

MERRIMAC MUNICIPAL LIGHT DEPARTMENT



ANNUAL REPORT OF THE YEAR ENDING DECEMBER 31, 2015

The Board of Light Commissioners and General Manager are pleased to submit the Annual Report of the Merrimac Municipal Light Department (“MMLD” or “Department”) for the year 2015.

NEW SERVICES

During 2015 there were a total of 34 new electrical services added to the MMLD's electric distribution system. The total number of electric meters in service at year's end was 2,883.

SYSTEM RELIABILITY

The MMLD is committed to providing the best electric service to the Town of Merrimac residents. The MMLD strives to provide safe and reliable power by continuing capital improvements of the system, in turn, reducing the major industry accepted indexes used to track the reliability of electric systems.

The early months of 2015 brought very inclement weather to the region. This weather caused a number of power outages in a many towns and cities; however the MMLD system withstood those snow storms without any major trouble, allowing residents and businesses to have uninterrupted electric service. During 2015, the MMLD's system experienced a total of 26 power outages, which affected a total of 866 customers. Quick response to these outages, by the MMLD's crews, resulted in 54% of the total number of customers interrupted being restored in less than 60 minutes, 45% restored between 61 and 120 minutes and only 1% restored in more 2 hours. Additionally, 69% of the total number of outages was caused by a combination of animal interference and weather related events. These two types of events are hard to prevent but the Department continues to work on ways to reduce the impact of them.

The System Average Interruption Duration Index (SAIDI) measures the number of minutes, on average, a Merrimac customer is without power. The System Average Frequency Index (SAIFI) measures the average frequency of interruptions for a Merrimac customer. The Customer Average Interruption Duration Index (CAIDI) identifies the average length of time, in minutes, that a customer who is interrupted can expect that interruption to last. All the indexes results, for both the combination of equipment and non-equipment related outages are found in Table 1 below.

SAIDI	SAIFI	CAIDI	TOTAL NUMBER OF OUTAGES
20.31	0.304	67	26

Table 1

CAPITAL PROJECTS

During 2015, the Municipal Light Department worked on a number of capital projects focusing on improving the distribution system reliability, incremental replacement of equipment near the end of its useful life and safety related projects. In any electrical distribution system, targeting these projects will make a significant impact on the amount of damages that could be sustained in major weather events such as the 2011 Tropical Storm Irene and the well remembered October, 2011 Snow Storm. Both of these events caused significant damages to the electrical distribution infrastructure in many communities, but systems that were focused on on-going system improvements had less of an impact and were able to restore power much faster than other systems where this was not a priority.

Among some of the major capital projects the Department worked on during 2015 it is important to mention the following projects:

Town Square Project:

As part of the renovations for the Town Square, some of the electrical infrastructure around the Town Square had to be upgraded. The MMLD upgraded, from 4.16 kV to 13.8 kV, the primary infrastructure on West Main Street, Littles Ct, Fairfield Ave and Central Street and rearranged the electrical distribution around the plains area to energize part of Grove Street. New step-down transformers had to be installed as part of this upgrade and relocation of some poles on Church Street and School Street was also necessary. In addition to this, the MMLD installed a new section of underground wire by Church Street, and worked with contractors on the replacement of the old streetlights to LED ornamental lights. This project was a challenge considering the weather and schedule of the project. The Municipal Light Department was able to complete all its work in a timely fashion which allowed other contractors, working for the Massachusetts Department of Transportation's ("MassDOT"), to complete their work without any major impact to the project's schedule.

Porcelain Cutout Replacement Project:

The MMLD's distribution system had about 87 porcelain cutouts still in service by the end of 2014. Those cutouts, over time, could crack and break and cause unnecessary outages to customers. As part of an ongoing replacement plan the MMLD, during 2015, replaced about 25 of those porcelain cutouts with polymer cutouts which are more reliable.

Transformer Cutout Installation Project:

In the MMLD's distribution system there were about 179 transformers without a cutout by the end of 2014. This situation, likely to be a result of cost savings back years ago, has proven to have a big impact on reliability and the number of customers affected during some outages. Entire areas and even feeders could go without power as a result of a problem involving a single distribution transformer. Additionally, distribution transformers could be significantly overloaded resulting in reduced lifespan for those units. Individual equipment protection is normal in electrical distribution systems and in order to reduce unnecessary widespread outages the MMLD has an ongoing installation program with about 25 cutouts installed during 2015. As mentioned, this project will help to reduce the number of customers interrupted during some of the outages in the system.

New Developments:

Besides the regular day to day maintenance, response to outages and new service installations, the MMLD, during 2015, installed the underground electrical infrastructure for two major residential developments in Town. One of them was Freedom Way, on West Main Street, and the other was Poplar Hill, on Middle Road. The MMLD worked with the developers on the design and timely installation of the infrastructure needed to provide power to those two sites.

POWER SUPPLY

The MMLD continues to work with Energy New England, who manages the MMLD's energy portfolio, to ensure energy contracts are in place to cover the Town's energy needs for future years. This is a difficult task especially because of the congested energy load zone that the Town of Merrimac is part of. Power congestion in the Northeast Massachusetts ("NEMA") and old power plants coming offline have been driving transmission and capacity costs up. This is a problem that is affecting both the municipal and Investor-owned electric utilities in this region and it will be getting worse before it gets better. As a result, electric rates have started to go up in many communities. For the Municipal Light Department, capacity expenses will go from \$478,974, in 2015, to \$959,146 in 2017 and \$1,046,651 in 2018. Transmission expenses will go from \$610,468, in 2015, to \$834,183 in 2017 and \$886,597 in 2018. During 2015, the Department secured 50% of the energy to be purchased from 2018 through 2020 at a very low rate which will help in the Department's goal of maintaining electric rates stable for the Town. Power expenses constitutes close to 80% of the Municipal Light Department's Operating Expenses; however out of the three components of power expenses (Energy, Capacity and Transmission) Energy is only half of the overall power expenses or 40% of the Operating Expenses.

Due to the expected increases in power costs the Department implemented a Rate Adjustment during the second half of 2015. This adjustment had an average impact of about 8% increase on electric bills.

The Department has been able to have a good portion of renewable energy in its energy portfolio, which includes the local 1.5 MW solar farm installation, hydro power from the Miller Hydro plant, and wind power from the Spruce Mountain and Saddleback Ridge projects.

CREDIT PROFILE

In order for the Municipal Light Department to secure good power contracts it needs to have a good credit rating assigned by an independent institution. In 2015, Standard & Poor's Ratings Services performed an analysis of the Municipal Light Department and assigned an "A/Stable" credit rating based on business practices and outlook.

CONTRIBUTIONS TO THE TOWN

Based on preliminary results of year 2015, and upon approval by the Municipal Light Board of Commissioners, Department will be providing the Town with the following contributions for Payment in Lieu of Taxes:

Cash Payment:	\$10,000.00
Unbilled Streetlight Usage:	<u>\$23,493.88</u>
Total PILOT Payment	\$33,493.88

OTHER CONTRIBUTIONS TO THE TOWN

The Municipal Light Department, different than other communities with Light departments, offers a reduced electric rate for all of the municipal buildings in Town. Those include the schools, water and sewer plants, and all the other buildings used by the Town departments. Annually, this is a savings close to \$58,000. In addition, the MMLD contributes \$3,000 annually for the Code Red System in Town.

COMMUNITY

The Merrimac Municipal Light Department is a Public Utility, which means it is owned by its rate payers and not by a board of directors like the investor owned utilities. This means that when people call or come into the office they get to talk to a person, someone who will help them with questions that they may have about billing or electric services. The Municipal Light Department is here to serve the community.

During 2015, the MMLD conducted an electrical safety program at the Helen R. Donaghue School. This program, conducted by our Public Safety Coordinator consultant, has the objective of teaching the young population in our community about the possible electric hazards at home or outside and how to stay safe and make others safe when dangerous electrical situations are encountered. Although there is an expense associated with obtaining the services of the Public Safety Coordinator consultant, the Municipal Light Department and its Board of Commissioners believe that investing in the safety of the children of the community is a priority.

The MMLD continues to work in collaboration with other Town departments, assisting them with the use of some of our equipment, trucks and electrical expertise which saves on expenses for those departments.

In December of 2015, the MMLD assisted the Santa Committee hanging reefs at the Town Hall building and strung the lights for the annual Christmas lighting event at the Kimball Park, which has become a family tradition well enjoyed and attended by hundreds in the community.

GENERAL MANAGER, STAFF AND COMMISSIONERS

Both the MMLD's staff and Commissioners continue to be dedicated to having a municipal light department that provides safe and reliable electricity to the Town while managing to maintain rates stable in an energy market where costs are continually changing.

During 2015, one of the Department's office clerks retired after 15 years of full time service; however the position was not filled because the Town had plans to take over the Water billing which was

being done by the Municipal Light Department. The transition was made successfully and now the MMLD only does business related to the electric customers.

In 2015, the MMLD had a Commissioner's seat open which was filled by Paula Hamel, from Hadley Road, who joined the Board and provided an immediate contribution to the Department in various areas, but most notably in Union Negotiations. In collaboration with Commissioner Larry Fisher and the General Manager, Paula helped reach an agreement between the Department and the Union employees.

The MMLD's General Manager, Francisco A. Frias, together with the staff and under the direction of the Municipal Light Board, continues to work towards making the following Mission Statement a reality in every aspect of the Department's operations.

MMLD MISSION STATEMENT

“The Merrimac Municipal Light Department (“MMLD”) exists to provide its owner, the Town of Merrimac’s ratepayers, safe and reliable electricity at a reasonable and competitive rate that sustains the healthy operations of the department, and the maintenance, expansion and modernization of the electrical distribution system. This mission will be accomplished by a staff of responsible, dedicated and customer-oriented employees with superior work ethics, skills and professionalism.”

Respectfully submitted,

Francisco A. Frias, General Manager

Board of Light Commissioners

Norman Denault

Term Expires 2017

Larry Fisher

Term Expires 2016

Paula Hamel

Term Expires 2016