

MERRIMAC MUNICIPAL LIGHT DEPARTMENT



ANNUAL REPORT OF THE YEAR ENDING DECEMBER 31, 2018

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 2018.

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.”

NEW SERVICES

During 2018, there were a total of 8 new electrical services added to the MMLD's electric distribution system. The total number of electric meters in service at year's end was 2,929.

SYSTEM RELIABILITY

The MMLD is committed to providing the best electricity service to the Town of Merrimac residents. It also 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.

During 2018, the MMLD’s system experienced a total of 26 power outages, which affected a total of 3,717 customers. The year had a lot of weather events, including a few major storms during the month of March. Those storms, combined with a lot of days with strong wind, made 2018 the most distribution system damaging year in the last six years. Weather, trees and animal-related issues accounted for 77% of the total number of outages during the year. These types of events are hard to prevent, but the Department continues to work on tree trimming and other ways to reduce their impact.

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
223.6	1.263	177	26

Table 1

CAPITAL PROJECTS

During 2018, the Municipal Light Department worked on a number of customer-owned projects and on multiple capital projects that focused on improving the distribution system reliability, incremental replacement of equipment near the end of its useful life and safety-related projects. In an electrical distribution system, targeting these projects will reduce the number of issues that could be sustained in major weather events such as those events we have experienced in past years. Storms can cause significant damages to the electrical distribution infrastructure, but systems that focus on on-going system improvements have less of an impact and are able to restore power much faster than other systems where this is not a priority.

The following are some of the customer-owned and capital projects the Department worked on during 2018:

Regency Apartments

The underground distribution system was installed for this apartment complex which is expected to have a total of about 96 residential units when two equally sized buildings are completely built. Three-phase underground cable, transformers, and streetlights were installed to supply power to this development and provisions were made for future electrical infrastructure at the site.

Public Streetlights Retrofit Project

The Municipal Light Department was able to get a grant from the Department of Energy Resources (DOER) for the replacement of High-Pressure Sodium (HPS) streetlights in 2017. Almost 400 streetlights were replaced with Light-Emitting-Diode (LED) fixtures throughout the town. These lights use less energy, last longer, and provide better lighting at night.

River Road (Locust to Broad St.) Area Conversion

This project consists of the upgrade and conversion of the electrical infrastructure from the corner of Locust Street to the Broad Street intersection. Some of the poles, part of the electrical infrastructure, are old and a large section of secondary cable needs to be updated to triplex secondary. The existing primary wire is already rated for 13.8 kV, which will make the job much easier. New poles and transformers were replaced in 2018 and the project will be completed by the spring of 2019.

Porcelain Cutout Replacement

During 2018, the MMLD's staff finished replacing the remaining known porcelain cutouts in service. These cutouts had the potential of cracking and cause unnecessary outages to customers; therefore it was important to remove them from service.

Transformer Cutout Installation

In the MMLD's distribution system, there are still transformers without a distribution cutout. This situation has proven to have a big impact on reliability. Large areas could go without power as a result of a problem involving a single distribution transformer in a distribution feeder. 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 continued to work on the installation of cutouts for transformers that are part of feeders 3 and 4. Since feeder 2 will be completely upgraded in future years, the upgrade will involve installing cutouts for each distribution transformer at the time of the upgrade.

OTHER PROJECTS

City of Haverhill Streetlight Maintenance

During 2018, the Municipal Light Department was able to sign a Time and Material Agreement with the City of Haverhill for the maintenance of the streetlights they purchased from National Grid. This agreement has been very beneficial for the Department since, by sending guys to do streetlight maintenance in Haverhill during specific periods convenient to the Department, a profit is made. This profit has helped to reduce the expenses of the Department.

POWER SUPPLY

The MMLD continues to work with Energy New England ("ENE"), 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 challenging task especially because of the congested energy load-zone that the Town of Merrimac is part of. Power congestion in 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. In the 2017 Town report, it was indicated that power supply expenses were going to be substantially higher in 2018 with a slight relief in 2019. For 2018, the Department expended \$3,589,630 in power supply expenses. That was a \$328,673 increase from what the Department paid in 2017 and \$762,376

from what was paid in 2016. The goal of the Department has been to maintain electric rates stable and affordable for all of our customers, even during the turbulent times in the Capacity and Transmission market.

In late 2017, the MMLD partnered with Tangent Generation Resources LLC, for the installation of a 1.4 MW peak shaving generator next to our facility on Federal Way. This installation came online in early 2018, and it helped to reduce the purchase power expenses for 2018. The Department had no out-of-pocket expenses related to this project, as Tangent makes it profit from the deferred energy, transmission and capacity costs that the Department would otherwise pay to ISO-New England.

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, hydropower from the Brown Bear II Hydro Plant, and wind power from the Canton Mountain, 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 2018, Standard & Poor's Ratings Services maintained the Municipal Light Department "A/Stable" credit rating based on business practices and outlook.

CONTRIBUTIONS TO THE TOWN

Based on results from 2018, and as approved by the Municipal Light Board of Commissioners, the MMLD will be providing the Town with a **\$10,000** cash payment for Payment in Lieu of Taxes. In addition to this cash payment, the MMLD had **\$6,242.98** of unbilled streetlight usage that was absorbed by the Department. The conversion of the public streetlights to LED streetlights cost the Light Department about **\$58,256**, after a \$28,952 grant, received from the Department of Energy Resources (DOER). As a result of this project, the public streetlights energy usage went down almost 75%. The completion of this project also contributed to the Town recently obtaining the Green Community designation from the DOER, which will open the door to many grants from the DOER in the future.

As indicated in past reports, the MMLD has a reduced public streetlight rate of \$0.103/kWh; however, per the Department of Public Utilities, this rate should be more close to \$0.1783/kWh. This would make the Unbilled Streetlight Usage **\$10,811.83** for 2018.

The Municipal Light Department offers a reduced electric rate for all of the municipal buildings in Town. Those buildings include the schools, water and sewer plants, and all the other buildings used by the multiple Town departments. This reduced rate for municipal buildings resulted in savings close to **\$58,329** for the Town. The MMLD continues to contribute **\$3,000** annually for the Town's Code Red System which is a great asset to the Town.

COMMUNITY

The Municipal Light Department is a public utility, which means that it is owned by its ratepayers and not by a board of directors like the investor-owned utilities (IOUs). One of the great advantages of a local municipal light department is 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. Most of the time, if you are being served by IOUs, it is difficult to speak with someone to answer questions. The Municipal Light Department is here to serve the community.

During 2018, the MMLD conducted an indoor electrical safety presentation at the Helen R. Donaghue School. This program was conducted by the MMLD's Public Safety Coordinator consultant and electrical safety materials were given to the children. The objective of this program is to teach the young population in our community about the potential electrical hazards at home or outside, how to stay safe and how to keep others safe when dangerous electrical situations are encountered. 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 Department also attended other community events organized by other town departments where equipment, tools, and trucks were shown to the attendants. At the office, we also had a lot of materials for kids and parents regarding electrical safety and energy conservation tips.

The Year 2018 was a challenging year and one that demonstrated how important it is for all Town departments to work together. Major storms passed through the area and for the March 8th storm, the entire Town was out of power for 36 hours straight. The MMLD worked in great collaboration with the Police, Fire and Highway departments, in helping the community to stay informed and deal with all the safety hazards during those very few difficult days.

The MMLD celebrated Public Power Week during the first full week in October. During that week, the Department gave away a lot of items to the public in celebration of being a non-profit, community-owned utility.

In December of 2018, the MMLD assisted the Santa Committee hanging wreaths at the Town Hall building and strung the lights for the annual Christmas Tree Lighting event at Kimball Park, which has become a family tradition well enjoyed and attended by hundreds in the community.

In an effort to promote energy conservation, the Municipal Light Department continued making available the Appliance Rebate Program and the free Residential Energy Audit program for the community. During 2018, the MMLD expended \$2,870 in appliance rebates and \$5,880 in the Residential Energy Audit program. The Appliance Rebate Program allows residential customers to obtain a rebate for qualified energy-efficient appliances, while the Residential Energy Audit program allows them to have an energy expert visit their homes to conduct an energy audit and find ways to reduce energy consumption.

Before the end of 2018, the Municipal Light Department opted to be part of a solar rebate program with the DOER. The program allocates a fund made up by a contribution of the Light Department which is then matched by the DOER. This fund will be used to provide rebates to residential customers looking to install solar arrays at their homes. Details of the program will be finalized before the spring of 2019, with the expectation to launch the program early in the year.

GENERAL MANAGER, STAFF AND COMMISSIONERS

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

In 2018, after 26 years of full-time service, Julie Hart, the MMLD's Office Manager, retired. Julie was in charge of running the office and she did an outstanding job at it. Prior to her retirement, the Department hired a new Office Clerk, Renee Ward, and preparations were made to have the Senior Clerk, Tara Aniello, take over the responsibility of Office Manager. Both Tara and Renee have been doing a great job running the office and moving the MMLD forward.

In 2018, the Department had a major reorganization in Line Operations. This reorganization resulted in the creation of two new positions. The Line Superintendent and the Crewleader positions were created and filled with existing employees. The Line Superintendent position, a management position, was given to Ken Buzzell, who previously was the Working Foreman, and the Crewleader position, a union position, was given to Scott Saunders, the senior 1st Class lineman in the department. No additional employees were added and the position of Working Foreman was eliminated.

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

Respectfully submitted,

Francisco A. Frias, General Manager

Board of Light Commissioners

Norman Denault	Term Expires 2020
Larry Fisher	Term Expires 2019
Paula Hamel	Term Expires 2021