027
- First 20 MW base load gen commissioned 2026
- Additional 20 MW base load gen commissioned in 2029, followed by two additional units in 2030's

Source(s): prior RMLD presentations and internal analysis

In territory generation options for RMLD

Hydrogen for electricity generation

- Early years of development
- Generation / distribution challenged
- Working to create pilot at Station 3

Carbon captured fuel cells

- Fuel cell technology well established
- Compliant – CES (emissions-based program)

Low temp geothermal for electricity generation

- High temp proven (3,700 MWs operating in US)
- Fundamental process / technology established
- Commercially viable 8-12 years out

Solar PV (landfill, industrial rooftops, muni rooftops, some resi)

- Great economics, low operating costs
- Very limited land for solar in RMLD (40 MW in territory maximum)
- 40 MW generates 60,000 MWHs annually (< 10 % of current total)

2024 Monthly Bill – Residential A example

updated text

Customer Charge
Cost of customer account administration.

Distribution Energy Charge
Cost of the distribution network system (wires, poles, transformers) including operations and maintenance for reliability.

Efficiency Electrification Charge
Cost of energy efficiency, electrification, rebate and incentive programs.

Fuel Charge
Wholesale cost of power supply (energy) including certificates.

Purchased Power Capacity & Transmission Charge (PPCT)
Wholesale cost for generation assets and transmission in ISO-NE. Cost based on RMLD peaks and regional pricing.

NYPA Credit
Credit from NY Power Authority related to hydropower. Legislation determined that the credit only applies to residential accounts.

effective March 2024

Residential A	*current*	*proposed*	$ change
*Customer Charge	$6.24	$7.70	$1.46
*Distribution Energy	$73.23	$74.03	$0.81
Efficiency Electrification	$3.25	$4.06	$0.81
Fuel	$40.13	$41.43	$1.30
Capacity & Trans (PPCT)	$41.36	$47.56	$6.20
NYPA Credit	$(4.58)	$(3.57)	$1.01
Prompt Payment	$(11.92)	$(12.26)	$(0.34)
Total Monthly Bill	**$147.70**	**$158.95**	**$11.26**
Average Monthly kWh	812	812	

Tariff Rate
$3.08
2%
fixed

Power Supply Pass Thru
$8.51
5.6%
adjusted monthly based on actuals

Fixed tariff (rate sheet) is $3.08 (2%) of total estimated increase.
Variable power supply pass through is estimated $8.51 (5.6%) of total.

Source: Rate and Analysis by Cost Stream v34 2023-10-19

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2024 Monthly Bill – Commercial C example

updated text

Customer Charge
Cost of customer account administration.

Distribution Energy Charge
Cost of the distribution network system (wires, poles, transformers) including operations and maintenance for reliability.

Distribution Demand
Cost of distribution network system tied to maximum demand of customer.

Efficiency Electrification Charge
Cost of energy efficiency, electrification, rebate and incentive programs.

Fuel Charge
Wholesale cost of power supply (energy) including certificates.

Purchased Power Capacity & Transmission Charge (PPCT)
Wholesale cost for generation assets and transmission in ISO-NE. Cost based on RMLD peaks and regional pricing.

effective March 2024

Commercial C	*current*	*proposed*	$ change
*Customer Charge	$10.30	$13.38	$3.09
*Distribution Energy	$159.02	$174.93	$15.90
*Distribution Demand	$279.23	$301.57	$22.34
Efficiency Electrification	$27.39	$34.24	$6.85
Fuel	$338.43	$349.43	$11.00
Capacity & Trans (PPCT)	$348.77	$401.08	$52.32
Prompt Payment	$(67.28)	$(73.48)	$(6.20)
Total Monthly Bill	**$1,095.86**	**$1,201.15**	**$105.29**
Average Monthly kWh	6,848	6,848	
Average kW	23	23	

Tariff Rate
$48.18
3.8%
fixed

Power Supply Pass Thru
$63.32
5.8%
adjusted monthly based on actuals

Fixed tariff (rate sheet) is $48.18 (2%) of total estimated increase.
Variable power supply pass through is estimated $63.32 (5.8%) of total.

Source: Rate and Analysis by Cost Stream v34 2023-10-19

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RMLD Ash Street Campus Update

Nov 2023 update

highlights

a) RMLD operations building (218) needs major refit

b) RMLD continues to explore better location for primary operations, but most likely scenario is to reconfigure Ash Street campus

c) Initial discussions with three other Ash Street campus owners; all three (232, 236,244) open to changes

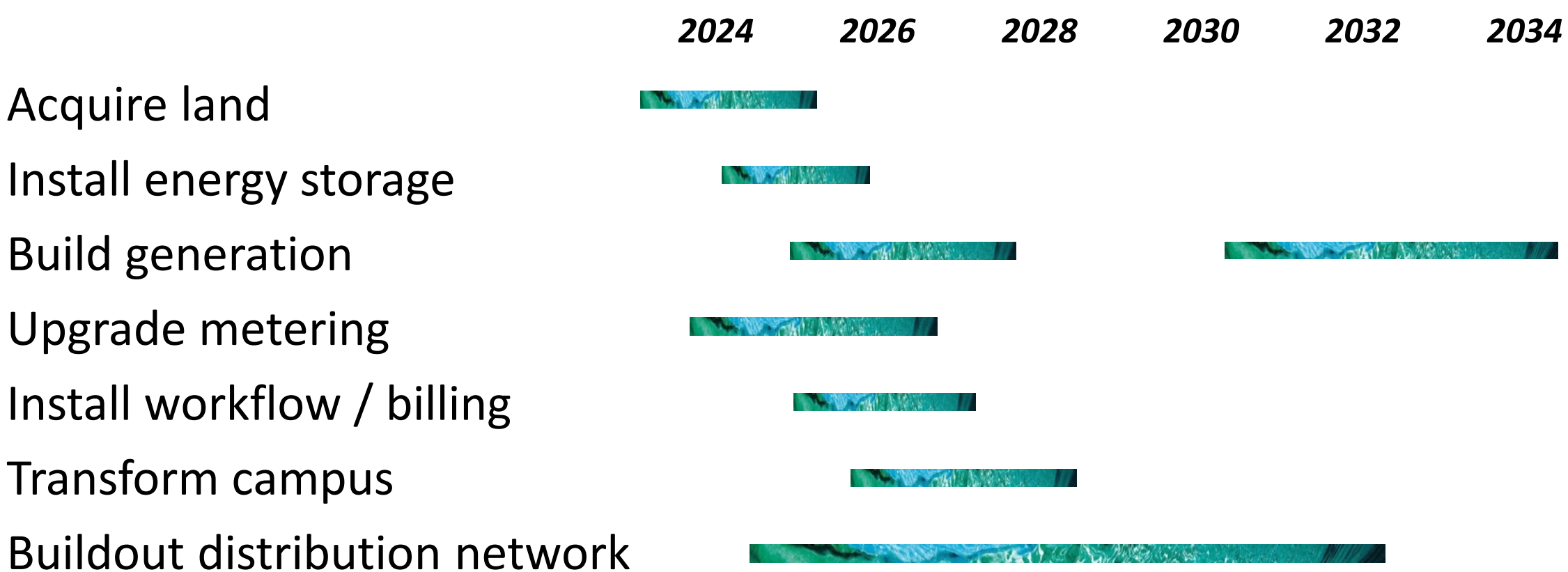
d) Ongoing planning discussions with Town of Reading and Gamble Associates to use Community Planning grant to vision Ash St RMLD campus and Eastern Gateway District

key milestones

Share Ash Street Campus concepts	2Q 2024
Finalize Ash Campus design	1Q 2025
Transfer property ownership	2Q 2025
Reconfigure Ash and Main intersection	3Q 2025
Start 218 - 232 Ash Street construction	3Q 2026
Complete RMLD transition on Ash Street Campus	4Q 2028

Note: numerous details to be defined and executed to support these milestones

Investment timing – key initiatives



Thank You
from the RMLD Team

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