

MUNICIPAL LIGHT DEPARTMENT

To the citizens of the Town of Marblehead:

The Marblehead Municipal Light Department is pleased to provide its 121st annual report and financial statements for the calendar year ending December 31, 2015.

The weather in the early months of 2015 provided the area with a parade of one hefty snow storm after another, leaving the Town buried in over six feet of snow. Even with all the snow, our system didn't encounter any prolonged outages. The continuous cold weather in 2015 put constraints on the gas pipelines into New England, forcing the running of oil-fired generation up to a premium cost. These factors, as in the past, drove up our purchased power costs for the months of January through March.

The summer of 2015 had only a few days over ninety degrees and we did not experience any prolonged heat waves. We set yearly demand peak for 2015 on July 20th with the demand of 27,405 KW. This was substantially below the previous record of 31,639 KW set in 2013. Total energy consumption for the year 2015 remained almost constant, decreasing from 105,357,501 kilowatt-hours in 2014 to 105,294,644 kilowatt-hours in 2015.

The end of 2015 brought another full year of energy production from our Berkshire Wind Power Project, exemplifying the success of public power in conjunction with renewable energy sources. This wind power project has once again exceeded expectations in the production of clean energy. The town's portion was 3,323,996 KWH of electricity. The Marblehead Municipal Light Department continues to look for renewable energy resources through its membership in the Massachusetts Municipal Wholesale Electric Company.

We did see an increase in local photovoltaic systems this year with seven new residential systems installed. Presently there are twenty two photovoltaic systems installed on buildings in Marblehead. The Light Department has already been contacted by two homeowners this year for the installation of photovoltaic systems on their buildings.

With greater than 50% of New England's electricity production from fossil fuels, and the largest share being natural gas, changes in the cost of fuels, either up or down, will impact the wholesale cost of electricity in the region. The low cost of natural gas of previous years has now led to congestion and availability problems on the pipelines into New England. Residential use takes priority during the coldest

months for heating, leaving little left for power plants. This has in turn has caused the need to run oil-fired generation more often in the winter months, which drives up power prices due to increased fuel costs.

This continuing pressure on natural gas delivery has required MMLD to run our diesel generators on occasion to support the power grid in the northeastern Massachusetts (or NEMA) zone, due to few generating stations in the area. It is usually during times of system stress, such as extended cold or hot weather spells, when our units are needed. The units are a proven resource for the town, reducing our power purchase costs, reducing overall costs, and supplying the town with emergency power if necessary.

Due to the importance of these generators to the town, we are currently performing upgrades to the system, allowing these units to run as clean, quiet, and efficiently as possible.

Although new sources of generation supply are required to meet the needs of our growing customer usage, we also recognize the importance of energy efficiency and demand side management programs within our community to try and reduce some of that growth requirement. Our programs provide various rebates when customers buy more energy efficient appliances, programmable thermostats and cool home rebates. Through this program, administered by MMWEC, our customers received a total of \$10,700.00 during 2015. For further information on the Light Department's energy and conservation programs please visit our website at www.marbleheadelectric.com or call 781-631-5600.

Marblehead Municipal Light Department's Advanced Metering System is continuing to prove itself as a valuable tool. During outages to our customers, we are notified through the Smart Meter System as to the location of the outage. This notification in turn allows for faster restoration by identifying the location of the failed electrical component. There are times when our electrical crews are already on the way to repair outages before our customers are even aware there is a problem. These types of smart systems are the future of the utility business.

As part of the light department's continuing 5-year budget and work-plan, work continued on several distribution projects in 2015.

- Work on the Ocean Avenue (Marblehead Neck) conductor upgrade project was completed in 2015.
- The installation of three voltage regulators on Ocean Avenue for the circuit that serves Marblehead Neck was completed in 2015.

- The installation of LED street lighting in the down town business area of Atlantic Avenue and Pleasant Street was completed in 2015. This will be a project continued in 2016.
- Work had begun on the Clifton Avenue conductor upgrade project by setting all new poles, and installing new hardware. Completion of this project should be in 2016.

In addition to our distribution and construction projects, we also continued the review and design process for the Commercial Street building, and completed a conceptual design of the facility in 2015. The department has retained Winter Street Architects of Salem to work with us to develop plans and go forward on this design. The original Commercial Street building was updated in 1969, adding the business offices to the generating facility. The building is in need of considerable work to bring it up to today's building code requirements. Originally constructed in 1894, it has served MMLD well and we plan to continue that service well into the future, with thoughtful design and respect for the past. There are few options in a town so fully developed, so relocating or new construction were both quickly ruled out as options. Construction will begin in 2016.

Net surplus revenue that was returned to the Town to reduce the tax levy in 2015 was \$330,000, part of the thirteen-year cumulative amount through 2015, totaling \$5,010,000.

Appreciation is tendered to the Board of Selectmen, Town Officials, Department Heads, and to all Town employees for their continued support, cooperation, and contributions.

Respectfully Submitted,

Andrew F. Hadden, General Manager
Michael A. Hull, Chairman
Walter E. Homan, Commissioner
Michael A. Tumulty, Commissioner
Joseph T. Kowalik, Commissioner
Michael J. Maccario, Commissioner