

MARBLEHEAD MUNICIPAL LIGHT DEPARTMENT

To the citizens of Marblehead,

The Marblehead Municipal Light Department (MMLD) is pleased to share its 130th annual report and financial statements for the calendar year ending December 31, 2024.

Top-line Results:

	2024	2023	2024-23 % Change
MMLD Energy Sales (MWh)	98,811	96,828	3.1%
Energy Sales Revenue \$	\$21,519,213	\$21,452,243	0.3%

	2024	2023	2024-23 % Change
MMLD Summer Peak	July 16th 2-3 PM 31.1 MW	July 28 th 3-4 PM 26.6 MW	16.9%
MMLD Winter Peak Demand	Dec 22nd 5-6 PM 21.0 MW	Feb 4th 5-6 PM 20.8 MW	1.0%
Highest Monthly Energy Use	July 11,957 MWh	July 11,780 MWh	1.5%
ISO-NE System Peak Demand	July 16 th 5-6 PM 24,461 MW	Sept 7 th 5-6 PM 24,016 MW	1.9%
MMLD Demand Co-incident with the ISO-NE Peak	29.85 MW	24.5 MW	21.8%

2024 – Significant Changes in Our Electric Power Portfolio

In 2024 MMLD worked closely with MMWEC, our state’s municipal power joint action agency, to change the hedged power portion (~30%) of our power portfolio. We systematically replaced commodity energy contracts with carbon-free energy sources that also generated Renewable Energy Certificates (RECs). The two new hydropower-based hedged contracts in italics below, delivered 13% of our electricity.

Power Generator	2024 Actual Energy (MWh)	2023 Actual Energy (MWh)	Percent Change
Millstone Nuclear	15,616	12,704	22.9%
Seabrook Nuclear	13,074	12,882	1.5%
NY Power Authority Hydro	8,626	7,858	9.8%
Hydro-Quebec	6,588	6,570	0.3%
Berkshire Wind 1	953	1,464	-34.9%
Berkshire Wind 2	1,739	1,272	36.7%
Hancock Wind	2,186	2,076	5.3%
Eagle Creek Hydro	1,801	2,542	-29.2%
<i>First Light Hydro</i>	<i>6,707</i>	0	N/A
<i>Brookfield Hydro</i>	<i>7,123</i>	0	N/A
Master Sgt Cotton Solar PV	1,217	0	N/A
Stony Brook Intermediate	1,103	446	147.3%
Northeast Reliability Center	766	0	N/A
Stony Brook Peaking	106	85	24.4%
Marblehead Wilkins Plant	95	62	53.6%
Hedged Power Contracts	16,456	33,988	-51.6%
ISO Interchange Spot Market	22,716	21,012	8.1%
Total Wholesale Energy Supply	106,873	102,961	3.8%

A 65% Carbon-Free Power Portfolio in 2024 – A Dramatic 55% increase from 42% in 2023.

In 2021 a new Massachusetts climate law established clear clean energy goals for municipal utilities: 50% carbon-free energy by 2030, 75% by 2040, and net-zero emissions by 2050. In May 2023, the MMLD Board voted to adopt more aggressive goals: 70% carbon-free energy sales by 2028, 85% by 2033, and net zero by 2040, in alignment with the Town’s goal of reaching Net Zero by 2040.

Eligible carbon-free power sources generate Renewable Energy Certificates (RECs), or Emission Free Energy Certificates (EFECs) for each MWh generated. Certificates must be retired (held), not sold, to be counted as carbon-free. **MMLD’s 2024 carbon-free percentage is 65%, a dramatic 55% increase from 42% in 2023.**

2024 MMLD Carbon-Free Wholesale Power Sources	Energy	RECs/ EFECs	RECs	Energy purchases without RECs
Millstone 3 Nuclear	15,616	15,616		
Seabrook Nuclear	13,074	19,826		
NY Power Authority Hydro	8,626	8,626		
Hydro-Quebec	6,588	6,588		
<i>First Light Hydro</i>	6,707	6,707		
<i>Brookfield Hydro</i>	7,123	7,123		
<i>Master Sgt Cotton Solar PV</i>	1,217		1,217	
Berkshire Wind 1	953		953	
Berkshire Wind 2	1,739		1,739	
Hancock Wind	2,186			2,186
Eagle Creek Hydro	1,801			1,801
Carbon-Free Supply Total	65,631	64,487	3,909	3,987
MMLD Solar Rebate Program		117		
MMLD Go Green Now! Program		346		
Total RECs & EFECs retired		65,950		
MMLD Total Retail Sales (MWh)		99,811		
MMLD Carbon-Free %	65 %			

It is also noteworthy that this change was implemented while keeping track of the bottom line. Over the same period, the average wholesale power cost decreased 3.4%, from 11.28 cents/kwh in 2023 to 10.9 cents/kwh in 2024. This reduction in the wholesale power costs allows MMLD to keep the rates as low as possible, in the face of increasing costs, including procurement costs and health care costs.

2024 Department Actions and Initiatives

January

- The Department implemented the second phase of an electric rate restructuring plan approved by the MMLD Board in 2022. The goal of this restructuring was to match more closely the department's fixed revenues to the department's fixed expenses. The increase in base rates allowed us to lower the electric rates, the variable part of residents' bill. The new residential monthly base rate was increased to \$18.50 from \$11.25 and the residential energy (kwh) rate was reduced from \$0.1969 to \$0.1895 per kwh.
- The MMLD Board voted to approve a reduced residential base rate for a second residential meter and a reduced base rate for seasonal-use fishing shanties located in Town-permitted areas. Full details are on the MMLD website.
- Two January storms, 1/11-12 and 1/13-15 resulted in extreme high tides and coastal flooding on multiple coastal roads in Marblehead. The longest electrical outages to residential customers were in the Crowninshield Road area.
- The MMLD Board voted to approve a \$21.24 million operating budget for 2024.
- MMLD vendor Bayside Engineering, Woburn, MA., completed a design for a concrete land bridge to be installed at the entrance of the Village 13 substation. The below-grade land bridge will enable the tractor trailer delivery of two new transformers, weighing ~120,000 pounds each, into the substation without damaging the Town's force sewer main pipe buried across the entrance to the substation.

February

- A contract with Concrete Systems Inc. (CSI) of Hudson, NH, for the construction of precast concrete sections for the Village 13 land bridge, was signed for \$82,800.
- Sealed bids were opened for the construction of the concrete land bridge. The winning bidder was George Cairns Construction Company of Windham, NH, with a winning bid of \$38,050.

March

- The MMLD Board voted to approve a payment in lieu of taxes (PILOT payment) to the Town of Marblehead for \$330,000.
- A municipal utility's chart of accounts includes a rate stabilization fund: a reserve account established to stabilize customer energy rates in response to unforeseen major disruptions in operations, as extended power outages, or significant increases in fuel or transmission costs. For many years the MMLD rate stabilization balance has been in the \$900,000 range, roughly equal to one month of MMLD wholesale energy costs. The American Public Power Association (APPA) and our auditors recommend an account balance equal to three months of wholesale energy costs. As a result, the MMLD Board voted to approve the transfer of \$1.5 million dollars from year end 2023 net income funds into the rate stabilization fund.

April

- Michael Rockett, owner of 26 Heritage Way, Marblehead, granted MMLD an easement that permitted the driving of oversized trucks transporting Village 13 substation transformers and related equipment across the Bessom Street end of his parcel.
- Construction work started on the Village 13 substation land bridge.
- *The American Public Power Association (APPA), the leading public power association in the U.S. with over 2,000 not-for-profit, community-owned electric utilities recognized MMLD with a 2023 Certificate of Excellence in Reliability, for "achieving exceptional electric reliability in 2023." The award is based on national reliability data collected from 526 public power utilities. APPA applies industry standard metrics developed by the Institute for Electrical and Electronics Engineers (IEEE 1366). MMLD was recognized for a System Average Interruption Duration Index (SAIDI) of under 17 minutes for all outages in 2023. The MMLD 2023 SAIDI figure is 69% lower (meaning outages of shorter duration) versus the average SAIDI of the 55 Northeast US-based utilities participating in the survey and 76% shorter duration outages than at the 100+ similar-sized municipal utilities participating in the survey nationwide. MMLD provides electrical service to 10,300 meters, which puts us in APPA's 7,300-14,000 meter count category.*

May

- A topographic survey of the MMLD-owned Tioga Way parcel was completed, in order to locate a potential Battery Electric Storage System (BESS) site.
- The Village 13 land bridge installation is completed, buried below grade at the front gate entrance of the Village 13 substation.

- The installation of a new perimeter fence and gates at 80 Commercial Street is begun. The project includes new child safe railings at Hammond Park, funded as part a Mass Office of Coastal Zone Management (CZM) Resiliency grant to the Town of Marblehead. The 80 Commercial St. fence and gate project scope is expanded, in conjunction with the adjacent Town DPW project to install new sidewalks along 80 Commercial St. The DPW improvements include: (1) improving public access to Hammond Park, (2) removing ledge rock to improve walking access to the waterfront pocket park located between the Commercial St docks and the Marblehead Yacht Club, and (3) pave Commercial St and sidewalks. A portion of the expanded scope is also funded by a Mass CZM grant to the Town of Marblehead, consistent with the Mass CZM mission to maintain and improve public access to the Massachusetts coastal waterfront.

June

- The two new Village 13 transformers were delivered to the Village 13 substation site over two days, June 27th and 28th. The transformers were delivered via the Bessom Street entrance to the ROW. The loaded trailer-trucks were oversized and overweight loads, at ~180,000 pounds each. A 450-ton crane was set up onsite to move the transformers from the trailer-trucks to their temporary storage locations in the substation. The successful delivery of the transformers through Marblehead streets to the Village 13 substation was possible due to the high degree of cooperation among multiple Town departments including the Marblehead Police Dept., the Public Works Dept., the Water & Sewer Dept, and MMLD, plus property abutters Mike Rockett and Gilbert & Cole, and the Tedesco Country Club for providing a truck staging area.

July

- Chris Dunbar began employment, as the first Information Systems and Technology Manager at MMLD.
- MMWEC presented MMLD with the NextZero Innovation Award at their annual participants meeting. MMWEC recognized MMLD for working with MMWEC to develop Next Zero program plans for residential batteries and diligence in “pursuing innovative methods to reach our goals.”

September

- MMLD GM Joe Kowalik informed the MMLD Board of the Department’s intention to apply for a Federal Infrastructure Investment and Jobs Act (IIJA) grant, also known as a Grid Resilience and Innovation Partnership (GRIP) Grant. The stated program objective is to “enhance the resilience of the electric grid, prevent outages and mitigate the impact of disruptive events through investments in activities, technologies, equipment and other hardening measures.” The funds

are distributed by the Federal Department of Energy to the states, with each state receiving an allocation. The Massachusetts Clean Energy Center (CEC) is the state agency responsible for evaluating the Mass-based applications. The MMLD grant application was focused squarely on hardening the subtransmission supply lines that run from the National Grid Railyard substation in Salem to the Village 13 substation in Marblehead. Proposed hardening improvements included: (1) replacing wooden poles with stronger steel poles in Salem and (2) replacing overhead lines along the right of way in Marblehead with a new underground service, beginning in the Lead Mills area and running toward West Shore Drive. Beacon Climate Innovations, of Somerville, Mass assisted MMLD in completing the application, due to the short deadline of early October 2024. The estimated project cost was \$1.98 million, and the grant request was for \$1.33 million (67%), with an MMLD contribution of \$654,000 (33%).

- MMLD has a long-term asset rights investment in National Grid transmission lines running from Quebec, Canada to Massachusetts. Recognizing the need to increase the future investment dollars to maintain the lines, National Grid has informed MMLD that we will be required to make additional investment of \$247,000 from 2024 to 2033. This investment is estimated to reduce our 2034-2065 investment dividend forecast from \$472,000 to \$225,000.
- Myers Controlled Power LLC., of North Canton, Ohio, the manufacturer of the new Village 13 switchgear equipment, informed us of a second three-month delay in the delivery of switchgear, to late December 2024.

October

- A construction repair request for quote for the 80 Commercial Street main office, needed to address roof and downspout drainage issues not adequately addressed in 2016-18 renovation contract, was issued for competitive bidding. The winning bidder was the Campbell Construction Group, LLC., Peabody, Mass., with a bid of \$283,829.

November

- MMLD Finance Manager Matt Barrett proposed a 2025 operating budget of \$21,681,000 to the MMLD Board.
- A request for bid was issued to complete the extensive site construction work in support of the Village 13 substation upgrade, with a December 11, 2024 bid opening date.
- Twelve contractors attended a mandatory site meeting to review the Village 13 substation site construction bid package.

- Improvements in the MMLD server room at 80 Commercial Street were completed, included new switches to route MMLD meter data, and an improved internet connection. New switches in the field are now planned for 2025.

December

- The MMLD Board voted to approve \$2,719,860 in capital funding to the lowest bid qualified vendor, Fischbach & Moore, of Boston, Mass., for the Village 13 substation site construction work.
- The Board voted to approve \$654,000 in capital funding to harden the subtransmission supply lines that run from Salem to Marblehead. The vote confirmed the local utility commitment as required in the \$1.98 million DOE GRIP grant application submitted to the Mass CEC.
- The Board voted to approve the 2025 department operating and maintenance budget of \$21,681,000.
- The MMLD Board voted to approve a bad debt write-off of \$38,800, representing inactive accounts with no payment activity between November 1, 2022 and October 31, 2023. While this debt is written off, collection efforts continue unabated.

Year-long Key Activity Summaries

- Preventive maintenance of our distribution system by MMLD line crews is a year-round responsibility. In 2024 27 new electric utility or light poles were replaced or added town wide. 21 pole installations were pole replacements, including preventive maintenance, poles damaged in auto accidents, storm damage, and old pole replacements. Six poles were installed in new locations, including three in the Crowninshield Road area to replace an unreliable underground service and three new poles installed in support of the Village 13 substation upgrade.

Public EV Charging @ 10 stations Annual Summary	2024 Actual	2023 Actual	Year-on-Year Percent Change
Unique Drivers	296	384	-23%
Charging Sessions	3,493	2,041	71%
Charging Energy Used (MWh)	56.7	32.2	76%
Greenhouse Gas Reduction (US tons)	47.3	25.4	86%
Electricity Sales Revenue	\$14,562	\$9,924	47%

- In 2024 MMLD continued to operate and maintain 10 public Level 2 EV charging ports in three locations: two charging ports at the 80 Commercial St MMLD main office, four ports at the Mary Alley Building main parking lot on Widger Road, and four ports at the Anderson Street end of the Round House Road public parking lot. 2024 was the third full year of 10-port operations.
- MMLD's Residential Scheduled EV Charging Program, gives Marblehead EV owners a ChargePoint® Home Flex residential EV Charger for free when they agree to enroll in MMLD's scheduled charging program. Its goal is simple: provide EV owners with an incentive not to charge their EV during the peak hours, 5-9 pm, on weekdays. Customers can continue to plug their EV into the charger when they arrive at home in the early evenings. The Scheduled Charging program software will automatically begin to curtail EV charging at 5 pm on weekdays and automatically resume EV charging after 9 pm. The program simply blocks EV charging until after the 5-9 PM peak hours have passed. Your new ChargePoint EV charger will still have plenty of night-time hours to recharge your EV for your use the next day. ChargePoint estimates that the Home Flex EV Charger provides an additional 25 miles of driving range per hour of charging, when the charger is connected to a 40-amp circuit on your electric service panel at home. A four-hour Level 2 charge on average provides an additional 100 miles of driving range, giving the Marblehead EV driver significantly more range than the 30 miles actually traveled per day, based on average vehicle miles traveled daily by the 708 plug-in hybrid and electric vehicles registered in Marblehead (Mass DOT vehicle data).

Here's how Program's participation has grown in the past year.

Scheduled EV Charging Program Enrollments by Year	Annual Enrollments	Cumulative Enrollments
2017	3	3
2018	5	8
2019	5	13
2020	14	27
2021	15	42
2022	34	76
2023	25	101
2024	27	128

NOTE: The Mass Dept. of Transportation website reports that as of January 1, 2025, there were a total of 708 chargeable EV vehicles registered in Marblehead, including 440 EVs and 268 plug-in hybrid vehicles. As such, **only 18% of chargeable EVs registered in Marblehead are enrolled in our Scheduled Charging Program.** It's in everyone's financial interest to avoid EV charging during peak hours, so we urge you to call our office at 781-631-5600 to join this important townwide initiative. Details on our website at www.marbleheadelectric.com

- MMLD participates in the MMWEC-sponsored NextZero Program, an expansion of the earlier Home Energy Loss Prevention Services (HELPS) Program. In 2024, 79 homeowners received free home energy efficiency audits, an 18% decrease from 93 in 2023. The three-year audit average is 77 audits/year.
- In 2024 the MMLD NextZero Program offered Marblehead residents a variety of cash rebates of up to \$2,250 and encouraged natural gas customers in Marblehead to apply for National Grid Mass Save® rebates in addition to MMLD NextZero rebates. Rebate dollars to Marblehead customers increased 73% in 2024, from \$39,031 in 2023 to \$67,702 in 2024.

Next Zero Program Customer Rebates	2024 Participants	2024 Rebate Dollars
Energy Star Appliances	124	\$12,120
Cool Homes Program (Heat Pumps)	38	\$37,220
Home Efficiency Incentives (HEI)	26	\$11,668
WiFi Thermostats	16	\$1,389
Battery Operated Lawn & Yard Equipment	76	\$5,305
Program Totals	280	\$67,702

For details on available rebates, visit www.marbleheadelectric.com.

- In 2022 MMLD added an Air Source Heat Pump consultation service, which provides customers with relevant, practical information about heat pumps and their applicability in Marblehead homes. Participating customers receive heat pump sizing and contractor design review services. In 2024, 20 MMLD customers took advantage of this program.

MMLD Employee Recognition

MMLD's most important asset remains our highly skilled workforce. ***The dedication of our employees is essential to the success of our mission:***

...to deliver reliable, cost competitive electric power to our customers, while increasing the carbon-free power in our portfolio and maintaining a safe and healthy work environment for employees and customers alike.

We're pleased to recognize the following employee milestones in 2024:

Employee work anniversaries:

- Working Foreman Paul Camarda celebrated his 25th year anniversary.
- Technical Services Manager Colin Coleman celebrated his 10th year anniversary.

New employee hires:

- Information Systems & Technology Manager Chris Dunbar

Employee retirements:

- Senior Facilities and Maintenance Specialist Paul Surette

Respectfully submitted,

Joseph T. Kowalik, General Manager
Lisa Wolf, Commission Chair
Simon Frechette, Commission Vice Chair
Jean-Jacques Yarmoff, Secretary
Michael A. Hull, Commissioner
Adam Smith, Commissioner

BALANCE SHEET

For the year ending December 31, 2024

Assets		
Plant Investments		\$ 19,724,219.55
Current Assets:		
Cash - Operating	8,158,091.19	
Petty Cash	500.00	
Construction	-	
Accounts Receivable	3,618,043.04	
Materials & Supplies	246,648.07	
Total Current Assets		\$ 12,023,282.30
Depreciation Fund		7,095,396.38
Insurance Escrow Account		1,089,552.70
Hydro Savings Reserve		-
MMWEC - NEPEX Reserve Trust		558,265.37
Rate Stabilization Reserve		2,541,482.74
Consumer Deposits		245,280.50
Prepayments		1,680,873.87
Pooled Financing Reserve-MMWEC		462,193.64
MMWEC 2015A Peabody Project		379,435.47
Deferred Outflows-Pensions		1,796,639.00
Deferred Outflows-OPEB		558,102.00
Total Assets		<u>\$ 48,154,723.52</u>
Liabilities And Surplus		
Accounts Payable:		
Depreciation	\$ 46,691.93	
Operating	1,916,162.43	
Consumer Deposits	5,100.00	
Total Accounts Payable		\$ 1,967,954.36
Consumer Deposits		240,180.50
Bonds Payable		3,388,957.96
Accumulated Provision For Rate Stabilization		3,341,482.74
Reserve-MMWEC Reserve Trust		558,265.37
Net Pension Liability		7,079,400.00
Deferred Inflows-Pensions		388,056.00
Deferred Inflows-Opeb		3,366,947.00
Reserve for Uncollectible Accounts		517,828.66
Reserve for Future Compensated Absences		126,781.77
Opeb Liability		3,340,487.00
Contribution In Aid For Construction		200,582.09
Unappropriated Earned Surplus		23,637,800.07
Total Liabilities And Surplus		<u>\$ 48,154,723.52</u>

NOTE: Financials are calendar year based and subject to MMLD independent audit

STATEMENT OF INCOME
For the year ending December 31, 2024

Operating Revenue		\$ 21,519,213.73
Less Expenses:		
Operating	15,768,068.11	
Maintenance	1,983,007.86	
Depreciation	2,126,907.44	
Total Expenses		<u>19,877,983.41</u>
Operating Income		1,641,230.32
Investment & Interest Income		912,568.36
Less Interest on Long Term Debt		<u>115,210.07</u>
Net Income Transferred to Surplus		<u><u>\$ 2,438,588.61</u></u>
		\$ 2,438,588.61

STATEMENT OF SURPLUS
For the year ending December 31, 2024

Balance December 31, 2023	\$ 20,149,744.82
Add: Credit balance transferred from income	<u>2,438,588.61</u>
Subtotal	22,588,333.43
Deduct: Amount transferred to Town Treasurer	
Strategic electrification fund	-
Payment in Lieu of Taxes (PILOT)	(330,000.00)
Yearend 2023 Auditor Adjustment	<u>1,379,466.64</u>
Balance December 31, 2024	<u><u>\$ 23,637,800.07</u></u>

NOTE: Financials are calendar year based and subject to MMLD independent audit

OPERATING EXPENSES

For the year ending December 31, 2024

Power Generation Expenses:		
Fuel	\$ 22,495.08	
Misc. Other Power Generating Expense	18,457.90	
Maint. of Other Power Generation	107,325.50	
Total Power Generation Expense		\$ 148,278.48
Power Supply Expenses:		
Electric Energy Purchased	9,405,889.23	
Misc. Purchased Power Expense	3,099,922.55	
Total Power Supply Expenses		12,505,811.78
Distribution Expenses:		
Information Systems	73,630.51	
Station Expense - Labor & Other	20,305.15	
Station Expense - Heat & Electricity	70,080.27	
Street Lighting	21,681.28	
Meter Expense - Inspection, Testing, Resetting	108,078.61	
Customer Installation Expense	51,815.55	
Misc. Distribution Expense	143,920.68	
Maintenance of Structures	135,314.14	
Maintenance of Station Equipment	72,466.76	
Maint. of Overhead & Underground Lines	1,495,610.89	
Maintenance of Line Transformers	-	
Maintenance of Meters	54,906.77	
Total Distribution Expenses		2,247,810.61
Customer Account Expenses:		
Supervision of Customer Accounting	146,687.86	
Meter Reading - Labor & Expenses	51,815.44	
Customer Records & Collections	134,065.56	
Uncollectible Accounts	115,862.87	
Interest Paid on Consumer Deposits	11,195.59	
Total Customer Account Expenses		459,627.32
Advertising, Conservation, Energy Audits		357,269.31
Administrative & General Expenses:		
Administrative Salaries	218,538.67	
Office Supplies & Expenses	322,284.92	
Outside Services Employed	340,176.34	
Property Insurance	39,987.86	
Injuries & Damages	1,234.00	
Rents	2,145.00	
Employee's Pensions & Benefits	935,412.42	
Maintenance of General Plant	76,992.16	
Transportation	40,391.64	
Miscellaneous General Expense	55,115.46	
Total Administrative & Gen. Expenses		2,032,278.47
Total Operating & Maintenance Expenses		<u>\$ 17,751,075.97</u>

NOTE: Financials are calendar year based and subject to MMLD independent audit