

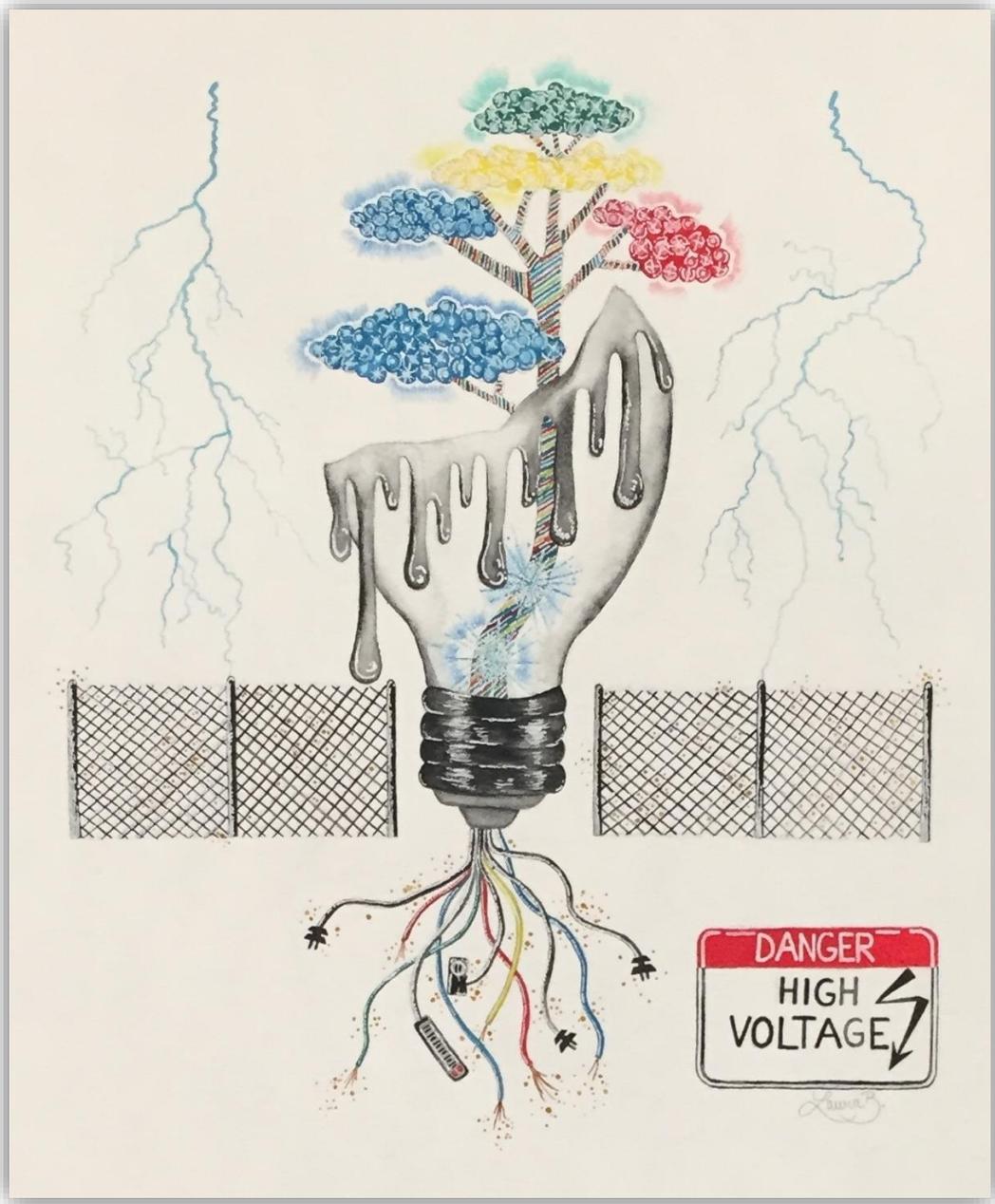
RMLD



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

ANNUAL REPORT FY 2017

STRATEGIC VISION



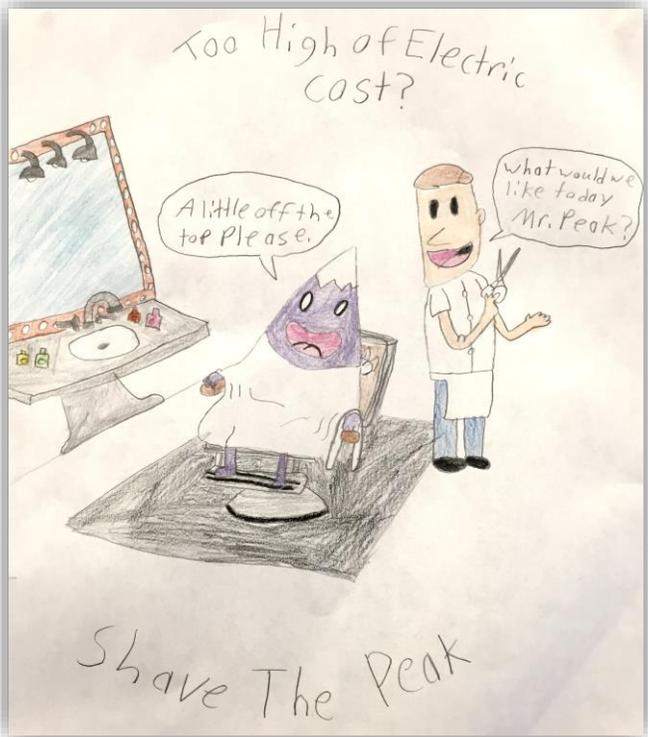
RMLD HIGH SCHOOL STUDENT ART CONTEST - 1ST PLACE WINNER
"ELECTRICITREE" BY LAURA BUSCEMI, NORTH READING HIGH SCHOOL



RMLD High School Student Art Contest – 2nd Place Winner
 “Shred the What?” by Megan Coram, Reading Memorial High School



RMLD High School Student Art Contest – 3rd Place Winner
 “Public Power” by Sophia Bonaccorsi, Wilmington High School

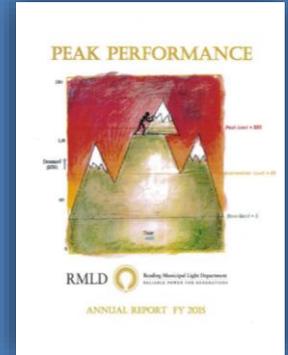


RMLD High School Student Art Contest – 4th Place Winner
 “Shave The Peak” by Patrick Aucella, Reading Memorial High School

**Prior Annual Report Covers
 Highlight RMLD’s Strategic Focus**



FY 2014 Annual Report Cover



FY 2015 Annual Report Cover



FY 2016 Annual Report Cover

To our customers,

Reading Municipal Light Department (RMLD) is committed to developing strategic visions within each of its divisions. Visions look beyond short-term plans and aim at predictive analysis to help navigate through areas of volatility projected for the future. Much change has and will continue to impact the electric industry in talent management, succession and the millennial generational transition; energy, capacity and transmission market pricing fluctuations; renewable and sustainable energy production; exponential technology development; etc. Risk management is key.



The RMLD is working to ensure that the short and long-term plans are strategically designed and continuously reviewed to meet the challenges of the present and future. We have successfully transitioned to proactive cyclic maintenance scheduling, providing a solid basis to our planning efforts. To reiterate our objectives, a quality electric utility must have the ability to be proactive in all disciplines of planning, including system function and operation. It must integrate its proactive measures to react efficiently by utilizing planned reaction procedures for unforeseen events such as weather and power market volatility. Working strategically ensures that the utility remains aligned with the path to success.

Ensuring that there is sufficient generation and transmitting facilities into and around the Boston NEMA Zone is an ongoing effort of the ISO New England (NE) grid operators. NE capacity deficiencies have resulted in recent cost escalations. The RMLD's focus on peak reduction remains a critical factor in offsetting these costs. A major RMLD accomplishment was the installation of a new 2.5MW gas generator at Substation 3. Commissioned on-line this past summer, the new generator is dispatched for operation during peak hours.

RMLD also advanced its peak reduction efforts through public education. RMLD's *Shred the Peak* campaign was a main driver in this year's Elementary School Student Art Contest as well as its first annual High School Student Art Contest. Over the past summer, more than fifteen high school students took time out from their summer break to meet at RMLD for an educational session. This year's annual report cover dons the first-place high school winner. Second, third, and fourth place winners are featured on page 2. We at the RMLD are extremely proud of all the students in both the elementary and high schools for their time, effort, and participation. We truly appreciate their support in promoting the value of conservation, especially during peak demand times when the price of electricity is at its highest, and when most of the more inefficient and environmental impacting generators are called into action.

The RMLD is pleased to have achieved 100% subscription to its first *Solar Choice* community solar project at 326 Ballardvale Street in Wilmington, which is now operational. This type of project allows the community to invest in the benefits of renewable energy. Generation, such as community solar projects, reduce RMLD's peak demand when located within the RMLD service territory and lessen the costs associated with capacity requirements. The RMLD is currently accepting enrollments for its second *Solar Choice* project at 40-50 Fordham Road in Wilmington, which is anticipated to be complete by the end of the 2018 fiscal year. The RMLD continues to work in concert with our service towns and private commercial businesses to provide more community solar benefits to our customers within the parameters of proper physical electric system balancing and safety.

The RMLD moves forward with a strong STRATEGIC VISION. Join us as we work to get MORE green, go MORE paperless, be MORE efficient, and SHRED MORE PEAKS.

Sincerely,

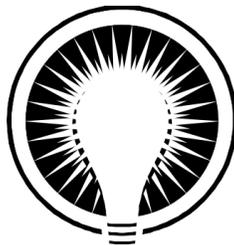
A handwritten signature in black ink that reads "Coleen O'Brien". The signature is written in a cursive, flowing style.

Coleen O'Brien
General Manager



Founded in 1894, Reading Municipal Light Department (RMLD) is a municipal electric utility serving Reading, North Reading, Wilmington, and Lynnfield Center. RMLD is the second largest of 42 Massachusetts Municipal Light Plants and is not-for-profit, locally owned and locally controlled.

A Board of Light Commissioners elected by Reading voters governs the utility. A Citizens' Advisory Board, appointed by the four communities we serve, makes recommendations to the Board of Commissioners.



RMLD Board of Commissioners



Philip Pacino
Chair



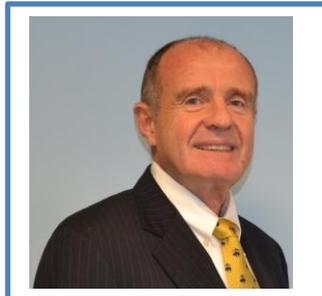
David Hennessy
Vice Chair



David Talbot
Commissioner

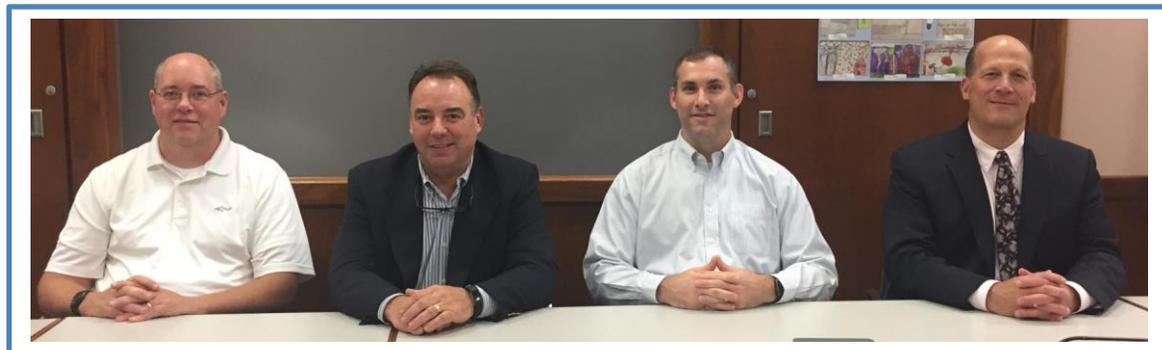


John Stempeck
Commissioner



Thomas O'Rourke
Commissioner

RMLD Citizens' Advisory Board



George Hooper, Chair – Wilmington (Middle Left)

Jason Small, Vice Chair – North Reading (Middle Right)

Dennis P. Kelley, Secretary – Wilmington (Left)

Neil Cohen – Reading (Right)

Mark Chrisos – North Reading (Through December 2016, not pictured)

David Nelson – Lynnfield (Through December 2016, not pictured)

STRATEGIC VISION FOR THE FUTURE

RMLD not only delivers electricity to our customers, but also provides information, support, and incentive programs related to energy awareness, electrical safety, and electrical efficiency. These valuable customer service resources help to keep overall costs down. Our employees are working to ensure that the short and long-term plans are strategically designed and continuously reviewed to meet the challenges of the present and future.

In FY 2017, RMLD continued strategic initiatives to improve overall electric system performance and increase organizational efficiency, system capacity, and productivity. This was accomplished through commencing the implementation of a technology roadmap, the Reliability and Organizational Study Recommendations, a defined Asset Management Strategy (comprehensive ten-point infrastructure maintenance plan), and a peak reduction portfolio. The RMLD combines energy services, the purchase of power, and the management and marketing of efficiency programs, thereby allowing the RMLD to target peak reductions to help keep rates stable.

Electric demand (kW or MW) is a measure of the amount of energy used during a specific time period. The amount of energy used is based on the number and size of the electrical equipment being run. Reducing energy during peak demand results in a decrease in capacity, transmission, and energy costs. RMLD incentives for peak reduction are the basis for our rebate structure, Demand Response, and the Peak Demand Reduction (PDR) programs. Reducing peak demand lowers cost, as does our Time-of-Use (TOU) rate.

RMLD is embracing advanced technologies through the utilization of Smart Grid technology within its electric system as well as rebates on electric vehicle charging stations, wireless thermostats, etc. Tackling the challenges on the distribution and generation side, the RMLD has added technologies such as a gas peaking unit and community solar power into our portfolio as a means of diversity and peak reduction. We have also applied for grants to test the efficacy of battery storage technology in future peak reduction efforts.

The key to making each of these improvements, programs, and incentives successful is communication; internally and externally. The *Get Greener, Go Paperless, Be Efficient* campaign is addressed in every aspect of the business. Our newsletter *In Brief* is now digital – customers can read it on our website or receive it via email.

Our Twitter feed and smart phone application provide important information to our customers. This Annual Report was designed and written in-house and is 100% paperless.

Efficient means of communications change rapidly in the world today. Establishing and maintaining a consistent two-way communication path is often challenging. Adaptation is key as more and more people are discontinuing their landline phones and instead turning to the internet to get their information. RMLD continues its effort to keep contact information up-to-date by maintaining and building our database of customer phone numbers and email addresses. Having the means to reach every one of our customers through paperless communication will lend itself to success by sharing knowledge, program updates, and electric system status, as well as receiving customer feedback. Please call us to ensure we have your latest information. Texting updates are forthcoming as part of our strategic technology roadmap.



FY 2017 Statistics

System peak demand	163,134 kW occurring on August 12, 2016, at 4:00 pm. This was 5.4% lower than the highest peak demand of 172,493 kW set in August 2006.
Retail sales	675,536,970 kWh
Customer calls for service	1,630
Pole installations	117
Meter replacements	553
DigSafe calls	3,734
New services	Reading – 49 residential; 13 commercial/industrial North Reading – 20 residential; 6 commercial/industrial Lynnfield – 2 residential; 3 commercial/industrial Wilmington – 24 residential; 8 commercial/industrial TOTAL: 95 new residential services represent a decrease from these services in FY 2016 30 new commercial/industrial services represent a decrease from these services in FY 2016

FY 2017 HIGHLIGHTS

RMLD continues to advance its programs and initiatives to improve overall electric system performance and increase organizational efficiency and productivity. Highlights from FY 2017 include:

- Achieved clean audit with no management letter;
- Installed 2.5MW natural gas powered distributed generator in North Reading to Shred the Peak;
- Achieved 100% subscription to the *Solar Choice* Program's first community solar project located at 326 Ballardvale, Wilmington (1 MW), and began accepting enrollments for the program's second project located at 40-50 Fordham Road, Wilmington (1.67 MW);
- Completed Tri-annual Cost of Service Study;
- Expanded Shred the Peak Educational Campaign;
- Held first annual High School Student Art Contest;
- Continued implementation of Organization and Reliability Study; and
- Updated efficiency programs and rebates including new customer rebate portal for online submissions.

Staff's FY 2017 accomplishments are detailed on the following (paperless) pages.

BUSINESS/FINANCIAL AND INFORMATION TECHNOLOGY

- Successfully completed management transition;
- Budget prepared and Capital and Expense presented (six-year projections);
- Performed annual audit and received no management letter;
- Established rate strategy to stabilize cross-rate subsidization;
- Monthly financial meetings;
- Completed a successful IT assessment and began implementing recommendations;
- Completed a successful Billing assessment and began implementing recommendations;
- Hired Senior Accountant and Staff Accountant;
- Successfully trained accounting staff to provide succession with payroll procedures, processes and reporting;
- Revised and documented all daily accounting processes and procedures;
- Fully automated the financial statements, budgeted financial statements, and budget to actual financial statements;
- Re-built entire RMLD network backbone;
- Created high speed (75Mbps) wireless environment;
- Replaced antiquated phone system with Avaya VoIP Phone System;
- Assisted in the deployment of the new Yukon Mesh Network Meter Reading System;
- Transitioning to cloud based systems;
- Created and refined RMLD's backup and disaster recovery processes; and
- Migrated to Microsoft Azure (the cloud), thereby eliminating a point of failure for Office365 authentication.

EFFICIENCY MEASURES

- Provided quarterly updates for \$250,000 LED grant from Department of Energy (DOE); split between streetlights in all four towns and LED rebates for commercial and residential customers;
- Continued LED street light retrofit installation, installing over 2,700 LED street lights on time and under budget in four communities;
- Sprypoint work order management system designed and in pilot phase with stock sheet time management process developed; This paperless system provides automation relief; and
- Continued updates of residential and commercial rebate and incentive programs.

SYSTEM RELIABILITY

- Installed 2.5 MW Distributed Generator at Substation 3 to be utilized during peak hours to offset the cost of premium energy prices;
- Commenced negotiations for land to build new substation in Wilmington to replace Substation 5;
- Continued installation of “500 Club” Advanced Metering Infrastructure (AMI) meters and expansion of AMI mesh network;
- Completed function tests of AMI mesh network overlay to fixed network system;
- Implementing long-term roadmap for distribution automation roadmap;
- Implemented FY 2017 grid optimization commitments including Scada-Mate switches and Intellirupter switches;
- Continued hardware and software upgrades for Survalent SCADA system to enable system automation;
- Conducting quarterly meetings of the General Safety Committee and Electrical Safety Committee;
- Developed Safety Operational Procedures for Ground-to-Ground rubber gloves;
- Conducted safety inspections of jobs while in progress;
- Performed Load Flow Analysis locating voltage trouble areas in all four towns for installing Cap Banks and Voltage Regulators;
- Completely redesigned and improved underground facilities at various critical locations;
- Inspected and replaced over 600 secondary mains, services, and neutral connections system-wide;
- Replaced over 100 overhead and padmount transformers as part of an ongoing Transformer Replacement Program;
- Performed Protection and Coordination study for appropriate transformer and lateral tap fusing;
- Filed all NERC mandated compliance rules to ensure RMLD stays in compliance;
- Performed ISO mandated 5% voltage reduction and simulated load shed testing and reported results;
- Utilized double pole tracking software (NJUNS) with Verizon, Comcast and local fire departments;
- Completed GIS data collection;
- Continued implementation of comprehensive system maintenance programs:
 - Pole inspection/testing – 1,400 completed;
 - Manhole inspections;
 - Transformer Load Management (TLM) analysis and replacement scheduling;
 - Porcelain cutout replacement;
 - Asset management database for predictive and preventative maintenance;
 - Tree Trimming Program;
 - Vegetation Management Program;
 - Completed all baseline substation maintenance and infrared substation scans;
 - Performing quarterly inspection of distribution feeders; cyclical plan underway; and
 - Ongoing Service and Secondary Inspection Program.
- Updated configuration maintenance and functionality including upgrade of 27 relays, replacement of battery bank and monitoring system, SCADA programming, RTU programming, at Station 4 in Reading;
- Updated configuration and maintenance for improved functionality and operation including corrected bus transfer scheme, replaced all relays, and SCADA programming at Station 3;
- Completed reinsulating bus at Station 5;
- Implemented the System Protection and Coordination Study; and
- Maintained Reliability Indices (SAIDI, CAIDI, and SAIFI).

System Reliability Indices

Key industry standard metrics have been identified to enable the RMLD to measure and track system reliability.

SAIDI (System Average Interruption Duration Index) is defined as the average interruption duration (in minutes) for customers served by the utility system during a specific time period.

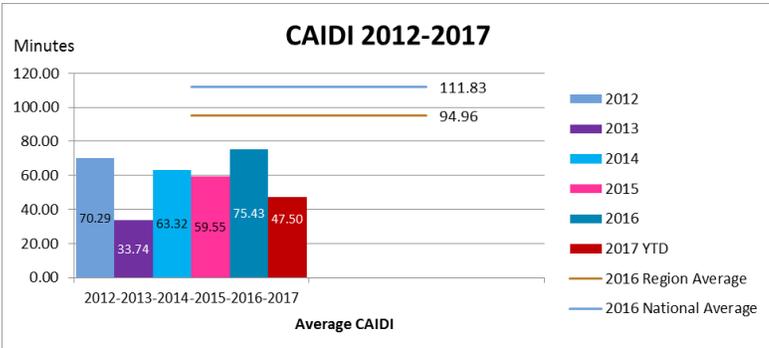
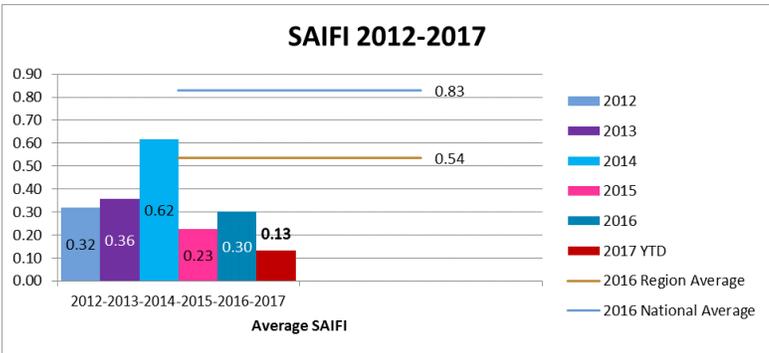
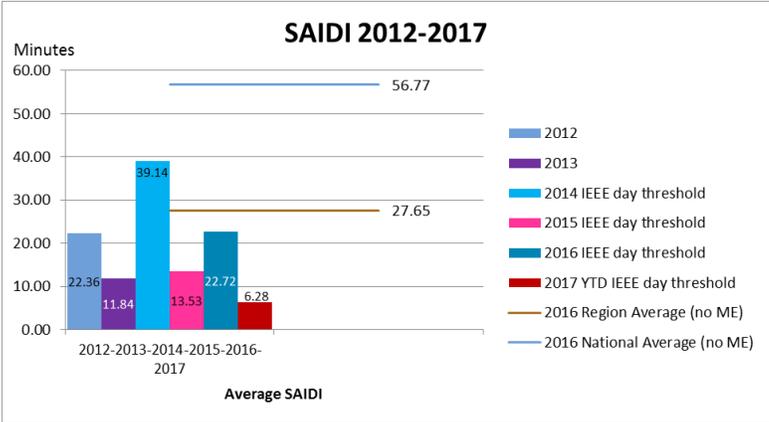
SAIDI = the sum of all customer interruption durations within the specified timeframe ÷ average number of customers served during that period.

SAIFI (System Average Interruption Frequency) is defined as the average number of instances a customer on the utility system will experience an interruption during a specific time period.

SAIFI = the total number of customer interruptions ÷ average number of customers served during that period.

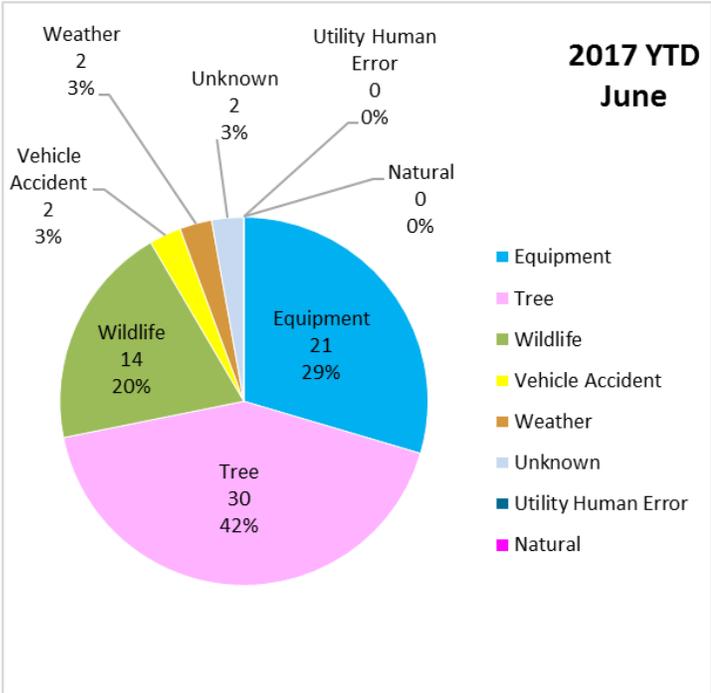
CAIDI (Customer Average Interruption Duration Index) is defined as the average duration (in minutes) of an interruption experienced by customers during a specific timeframe.

CAIDI = the sum of all customer interruption durations during that time period ÷ the number of customers that experienced one or more interruptions during that time period.

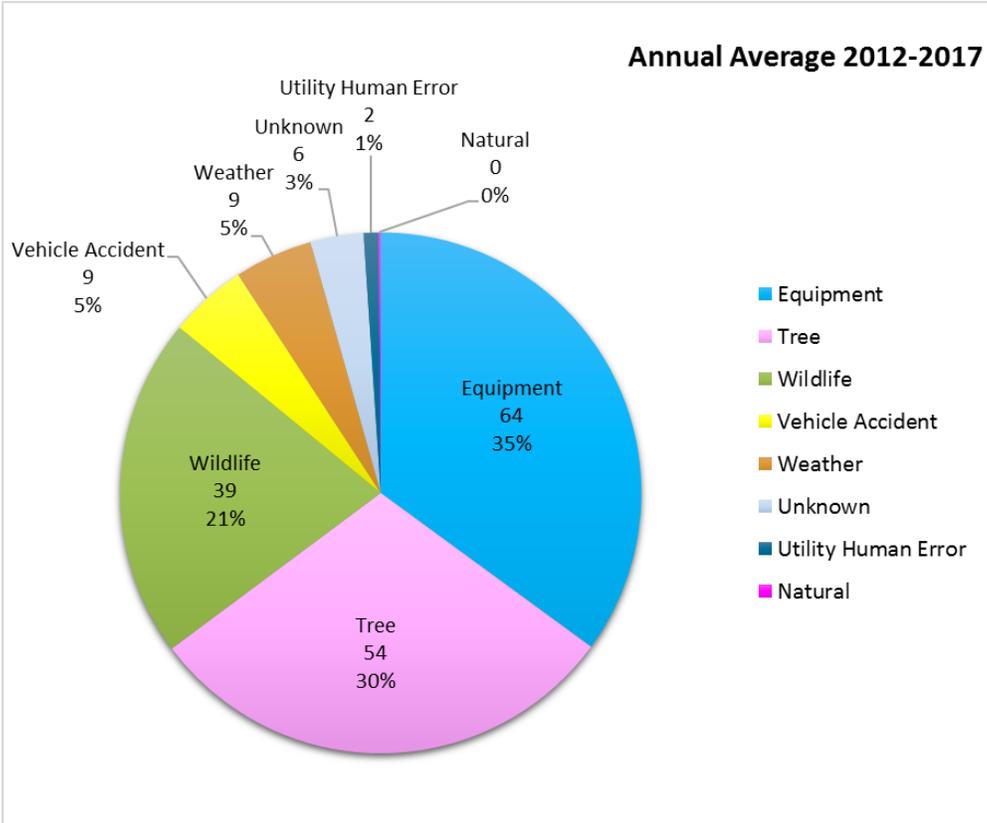


System Outages

Outage Causes Calendar YTD (from eReliability website)



Outage Cause	Count
Tree	30
Equipment	21
Wildlife	14
Unknown	2
Weather	2
Utility Human Error	0
Natural	0
Vehicle Accident	2
Total	71



LEADERSHIP

- Updated the comprehensive RMLD Service Requirements Handbook;
- Continued implementation of Organizational Study Recommendations (organizational assessment of structure, job descriptions, skill sets, career development plans, succession planning, and best utility business practices);
- Continued to delegate, monitor, mentor, and support the impact of culture changes resulting from transitioning the company from reactive to proactive;
- Continued the full policy review for legal compliance;
- Continued implementation of Reliability Study Recommendations; and
- Communicated effectively, frequently, and with transparency, to educate and inform the RMLD Board of Commissioners and the Citizens' Advisory Board (CAB), on the general information pertaining to the health and operations of RMLD, along with any issues relating to governance or unusual situations.

COMMUNICATIONS AND COMMUNITY RELATIONS

- INTERNAL
 - Continued development of intranet, Division Dashboards, SharePoint, Sprypoint, and Slack;
 - Increased regular senior staff meetings; and
 - Continued quarterly company meetings.
- EXTERNAL
 - Continued to evaluate and update Communications Roadmap;
 - Hired and trained a new Communications Manager;
 - Held first annual High School Student Art Contest to engage high school age students within the four communities; winners shown at beginning of report;
 - Wrote, filmed, produced and edited a new video for RMLD's Elementary Student Art Contest with a focus on Shred the Peak;
 - Held ribbon cutting ceremonies to commemorate the activation of RMLD's first Solar Choice project in Wilmington as well as RMLD's Distributed Generator at Station 4;
 - Continued Shred the Peak campaign, adding an opt-in component of which 1,600 customers participated;
 - Continued use and promotion of Twitter to communicate area outage information and Shred the Peak alerts;
 - Continued Get Greener, Go Paperless, Be Efficient public relations campaign;
 - Met with each town's safety officer to determine appropriate emergency response data for substation fires;
 - Met with Town Managers and Boards of Selectman bi-annually and provided presentation updates;
 - Worked to develop a strong communication effort between Town Selectmen, RMLD Board of Commissioners and CAB members;
 - Held 4th Annual Public Power Open House;
 - Continued working relationships with state and national utility associations;

- Communicated effectively with community and business interests in the four towns;
- Highlighted benefits of receiving electric service from RMLD in order to foster economic development to attract new customers and retain existing customers;
- Actively involved in industry changes at federal and state levels to mitigate impact. Issues included RGGI refund money, transmission and capacity increases, behind-the-fence generation and reconstitution;
- Established ENE lobbyist spokesperson from North Reading to support municipal agendas on The Hill; and
- Attended legislative rally in Washington D.C.

TALENT MANAGEMENT

- Completed Union Negotiations for all three units.
- Continued Phase II of updating department job descriptions;
- Working with Organization Study consultant to complete the restructuring of Business/Finance Utility Technology group through review/creation of job descriptions and Career Development Plans.
- Worked with RMLD software vendor to begin automation of some HR functions.
- Continued review and updating of RMLD HR policies.
- Completed the restructuring of Engineering group through new job descriptions, Career Development Plans and increased staffing;

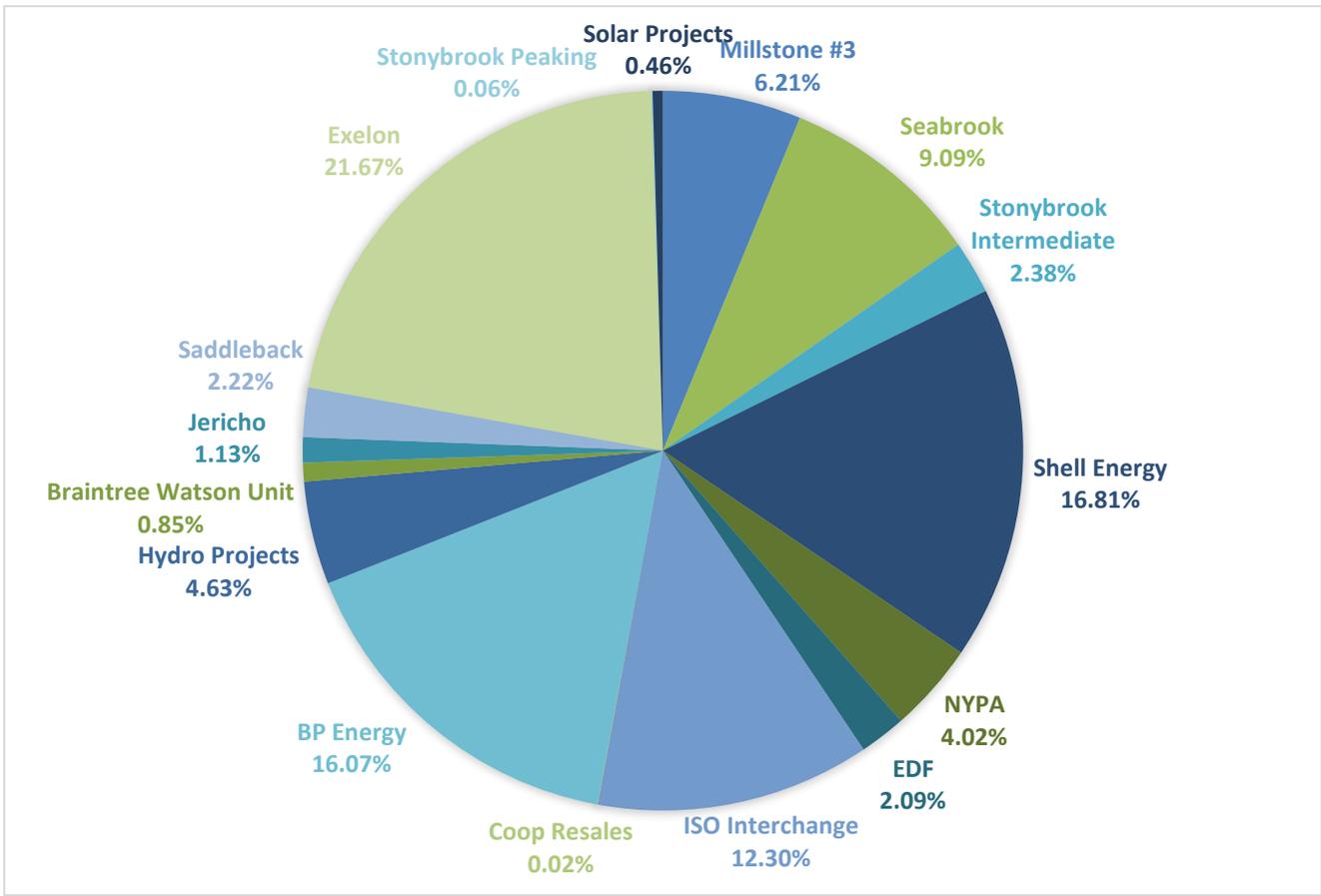
POWER SUPPLY/RATES AND CUSTOMER SERVICE

- Updated and filed new rates with Massachusetts DPU effective July 1, 2017;
- Completed Cost of Service Study and implemented recommendations to reduce subsidization across rate classes;
- Continued laddering and layering approach for power supply procurement strategy, including renewable projects;
- Commenced power supply strategic plan with Nextera to stabilize wholesale power supply costs and mitigate risk;
- Provided budget input projections for electricity line items to towns for appropriate transition to budget process;
- Continued Renewable Energy Credit (REC) sales;
- Attended ISO-NE's Participant Committee Meetings with State Regulators and ISO-NE Board members;
- Processed 35 energy and lighting commercial rebate projects, 1 commercial solar rebate, 22 residential solar rebates, 699 residential Energy Star appliance rebates, 255 residential home energy assessments, and 6 electric vehicle charger rebates;
- Used \$383,961 energy conservation fund dollars, resulting in 1,315,190 kWh, 584kW savings;
- Held National Drive Electric Week Ride and Drive event to promote understanding of electric vehicles and awareness of RMLD's electric vehicle charger rebate program;
- Continued growing and promoting Peak Demand Reduction (PDR) Program for our "500 Club" commercial, industrial, and municipal customers. Fifteen customers are enrolled in the PDR Program

with total load-shedding results in the range of 3 MW to 4 MW for FY 2017, resulting in approximately \$26,600 in customer capacity credits and ~\$14,400 in customer transmission credits;

- Submitted applications for state funded grants to test the efficacy of battery storage in peak reduction efforts;
- Coordinated efforts to work with some of our largest customers, to site DG assets at their facilities;
- Achieved full subscription for RMLD’s first completed *Solar Choice* community shared solar project located at 326 Ballardville Street, Wilmington, and began accepting enrollments for second Solar Choice project located at 40-50 Fordham Road, Wilmington;
- Actively participated in Towns’ economic development discussions;
- Attended several technical seminars on Energy Storage applications for the Utility Industry;
- Attended industry training on Interconnecting Distributed Generation;
- Acted as Keynote Speaker at NEPPA Public Utility Management Program;
- RMLD online store successful and growing;
- Implemented E-Tracker rebate automation program so that customers may submit rebate applications online;
- Developed new workflow process for credit and collections;
- Implemented new automated pay by phone procedure to add efficiency to Customer Service operations; and
- Hired and trained a new receptionist.

RMLD Energy by Resources



CONSTRUCTION

Construction throughout the system is performed to provide reliability enhancement, to connect new loads, or to address areas requiring upgrades. This work includes both overhead and underground cable installation, service installation and upgrades, installation and removal of poles, transfers of electrical equipment, and performing work related to Massachusetts Highway Projects (Force Accounts).

Reading:

Circuit Upgrades:

- Approximately 2,500 circuit feet of primary underground cable was replaced for the 4W9 feeder getaway project.

Pole Line Upgrades:

- Federal Street – replaced approximately 10 poles, 1,100 feet of primary cable and 1,200 feet of secondary cable.
- Main Street – transferred primary cable, secondary cable, and street lights to approximately 25 new poles.
- Glenmere Circle/Winslow Road – replaced poles and approximately 2,200 feet of primary cable and approximately 2,700 feet of secondary cable.

Commercial/Industrial/Residential:

Notable examples of new service additions or upgrades:

- Artis Senior Living – Main Street
- Reading Woods – South Street
- Pumping Stations – Batchelder Road and West Street

Wilmington:

Circuit Upgrades:

- Approximately 9,000 feet of underground primary cable was installed in the Lucaya Circle and Freeport Drive area.

Pole Line Upgrades:

- Installed three (3) new Scada-Mate switches – 4W7 and 4W23.
- Make-ready and framed 57 poles on Ballardvale Street for fiber installation.

Commercial/Industrial/Residential:

Notable examples of new service additions or upgrades:

- Yentile Farm Recreational Facility – Cross Street
- Capital Carpet and Flooring Specialists - 64 Industrial Way
- Keolis – 234 Ballardvale Street
- North Wilmington Estates – new underground subdivision
- McGrane Road - new underground subdivision

North Reading:

Circuit Upgrades:

- Approximately 1,600 feet of underground primary cable was installed on Judith Drive.
- Approximately 2,300 feet of underground primary cable was installed on Rust Lane and North Hill Drive.
- Approximately 4,000 feet of underground primary cable was installed in the Crestwood Road area.

Lynnfield Center:

Circuit Upgrades:

- Approximately 800 feet of primary cable was installed on Patrice Lane.
- Installed two (2) IntelliRupter Switches and one (1) Scada-Mate Switch.

Commercial/Industrial/Residential:

Notable examples of new service additions or upgrades:

- Parsons Avenue – new underground subdivision was built

**TOWN OF READING, MASSACHUSETTS
READING MUNICIPAL LIGHT DEPARTMENT**

Annual Financial Statements

For the Year Ended June 30, 2017

Reading Municipal Light Department

TABLE OF CONTENTS

	<u>PAGE</u>
INDEPENDENT AUDITORS' REPORT	1
MANAGEMENT'S DISCUSSION AND ANALYSIS	3
BASIC FINANCIAL STATEMENTS:	
Proprietary Fund:	
Statements of Net Position	7
Statements of Revenues, Expenses, and Changes in Net Position	8
Statements of Cash Flows	9
Fiduciary Funds:	
Statements of Fiduciary Net Position	10
Statements of Changes in Fiduciary Net Position	11
Notes to Financial Statements	12
REQUIRED SUPPLEMENTARY INFORMATION	
Pension:	
Schedule of Proportionate Share of the Net Pension Liability (GASB 68)	38
Schedule of Pension Contributions (GASB 68)	39
OPEB:	
Schedule of OPEB Funding Progress (GASB 45)	40
Schedule of Changes in Net OPEB Liability (GASB 74)	41
Schedule of Net OPEB Liability, Contributions, and Investment Returns (GASB 74)	42

INDEPENDENT AUDITORS' REPORT

To the Municipal Light Board
Town of Reading Municipal Light Department

Additional Offices:

Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and the aggregate remaining fund information of the Town of Reading Municipal Light Department ("the Department") (an enterprise fund of the Town of Reading, Massachusetts), as of and for the year ended June 30, 2017 and the related notes to the financial statements, which collectively comprise the Department's basic financial statements as listed in the Table of Contents.

Management's Responsibility for the Financial Statements

The Department's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies

used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate remaining fund information of the Town of Reading Municipal Light Department as of June 30, 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Summarized Comparative Information

We have previously audited the Department's fiscal year 2016 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated October 20, 2016. In our opinion, the summarized comparative information presented herein as of and for the fiscal year ended June 30, 2016 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the Pension and OPEB schedules appearing on pages 38 to 42 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with evidence sufficient to express an opinion or provide any assurance.

Melanson Heath

November 9, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS

Within this section of the Town of Reading Municipal Light Department's ("the Department") annual financial report, management provides a narrative discussion and analysis of the Department's financial activities for the year ended June 30, 2017. The Department's performance is discussed and analyzed within the context of the accompanying financial statements and disclosures following this section.

A. OVERVIEW OF THE FINANCIAL STATEMENTS

The basic financial statements include (1) the Proprietary Fund Statements of Net Position, (2) the Proprietary Fund Statements of Revenues, Expenses and Changes in Net Position, (3) the Proprietary Fund Statements of Cash Flows, (4) the Fiduciary Funds Statements of Fiduciary Net Position, (5) the Fiduciary Funds Statements of Changes in Fiduciary Net Position, and (6) Notes to Financial Statements.

Proprietary funds. Proprietary fund reporting focuses on the determination of operating income, changes in net position (or cost recovery), financial position, and cash flows. The proprietary fund category includes enterprise funds.

Enterprise funds are used to report activity for which a fee is charged to external users, and must be used when one of the following criteria are met: (1) activity is financed with debt that is secured solely by a pledge of the net revenues from fees and charges, (2) laws or regulations require the activity's costs of providing services be recovered with fees and charges, and (3) the pricing policies of the activity establish fees and charges designed to recover its costs, including capital costs such as depreciation or debt service. The primary focus on these criteria is on fees charged to external users.

Fiduciary funds. Fiduciary funds are used to account for resources held for the benefit of parties outside the government. Fiduciary funds are not reflected in the government-wide financial statements because the resources of those funds are not available to support the Department's own programs. The accounting used for fiduciary funds is much like that used for proprietary funds.

Notes to financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements.

Other information. In addition to the basic financial statements and accompanying notes, this report also presents certain required supplementary information which is required to be disclosed by accounting principles generally accepted in the United States of America.

B. FINANCIAL HIGHLIGHTS

The Proprietary Fund Statements of Net Position is designed to indicate our financial position at a specific point in time. At June 30, 2017, it shows our net worth of \$109,368,059 which comprises \$76,110,937 invested in capital assets, \$4,951,661 and \$5,683,014 restricted for depreciation fund and the pension trust, and \$22,622,447 unrestricted.

The Proprietary Fund Statements of Revenues, Expenses and Changes in Net Position summarize our operating results and reveal how much, if any, of a profit was earned for the year. As discussed in more detail below, our net profit for the year ended June 30, 2017 was \$4,472,650.

The Proprietary Fund Statements of Cash Flows provide information about cash receipts, cash payments, investing, and financing activities during the accounting period. A review of our Proprietary Fund Statements of Cash Flows indicates that cash receipts from operating activities adequately covered our operating expenses in fiscal year 2017.

The following is a summary of the Department's financial data for the current and prior fiscal years (in thousands).

Summary of Net Position

	<u>2017</u>	<u>2016</u>
Current assets	\$ 26,614	\$ 23,903
Noncurrent assets	105,466	101,001
Deferred outflows of resources	<u>4,135</u>	<u>4,838</u>
Total assets and deferred outflows of resources	<u>\$ 136,215</u>	<u>\$ 129,742</u>
Current liabilities	\$ 9,791	\$ 8,245
Noncurrent liabilities	16,341	15,719
Deferred inflows of resources	<u>715</u>	<u>883</u>
Total liabilities and deferred inflows of resources	26,847	24,847
Net position:		
Net investment in capital assets	76,111	72,202
Restricted for depreciation fund	4,952	4,495
Restricted for pension trust	5,683	5,610
Unrestricted	<u>22,622</u>	<u>22,588</u>
Total net position	<u>109,368</u>	<u>104,895</u>
Total liabilities and net position	<u>\$ 136,215</u>	<u>\$ 129,742</u>

Summary of Changes in Net Position

	<u>2017</u>	<u>2016</u>
Operating revenues	\$ 92,617	\$ 88,736
Operating expenses	<u>(87,128)</u>	<u>(84,200)</u>
Operating income	5,489	4,536
Non-operating revenues (expenses)	<u>(1,016)</u>	<u>(1,096)</u>
Change in net position	4,473	3,440
Beginning net position, as restated	<u>104,895</u>	<u>101,455</u>
Ending net position	<u>\$ 109,368</u>	<u>\$ 104,895</u>

Electric sales (net of discounts) were \$91,822,764 in fiscal year 2017, an increase of 3.93% from the prior year. In fiscal year 2017, kilowatt hours sold decreased by 0.09% to 675,536,970, compared to 676,128,060 in fiscal year 2016. In fiscal year 2017, customers received charges of \$724,692 in purchase power fuel charge adjustments, compared to credits of \$63,410 in fiscal year 2016.

In fiscal year 2015, the Department restructured its rates and began billing customers purchase power capacity and transmission costs separately from the base rate. In fiscal year 2017, customers were charged purchase power capacity and transmission adjustments of \$69,300.

Operating expenses totaled \$87,127,810 in fiscal year 2017, an overall increase of 3.48% from fiscal year 2016. The largest portion of this total, \$64,703,438, was for purchase power costs. Other operating expenses included \$16,889,921 for general operating and maintenance costs, \$1,433,143 for voluntary payments to Towns, and depreciation expense of \$4,101,308. In fiscal year 2017, the depreciation rate was 3.0%.

In fiscal year 2017, the Department contributed \$1,600,000 to the Reading Municipal Light Department Employees' Retirement Trust ("Pension Trust") and the Pension Trust contributed \$1,579,345 to the Town of Reading Contributory Retirement System on behalf of the Department's employees.

In fiscal year 2017, the Department contributed \$794,319 to the Other Post-Employment Benefits Trust ("OPEB Trust"), which was \$138,068 less than the actuarially determined liability at June 30, 2017. As a result, the Department recognized an OPEB liability at June 30, 2017 in the Statements of Net Position. Additional information on the Department's OPEB contributions can be found in Note 17 on pages 28-32 of this report.

C. CAPITAL ASSET AND DEBT ADMINISTRATION

Capital assets. Total investment in land at year end amounted to \$1,265,842; there was no change from the prior year. Total investment in depreciable capital assets

at year-end amounted to \$74,845,094 (net of accumulated depreciation), an increase of \$3,908,524 from the prior year. This investment in depreciable capital assets includes structures and improvements, equipment and furnishings, and infrastructure assets.

Debt and other long-term liabilities. At the end of the current fiscal year, the Department had no outstanding bonded debt.

Additional information on capital assets and other long-term liabilities can be found in the Notes to Financial Statements.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Town of Reading Municipal Light Department's finances for all those with an interest in the Department's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Accounting/Business Manager
Town of Reading Municipal Light Department
230 Ash Street
Reading, Massachusetts 01867

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT
BUSINESS-TYPE PROPRIETARY FUND
STATEMENTS OF NET POSITION
JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
ASSETS		
Current:		
Unrestricted cash and short-term investments	\$ 15,522,815	\$ 13,123,605
Receivables, net of allowance for uncollectable	8,761,845	8,203,587
Prepaid expenses	680,703	985,756
Inventory	<u>1,648,675</u>	<u>1,590,329</u>
Total current assets	26,614,038	23,903,277
Noncurrent:		
Restricted cash and short-term investments	26,482,494	26,080,078
Restricted investments	2,659,813	2,691,326
Investment in associated companies	212,428	26,994
Land	1,265,842	1,265,842
Capital assets, net of accumulated depreciation	<u>74,845,094</u>	<u>70,936,570</u>
Total noncurrent assets	105,465,671	101,000,810
DEFERRED OUTFLOWS OF RESOURCES		
Related to pensions	<u>4,135,078</u>	<u>4,838,218</u>
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	136,214,787	129,742,305
LIABILITIES		
Current:		
Accounts payable	7,193,756	5,484,732
Accrued liabilities	565,784	449,404
Customer deposits	1,080,257	901,905
Customer advances for construction	927,303	1,007,142
Current portion of long-term liabilities:		
Compensated absences	<u>23,695</u>	<u>401,347</u>
Total current liabilities	9,790,795	8,244,530
Noncurrent:		
Net pension liability	13,076,538	12,862,732
Net OPEB obligation	138,068	-
Compensated absences	<u>3,126,439</u>	<u>2,856,462</u>
Total noncurrent liabilities	16,341,045	15,719,194
DEFERRED INFLOWS OF RESOURCES		
Related to pensions	<u>714,888</u>	<u>883,172</u>
TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES	26,846,728	24,846,896
NET POSITION		
Net investment in capital assets	76,110,937	72,202,413
Restricted for:		
Depreciation fund	4,951,661	4,494,953
Pension trust	5,683,014	5,610,105
Unrestricted	<u>22,622,447</u>	<u>22,587,938</u>
TOTAL NET POSITION	<u>\$ 109,368,059</u>	<u>\$ 104,895,409</u>

The accompanying notes are an integral part of these financial statements.

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND
STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
Operating Revenues:		
Electric sales, net of discounts of \$3,648,851 and \$3,294,567 respectively	\$ 91,822,764	\$ 88,353,905
Purchase power adjustments:		
Fuel charge adjustment	724,692	(63,410)
Capacity and transmission adjustment	69,300	445,488
	92,616,756	88,735,983
Operating Expenses:		
Purchase power	64,703,438	63,700,338
Operating	14,311,692	12,902,149
Maintenance	2,578,229	2,252,540
Voluntary payments to towns	1,433,143	1,400,347
Depreciation	4,101,308	3,944,792
	87,127,810	84,200,166
Total Operating Expenses	87,127,810	84,200,166
Operating Income	5,488,946	4,535,817
Nonoperating Revenues (Expenses):		
Interest income	271,658	333,497
MMWEC surplus	148,898	250,690
Intergovernmental grants	67,797	125,000
Contributions in aid of construction	335,198	285,921
Return on investment to Town of Reading	(2,384,668)	(2,370,445)
Loss on disposal of capital assets	(44,692)	(85,561)
Other	589,513	365,046
	(1,016,296)	(1,095,852)
Total Nonoperating Revenues (Expenses), Net	(1,016,296)	(1,095,852)
Change in Net Position	4,472,650	3,439,965
Net Position at Beginning of Year, as restated	104,895,409	101,455,444
Net Position at End of Year	\$ 109,368,059	\$ 104,895,409

The accompanying notes are an integral part of these financial statements.

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND
STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
<u>Cash Flows From Operating Activities:</u>		
Receipts from customers and users	\$ 91,442,858	\$ 87,519,922
Payments to vendors and employees	(80,175,335)	(79,529,184)
Customer purchase power adjustments	793,993	382,077
	12,061,516	8,372,815
Net Cash Provided By (Used For) Operating Activities		
<u>Cash Flows From Noncapital Financing Activities:</u>		
Return on investment to Town of Reading	(2,384,668)	(2,370,445)
MMWEC surplus	148,898	250,690
Other	924,710	365,047
	(1,311,060)	(1,754,708)
Net Cash Provided By (Used For) Noncapital Financing Activities		
<u>Cash Flows From Capital and Related Financing Activities:</u>		
Acquisition and construction of capital assets	(8,054,525)	(6,316,416)
Contributions in aid of construction	(79,839)	403,289
Intergovernmental revenues	67,797	125,000
	(8,066,567)	(5,788,127)
Net Cash Provided By (Used For) Capital and Related Financing Activities		
<u>Cash Flows From Investing Activities:</u>		
Investment income	271,658	333,497
(Increase) decrease in restricted cash and investments	(556,337)	(1,191,734)
	(284,679)	(858,237)
Net Cash Provided By (Used For) Investing Activities		
Net Change in Unrestricted Cash and Short-Term Investments	2,399,210	(28,257)
Unrestricted Cash and Short-Term Investments, Beginning of Year	13,123,605	13,151,862
Unrestricted Cash and Short-Term Investments, End of Year	\$ 15,522,815	\$ 13,123,605
<u>Reconciliation of Operating Income (Loss) to Net Cash:</u>		
Operating income	\$ 5,488,946	\$ 4,535,817
Adjustments to reconcile operating income to net cash provided by (used for) operating activities:		
Depreciation expense	4,101,308	3,944,792
Changes in assets, liabilities, and deferred outflows/inflows		
Accounts receivable	(558,258)	(889,528)
Prepaid and other assets	305,054	152,142
Inventory	(58,346)	(9,922)
Deferred outflows - related to pensions	703,140	(4,790,403)
Accounts payable and accrued liabilities	1,717,729	438,515
Due to other postemployment benefits trust	-	(345,382)
Net OPEB obligation	138,068	-
Net pension liability	213,806	4,398,069
Deferred inflows - related to pensions	(168,284)	883,172
Other	178,353	55,543
	\$ 12,061,516	\$ 8,372,815
Net Cash Provided By (Used For) Operating Activities		

The accompanying notes are an integral part of these financial statements.

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS
STATEMENTS OF FIDUCIARY NET POSITION

JUNE 30, 2017 AND 2016

	Other Post Employment Benefits Trust Fund	
	<u>2017</u>	<u>2016</u>
ASSETS		
Cash and short-term investments	\$ <u>2,857,150</u>	\$ <u>2,525,843</u>
TOTAL ASSETS	<u>2,857,150</u>	<u>2,525,843</u>
NET POSITION		
Total net position held in trust	\$ <u><u>2,857,150</u></u>	\$ <u><u>2,525,843</u></u>

The accompanying notes are an integral part of these financial statements.

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEARS ENDED JUNE 30, 2017 AND 2016

	Other Post Employment Benefits Trust Fund	
	<u>2017</u>	<u>2016</u>
Additions:		
Contributions:		
Employers	\$ <u>794,319</u>	\$ <u>308,795</u>
Total Contributions	794,319	308,795
Investment Income (Loss):		
Increase (decrease) in fair value of investments	<u>22,561</u>	<u>13,928</u>
Net investment income (loss)	<u>22,561</u>	<u>13,928</u>
Total additions	816,880	322,723
Deductions:		
Benefit payments to plan members, beneficiaries and other systems	<u>485,573</u>	<u>-</u>
Total deductions	<u>485,573</u>	<u>-</u>
Net increase (decrease)	331,307	322,723
Net position:		
Beginning of Year	<u>2,525,843</u>	<u>2,203,120</u>
End of Year	<u>\$ <u>2,857,150</u></u>	<u>\$ <u>2,525,843</u></u>

The accompanying notes are an integral part of these financial statements.

Town of Reading, Massachusetts Municipal Light Department

Notes to Financial Statements

1. Summary of Significant Accounting Policies

The significant accounting policies of the Town of Reading Municipal Light Department (the Department) (an enterprise fund of the Town of Reading, Massachusetts) are as follows:

- A. Business Activity - The Department purchases electricity for distribution to more than 25,000 customers within the towns of Reading, North Reading, Wilmington, and Lynnfield.
- B. Regulation and Basis of Accounting - Under Massachusetts General Laws, the Department's electric rates are set by the Municipal Light Board. Electric rates, excluding the purchase power fuel charge and the purchase power capacity and transmission charge, cannot be changed more than once every three months. Rate schedules are filed with the Massachusetts Department of Public Utilities (DPU). While the DPU exercises general supervisory authority over the Department, the Department's rates are not subject to DPU approval. The Department's policy is to prepare its financial statements in conformity with generally accepted accounting principles.

The proprietary fund financial statements are reported using the *economic resources measurement* focus and the *accrual basis of accounting*. Under this method, revenues are recognized when earned and expenses are recorded when liabilities are incurred.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the Department's proprietary fund are charges to customers for electric sales and services. Operating expenses for the Department's proprietary fund include the cost of sales and services, administrative expenses and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

- C. Concentrations - The Department operates within the electric utility industry. In 1998, the Commonwealth of Massachusetts enacted energy deregulation legislation that restructured the Commonwealth's electricity industry to foster competition and promote reduced electric rates. Energy deregulation created a separation between the supply and delivery portions of electricity service and enabled consumers to purchase their energy from a retail supplier of their choice. Municipal utilities are not currently subject to this legislation.

- D. Retirement Trust - The Reading Municipal Light Department Employees' Retirement Trust (the "Pension Trust") was established by the Reading Municipal Light Board on December 30, 1966, pursuant to Chapter 64 of the General Laws of the Commonwealth of Massachusetts.

The Pension Trust constitutes the principal instrument of a plan established by the Municipal Light Board to fund the Department's annual required contribution to the Town of Reading Contributory Retirement System (the System), a cost-sharing, multi-employer public employee retirement system.

In accordance with Government Accounting Standards Board Statement 68 (GASB 68), the Retirement Trust was consolidated into the Business-Type Proprietary Fund and is reflected in net position as "restricted for pension trust."

- E. Other Post-Employment Benefits Trust - The Other Post-Employment Benefits Liability Trust Fund (the "OPEB Trust") was established by the Reading Municipal Light Board pursuant to Chapter 32B, Section 20 of the General Laws of the Commonwealth of Massachusetts.

The OPEB Trust constitutes the principal instrument of a plan established by the Municipal Light Board to fund the Department's annual actuarially determined OPEB contribution for future retirees.

- F. Revenues - Revenues are based on rates established by the Department and filed with the DPU. Revenues from sales of electricity are recorded on the basis of bills rendered from monthly meter readings taken on a cycle basis and are stated net of discounts. Recognition is given to the amount of sales to customers which are unbilled at the end of the fiscal period.

- G. Cash and Short-term Investments - For the purposes of the Statements of Cash Flows, the Department considers unrestricted cash on deposit with the Town Treasurer to be cash or short-term investments. For purposes of the Statements of Net Position, both the proprietary funds and fiduciary funds consider unrestricted and restricted investments with original maturities of three months or less to be short-term investments.

- H. Investments - State and local statutes place certain limitations on the nature of deposits and investments available. Deposits in any financial institution may not exceed certain levels within the financial institution. Non-fiduciary fund investments can be made in securities issued or unconditionally guaranteed by the U.S. Government or agencies that have a maturity of one year or less from the date of purchase and repurchase agreements guaranteed by such securities with maturity dates of no more than 90 days from date of purchase.

Investments for the Department and the Pension Trust consist of domestic and foreign fixed income bonds which the Department intends to hold to maturity. These investments are reported at fair market value.

- I. Inventory - Inventory consists of parts and accessories purchased for use in the utility business for construction, operation, and maintenance purposes and is stated at average cost. Meters and transformers are capitalized when purchased.
- J. Capital Assets and Depreciation - Capital assets, which include property, plant, equipment, and utility plant infrastructure, are recorded at historical cost or estimated historical cost when purchased or constructed. Donated capital assets are recorded at estimated fair market value at the date of the donation.

The cost of normal maintenance and repairs that do not add to the value of the asset or materially extend asset lives are not capitalized.

Major outlays for capital assets and improvements are capitalized as they are acquired or constructed. Interest incurred during the construction phase of proprietary fund capital assets is included as part of the capitalized value of the constructed asset. When capital assets are retired, the cost of the retired asset, less accumulated depreciation, salvage value and any cash proceeds, is charged to the Department's unrestricted net position.

Massachusetts General Laws require utility plant in service to be depreciated at a minimum annual rate of 3%. To change this rate, the Department must obtain approval from the DPU. Changes in annual depreciation rates may be made for financial factors relating to cash flow for plant expansion, rather than engineering factors relating to estimates of useful lives.

- K. Accrued Compensated Absences - Employee vacation leave is vested annually but may only be carried forward to the succeeding year with supervisor approval and, if appropriate, within the terms of the applicable Department policy or union contract. Generally, sick leave may accumulate according to union and Department contracts and policy, and is paid upon normal termination at the current rate of pay. The Department's policy is to recognize vacation costs at the time payments are made. The Department records accumulated, unused, vested sick pay as a liability. The amount recorded is the amount to be paid upon normal termination at the current rate of pay.
- L. Long-Term Obligations - The proprietary fund financial statements report long-term debt and other long-term obligations as liabilities in the Statements of Net Position.
- M. Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures for contingent assets and liabilities at the date of the financial statements, and the reported amounts of the revenues and expenses during the fiscal year. Actual results could vary from estimates that were used.
- N. Rate of Return - The Department's rates must be set such that earnings attributable to electric operations do not exceed eight percent of the net cost

of plant. The Department's audited financial statements are prepared in accordance with auditing standards generally accepted in the United States of America. To determine the net income subject to the rate of return limitations, the Department performs the following calculation. Using the net income per the audited financial statements, the return on investment to the Town of Reading is added back, the fuel charge adjustment is added or deducted, and miscellaneous debits/credits (i.e., gain/loss on disposal of fixed assets, etc.) are added or deducted, leaving an adjusted net income figure for rate of return purposes. Investment interest income and bond principal payments are then deducted from this figure to determine the net income subject to the rate of return. The net income subject to the rate of return is then subtracted from the allowable eight percent rate of return, which is calculated by adding the book value of net plant and the investment in associated companies multiplied by eight percent. From this calculation, the Municipal Light Board will determine what cash transfers need to be made at the end of the fiscal year.

2. Cash and Investments

Total cash and investments as of June 30, 2017 are classified in the accompanying financial statements as follows:

Proprietary Fund:	
Unrestricted cash and short-term investments	\$ 15,522,815
Restricted cash and short-term investments	26,482,494
Restricted investments	2,659,813
Fiduciary Funds:	
Cash and short-term investments - OPEB Trust	<u>2,857,150</u>
Total cash and investments	<u>\$ 47,522,272</u>

Total cash and investments at June 30, 2017 consist of the following:

Cash on hand	\$ 3,500
Deposits with financial institutions	<u>47,518,772</u>
Total cash and investments	<u>\$ 47,522,272</u>

Disclosures Relating to Interest Rate Risk

Interest rate risk is the risk that the fair value of an investment will be adversely affected by changes in market interest rates. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The Department manages its exposure to interest rate risk by purchasing a combination of shorter term and longer-term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing or coming close to maturity evenly over time as necessary to provide the cash flow and liquidity needed for operations.

As of June 30, 2017, the Department (including the Pension Trust and OPEB Trust) held cash and short-term investments in pooled investments with the Massachusetts Municipal Depository Trust (MMDT), FDIC-insured savings accounts, and 90-day FDIC-insured bank certificates of deposit. Because of their immediate liquidity and/or short-term maturity, these funds are classified as cash and short-term investments in the accompanying financial statements and are not considered to be exposed to significant interest rate risk.

As of June 30, 2017, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying maturity dates as follows:

	Proprietary Fund	
	<u>Restricted Investments</u>	<u>Maturity Date</u>
<u>Corporate bonds</u>		
AT&T Inc	\$ 433,147	12/01/22
General Electric Cap Corp	429,272	01/09/23
Wells Fargo & Co	422,960	08/15/23
Rabobank Nederland Bank	522,140	11/09/22
Teva Pharmaceut Fin BV	427,700	12/18/22
BNP Paribas	<u>424,594</u>	03/03/23
Total	<u>\$ 2,659,813</u>	

Disclosures Relating to Credit Risk

Generally, credit risk is the risk that the issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assigning of a rating by a nationally recognized statistical rating organization. As of June 30, 2017, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying ratings as follows:

	Proprietary Fund	
<u>Investment Type</u>	<u>Restricted Investments</u>	<u>Moody's Rating</u>
Corporate bonds:		
AT&T Inc	\$ 433,147	BAA1
General Electric Cap Corp	429,272	A1
Wells Fargo & Co	422,960	A3
Rabobank Nederland Bank	522,140	A3
Teva Pharmaceut Fin BV	427,700	BAA2
BNP Paribas	<u>424,594</u>	A1
Total	<u>\$ 2,659,813</u>	

Concentration of Credit Risk

The Department follows the Town of Reading's investment policy, which does not limit the amount that can be invested in any one issuer beyond that stipulated by Massachusetts General Laws. At June 30, 2017, the Department and Pension Trust investments were held in domestic and foreign fixed income bonds, as detailed in the sections above. Five of the bonds each individually represent approximately 16% of the Department's and System's total investments, while the investment in Rabobank Nederland Bank represents approximately 20%.

Custodial Credit Risk

Custodial Credit Risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, the Department will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the Department will not be able to recover the value of its investments or collateral securities that are in the possession of another party. Massachusetts General Laws, Chapter 44, Section 55, limits deposits "in a bank or trust company or banking company to an amount not exceeding sixty per cent of the capital and surplus of such bank or trust company or banking company, unless satisfactory security is given to it by such bank or trust company or banking company for such excess." The Department follows the Massachusetts statute as written, as well as the Town of Reading's deposit policy for custodial credit risk.

Because the Department pools its cash and short-term investments with the Town of Reading, and bank accounts are maintained in the name of the Town, the amount of the Department's balance exposed to custodial credit risk at June 30, 2017, cannot be reasonable determined.

As of June 30, 2017, none of the Department or Pension Trust investments were exposed to custodial credit risk because the related securities are registered in the Department's name.

Fair Value

The Department categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72 Fair Value Measurement and Application (GASB 72). The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

<u>Description</u>	<u>Fair Value Measurements Using:</u>		
	<u>Quoted prices in active markets for identical assets (Level 1)</u>	<u>Significant observable inputs (Level 2)</u>	<u>Significant unobservable inputs (Level 3)</u>
Investments by fair value level:			
Debt securities			
Corporate bonds	\$ <u>2,659,813</u>	\$ 2,659,813	\$ - \$ -
Total	\$ <u>2,659,813</u>		

3. Restricted Cash and Investments

The Department's proprietary fund restricted cash and investment balances represent the following reserves:

	<u>6/30/17</u>		<u>6/30/16</u>	
	<u>Cash</u>	<u>Investments</u>	<u>Cash</u>	<u>Investments</u>
Depreciation fund	\$ 2,451,661	\$ -	\$ 4,494,953	\$ -
Construction fund	2,500,000	-	1,500,000	-
Deferred fuel reserve	5,841,567	-	5,116,875	-
Deferred energy conservation reserve	602,131	-	717,418	-
Rate stabilization	6,883,542	-	6,822,339	-
Reserve for uncollectible accounts	200,000	-	200,000	-
Sick leave benefits	1,820,228	1,329,907	1,912,146	1,345,663
Hazardous waste fund	750,000	-	150,000	-
Customer deposits	1,080,257	-	901,905	-
Pension trust	4,353,108	1,329,906	4,264,442	1,345,663
Total	\$ <u>26,482,494</u>	\$ <u>2,659,813</u>	\$ <u>26,080,078</u>	\$ <u>2,691,326</u>

The Department maintains the following reserves:

- Depreciation fund - The Department is normally required to reserve 3.0% of capital assets each year to fund capital improvements.
- Construction fund – This represents additional funds set aside to fund capital expenditures.
- Deferred fuel reserve - The Department transfers the difference between the customers' monthly fuel charge adjustment and actual fuel costs into this account to be used in the event of a sudden increase in fuel costs.
- Deferred energy conservation reserve - This account is used to reserve monies collected from a special energy charge added to customer bills. Customers who undertake measures to conserve and improve energy efficiency can apply for rebates that are paid from this account.
- Rate stabilization - This represents amounts set aside to help stabilize cost increases resulting from fluctuations in purchase power costs.

- Reserve for uncollectible accounts - This account was set up to offset a portion of the Department's bad debt reserve.
- Sick leave benefits - This account is used to offset the Department's actuarially determined compensated absence liability.
- Hazardous waste fund - This reserve was set up by the Board of Commissioners to cover the Department's insurance deductible in the event of a major hazardous materials incident.
- Customer deposits - Customer deposits that are held in escrow.
- Pension trust - The principal instrument of a plan established by the Municipal Light Board to fund the Department's annual required contribution to the Town of Reading Contributory Retirement System (the System), a cost-sharing, multi-employer public employee retirement system.

4. Accounts Receivable

Accounts receivable consists of the following at June 30, 2017:

Customer Accounts:		
Billed	\$	2,488,551
Less allowances:		
Uncollectible accounts		(200,000)
Sales discounts		<u>(98,570)</u>
Total billed		2,189,981
Unbilled, net		<u>6,118,951</u>
Total customer accounts		8,308,932
Other Accounts:		
Merchandise sales		249,384
MMWEC surplus		147,193
Intergovernmental grants		43,056
Liens and other		<u>13,280</u>
Total other accounts		<u>452,913</u>
Total net receivables	\$	<u><u>8,761,845</u></u>

5. Prepaid Expenses

Prepaid expenses consist of the following:

Insurance and other	\$	298,971
Purchase power		(201,947)
NYPA prepayment fund		307,573
WC Fuel - Watson		<u>276,106</u>
Total	\$	<u><u>680,703</u></u>

6. Inventory

Inventory comprises supplies and materials at June 30, 2017, and is valued using the average cost method.

7. Investment in Associated Companies

Under agreements with the New England Hydro-Transmission Electric Company, Inc. (NEH) and the New England Hydro-Transmission Corporation (NHH), the Department has made the following advances to fund its equity requirements for the Hydro-Quebec Phase II interconnection. The Department is carrying its investment at fair value, reduced by shares repurchased. The Department's equity position in the Project is less than one-half of one percent.

Investment in associated companies consists of the following, at June 30, 2017:

New England Hydro-Transmission (NEH & NHH) \$ 212,428

8. Capital Assets

The following is a summary of fiscal year 2017 activity in capital assets (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance
Business-Type Activities:				
Capital assets, being depreciated:				
Structures and improvements	\$ 16,146	\$ 3,268	\$ -	\$ 19,414
Equipment and furnishings	32,511	1,322	(241)	33,592
Infrastructure	88,053	3,465	(991)	90,527
Total capital assets, being depreciated	136,710	8,055	(1,232)	143,533
Less accumulated depreciation for:				
Structures and improvements	(8,949)	(465)	-	(9,414)
Equipment and furnishings	(20,856)	(905)	241	(21,520)
Infrastructure	(35,969)	(2,731)	946	(37,754)
Total accumulated depreciation	(65,774)	(4,101)	1,187	(68,688)
Total capital assets, being depreciated, net	70,936	3,954	(45)	74,845
Capital assets, not being depreciated:				
Land	1,266	-	-	1,266
Total capital assets, not being depreciated	1,266	-	-	1,266
Capital assets, net	\$ 72,202	\$ 3,954	\$ (45)	\$ 76,111

9. Deferred Outflows of Resources

Deferred outflows of resources represent the Department’s consumption of net position that is applicable to future reporting periods. Deferred outflows of resources have a positive effect on net position, similar to assets. Deferred outflows of resources related to pensions, in accordance with GASB Statement No. 68, Accounting and Financial Reporting for Pensions, are more fully discussed in Note 16.

10. Accounts Payable

Accounts payable represent fiscal 2017 expenses that were paid after June 30, 2017.

11. Accrued Liabilities

Accrued liabilities consist of the following at June 30, 2017:

Accrued payroll	\$ 143,561
Accrued sales tax	219,158
Other	<u>203,065</u>
Total	<u>\$ 565,784</u>

12. Customer Deposits

This balance represents deposits received from customers that are held in escrow.

13. Customer Advances for Construction

This balance represents deposits received from vendors in advance for work to be performed by the Department. The Department recognizes these deposits as revenue after the work has been completed.

14. Accrued Employee Compensated Absences

Department employees are granted sick leave in varying amounts. Upon retirement, normal termination, or death, employees are compensated for unused sick leave (subject to certain limitations) at their then current rates of pay.

15. Deferred Inflows of Resources

Deferred inflows of resources are the acquisition of net position by the Department that are applicable to future reporting periods. Deferred inflows of resources

have a negative effect on net position, similar to liabilities. The Department reports two items as deferred inflows of resources: one which is attributable to changes in the net pension liability, and the other which arises from the current financial resources measurement focus and the modified accrual basis of accounting in governmental funds. Deferred inflows of resources related to pension will be recognized in pension expense in future years and is more fully described in Note 16.

16. Reading Contributory Retirement System

The Department follows the provisions of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27*, with respect to the employees' retirement funds.

A. Plan Description

Substantially all employees of the Department are members of the Town of Reading Contributory Retirement System (the System), a cost-sharing, multiple-employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, as well as contribution percentages and benefits paid. The System Retirement Board does not have the authority to amend benefit provisions. Additional information is disclosed in the System's annual financial reports, which are publicly available from the System's administrative offices located at Reading Town Hall, 16 Lowell Street, Reading, Massachusetts, 01867.

Participant Retirement Benefits

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest five-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 10 percent, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation and group classification.

If a participant was a member prior to February 2012, a retirement allowance may be received at any age, upon attaining 20 years of service. The

plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left Department employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4, have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Participant Refunds

Employees who resign from service and who are not eligible to receive a retirement allowance are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3%.

Participants Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired after January 1, 1979 contribute an additional 2% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5%
January 1, 1975 - December 31, 1983	7%
January 1, 1984 - June 30, 1996	8%
Beginning July 1, 1996	9%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

The Department's contribution to the System for the year ended June 30, 2017 was \$1,579,345, which was equal to its annual required contribution.

B. Summary of Significant Accounting Policies

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the System and additions to/deductions from System's fiduciary net position have been determined on the same basis as they are reported by System. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

C. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2017, the Department reported a liability of \$13,076,538 for its proportionate share of the System's net pension liability. The net pension liability was measured as of December 31, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2015 rolled forward to December 31, 2016. The Department's proportion of the net pension liability was based on an actuarially determined projection of the Department's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers. At December 31, 2016, the Department's proportion was 29.15%.

Town of Reading Municipal Light Department Employees' Retirement Trust ("Pension Trust"): The Department has established an irrevocable trust for the purpose of currently funding its annual required contribution to the Town of Reading Contributory Retirement System (RCRS). Annual contributions to the trust are actuarially determined to be the net normal cost for funding the Department's liability for pension benefits for covered employees, and both the principal and income of the trust is restricted for the exclusive benefit of Department employees and their beneficiaries. This Pension Trust is included in the proprietary fund statements in the Department's basic financial statements.

As noted in the first paragraph of this section, the Department's proportionate share of the RCRS net pension liability was determined by an actuarial valuation as of January 1, 2015 rolled forward to December 31, 2016. However, the actuarial valuation does not take into account the fiduciary net position of the Department's Pension Trust at December 31, 2016 (the measurement date). Accordingly, the following reconciliation is provided:

For the year ended June 30, 2017, the Department recognized pension expense of \$2,313,974. In addition, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Net differences between expected and actual experience	\$ -	\$ 714,888
Changes of assumptions	2,374,236	-
Net difference between projected and actual investment earnings on pension plan	1,538,405	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>222,437</u>	<u>-</u>
Total	<u>\$ 4,135,078</u>	<u>\$ 714,888</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:

2018	\$ 1,028,288
2019	1,028,288
2020	1,015,954
2021	<u>347,660</u>
Total	<u>\$ 3,420,190</u>

D. Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2015, rolled forward to the measurement date of December 31, 2016 using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation Date	January 1, 2015
Actuarial Cost Method	Entry Age Normal Cost Method
Actuarial Assumptions:	
Investment rate of return	7.65%, net of pension plan investment expense,
Projected salary increases	4.25%-6.00% for Group 1 and 4.75%-7.00% for Group 4
Inflation rate	3.00% Annually
Post-retirement cost-of-living adjustment	3.00% of first \$12,000

Mortality rates were based on the RP-2014 Mortality Table with full generational mortality improvement using Scale MP-2014. For disabled lives, the mortality rates were based on the RP-2014 Disabled Mortality Table.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2015 are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-term Expected Rates of Return</u>
International Equity	22.00%	8.75%
Domestic Equity	18.00%	7.63%
Core Fixed Income	13.00%	3.76%
Value-Added Fixed Income	10.00%	6.45%
Private Equity	10.00%	9.50%
Real estate	10.00%	6.50%
Hedge funds	9.00%	6.50%
Timber/Natural Resources	4.00%	7.07%
Portfolio Completion Strategies	<u>4.00%</u>	6.18%
Total	<u>100.00%</u>	

E. Discount Rate

The discount rate used to measure the total pension liability was 7.65%. The projection of cash flows used to determine the discount rate assumed that the plan member contributions will be made at the current contribution rate

and that employer contributions will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments to current active and inactive plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

F. Sensitivity of the Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following table presents the Department's proportionate share of the net pension liability (asset) calculated using the current discount rate of 7.65%, as well as what the Department's proportionate share of the net pension liability (asset) would be if it were calculated using a discount rate that is 1 percentage-point lower (6.65%) or 1 percentage-point higher (8.65%) than the current rate:

1% Decrease (6.65%)	Current Discount Rate (7.65%)	1% Increase (8.65%)
\$ 18,629,075	\$ 13,076,538	\$ 8,349,754

G. Pension Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in the separately issued System financial report.

H. Town of Reading Municipal Light Department Employees Retirement Trust ("Pension Trust")

The Department has established an irrevocable trust for the purpose of currently funding its annual required contribution to the Town of Reading Contributory Retirement System (RCRS). Annual contributions to the trust are actuarially determined to be the net normal cost for funding the Department's liability for pension benefits for covered employees, and both the principal and income of the trust is restricted for the exclusive benefit of Department employees and their beneficiaries. This Pension Trust is included in the proprietary fund statements in the Department's basic financial statements.

As noted in the first paragraph of this section, the Department's proportionate share of the RCRS net pension liability was determined by an actuarial valuation as of January 1, 2015 rolled forward to December 31, 2016. However, the actuarial valuation does not take into account the fiduciary net position of the Department's Pension Trust at December 31, 2016 (the measurement date). As of December 31, 2016, the value of the pension trust was \$4,016,746.

17. Other Post-Employment Benefits – OPEB (GASB 45)

The Department follows GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions*. Statement No. 45 requires governments to account for other post-employment benefits (OPEB), primarily healthcare, on an accrual basis rather than on a pay-as-you-go basis. The effect is the recognition of an actuarially required contribution as an expense on the proprietary fund Statements of Revenues, Expenses, and Changes in Net Position when a future retiree earns their post-employment benefits, rather than when they use them. To the extent that an entity does not fund their actuarially required contribution, a post-employment benefit liability is recognized on the proprietary fund Statements of Net Position over time.

A. Plan Description

In addition to providing the pension benefits described in Note 16, the Department provides post-employment health and life insurance benefits to retired employees through the Town of Reading's participation in the Massachusetts Interlocal Insurance Association (MIIA) Health Benefits Trust. Benefits, benefit levels, employee contributions and employer contributions are governed by Chapter 32 of the Massachusetts General Laws. As of June 30, 2017, the actuarial valuation measurement date, approximately 91 retirees and 58 active employees meet the eligibility requirements. The plan does not issue a separate financial report.

B. Benefits Provided

The Department provides post-employment medical, prescription drug, and life insurance benefits to all eligible retirees and their surviving spouses. All active employees who retire from the Department and meet the appropriate criteria are eligible to receive these benefits.

C. Funding Policy

As of the June 30, 2017, the actuarial valuation measurement date, retirees are required to contribute 29% of the cost of the medical and prescription drug plan, as determined by the MIIA Health Benefits Trust. Retirees also contribute 50% of the premium for a \$5,000 life insurance benefit. The Department contributes the remainder of the medical, prescription drug, and life insurance plan costs on a pay-as-you-go basis.

D. Annual OPEB Costs and Net OPEB Obligation

The Department's fiscal 2017 annual OPEB expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost per year and amortize the unfunded actuarial liability over a remaining period of sixteen years.

The following table shows the components of the Department's annual OPEB cost for the year ending June 30, 2017, the amount actually contributed to the plan, and the change in the Department's net OPEB obligation based on an actuarial valuation as of June 30, 2017.

Annual Required Contribution (ARC)	\$ <u>932,387</u>
Annual OPEB cost	932,387
Projected benefit payments	<u>(485,573)</u>
Increase in net OPEB obligation	446,814
Net OPEB obligation - beginning of year	-
Contributions to OPEB Trust	<u>(308,746)</u>
(1) Net OPEB obligation - end of year	\$ <u><u>138,068</u></u>

(1) See Part E for additional information

The Department's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for fiscal year 2017 and the two preceding fiscal years were as follows:

<u>Fiscal Year Ended</u>	<u>Annual OPEB Cost</u>	<u>Percentage of OPEB Cost Contributed</u>	<u>Net OPEB Obligation</u>
2017	\$ 932,387	85.2%	\$ 138,068
2016	\$ 782,939	100.0%	\$ -
2015	\$ 758,525	100.0%	\$ -
2014	\$ 768,378	100.0%	\$ -
2013	\$ 604,987	100.0%	\$ -

E. Funded Status and Funding Progress

The funded status of the plan as of June 30, 2017, the most recent actuarial valuation measurement date was as follows:

Actuarial accrued liability (AAL)	\$ 10,015,425
Actuarial value of plan assets	<u>2,857,072</u>
Unfunded actuarial accrued liability (UAAL)	\$ <u><u>7,158,353</u></u>
Funded ratio (actuarial value of plan assets/AAL)	28.53%
Covered payroll (active plan members)	N/A
UAAL as a percentage of covered payroll	N/A

In 2010, the Department's Municipal Light Board voted to accept the provisions of Chapter 32B §20 of Massachusetts General Laws and create an

Other Post-Employment Benefits Liability Trust Fund as a mechanism to set aside monies to fund its OPEB liability. In 2013, the Commissioners voted to create an OPEB trust instrument in alignment with the Town of Reading. The assets and net position of this trust are reported in the Department's Fiduciary Funds Statements of Fiduciary Net Position.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability.

F. Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the plan as understood by the Department and the plan members and include the types of benefits provided at the time of each actuarial valuation and the historical pattern of sharing of benefit costs between the Department and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the June 30, 2017 actuarial valuation, the Projected Unit Credit actuarial cost method was used. The Department's actuarial value of plan assets was \$2,857,072. The actuarial assumptions included a 7.50% investment rate of return and an initial annual health care cost trend rate of 7.0% which decreases by 0.5% for five years to an ultimate level of 4.5% per year. The amortization costs for the initial UAAL is a level percentage of payroll amortization, with amortization payments increasing at 2.5% per year for a remaining period of 14 years.

18. Other Post-Employment Benefits – OPEB (GASB 74)

In 2010 the Government established an OPEB Trust fund to provide funding for future employee health care costs.

Cash and Short-term Investments

At June 30, 2017, cash and short-term investments consisted of amounts held in money market and certificates of deposit. Concentration and rate of return information was not available.

Net OPEB Liability

The components of the net OPEB liability were as follows:

Total OPEB liability	\$ 10,015,425
Plan fiduciary net position	<u>2,857,072</u>
Net OPEB liability	<u>\$ 7,158,353</u>

Plan fiduciary net position as a percentage of the total OPEB liability	28.5%
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Actuarial assumptions. The total OPEB liability was determined by an actuarial valuation as of June 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Salary increases	6.00% decreasing to 4.25% for Groups 1 & 2 7.00% decreasing to 4.75% for Group 4
Investment rate of return	7.50% percent, net of OPEB plan investment expense, including inflation

Mortality rates were based on:

- Pre-Retirement – RP-2014 Healthy Employee Table projected generationally with Scale MP2014.
- Healthy – RP-2014 Healthy Annuitant Table projected generationally with Scale MP2014.
- Disabled – RP-2014 Disabled Retiree Table projected generationally with Scale MP2014.

The actuarial assumptions used in the June 30, 2017 valuation were the same used during the January 1, 2015 actuarial valuation of the Reading Contributory Retirement System.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2017 are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-term Expected Real Rate of Return</u>
Domestic equity	18.00%	6.44%
International developed markets equity	16.00%	7.40%
International emerging markets equity	6.00%	9.42%
Core fixed income	12.00%	2.02%
High-yield fixed income	10.00%	4.43%
Real estate	10.00%	5.00%
Commodities	4.00%	4.43%
Hedge Fund, GTAA, Risk parity	13.00%	3.75%
Private equity	11.00%	10.47%
Total	<u>100.00%</u>	

Discount rate. The discount rate used to measure the total OPEB liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan member will be made at the current contribution rate. Based on those assumptions, the OPEB plan fiduciary net position was not projected to be available to make all projected future benefit payments of current plan members.

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the net OPEB liability as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current discount rate:

<u>1% Decrease (6.50%)</u>	<u>Discount Rate (7.50%)</u>	<u>1% Increase (8.50%)</u>
\$ 7,814,750	\$ 7,158,353	\$ 6,105,048

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The following presents the net OPEB liability as well as what the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower (7.00% decreasing to 6.00%) or 1-percentage-point higher (7.00% increasing to 8.00%) than the current healthcare cost trend rates:

<u>1% Decrease (7.00% decreasing to 6.00%)</u>	<u>Healthcare Cost Trend Rates (7.00%)</u>	<u>1% Increase (7.00% increasing to 8.00%)</u>
\$ 6,034,235	\$ 7,158,353	\$ 7,799,633

19. Participation in Massachusetts Municipal Wholesale Electric Company

The Town of Reading, acting through its Light Department, is a Participant in certain Projects of the Massachusetts Municipal Wholesale Electric Company (MMWEC).

MMWEC is a public corporation and a political subdivision of the Commonwealth of Massachusetts, created as a means to develop a bulk power supply for its Members and other utilities. MMWEC is authorized to construct, own, or purchase ownership interests in, and to issue revenue bonds to finance, electric facilities (Projects). MMWEC has acquired ownership interests in electric facilities operated by other entities and also owns and operates its own electric facilities. MMWEC sells all of the capability (Project Capability) of each of its Projects to its Members and other utilities (Project Participants) under Power Sales Agreements (PSAs). Among other things, the PSAs require each Project Participant to pay its pro rata share of MMWEC's costs related to the Project, which costs include debt service on the revenue bonds issued by MMWEC to finance the Project, plus 10% of MMWEC's debt service to be paid into a Reserve and Contingency Fund. In addition, should a Project Participant fail to make any payment when due, other Project Participants of that Project may be required to increase (step-up) their payments and correspondingly their Participant's share of that Project's Project Capability to an additional amount not to exceed 25% of their original Participant's share of that Project's Project Capability. Project Participants have covenanted to fix, revise, and collect rates at least sufficient to meet their obligations under the PSAs.

MMWEC has issued separate issues of revenue bonds for each of its eight Projects, which are payable solely from, and secured solely by, the revenues derived from the Project to which the bonds relate, plus available funds pledged under MMWEC's Amended and Restated General Bond Resolution (GBR) with respect to the bonds of that Project. The MMWEC revenues derived from each Project are used solely to provide for the payment of the bonds of any bond issue relating to such Project and to pay MMWEC's cost of owning and operating such Project and are not used to provide for the payment of the bonds of any bond issue relating to any other Project.

MMWEC operates the Stony Brook Intermediate Project and the Stony Brook Peaking Project, both fossil-fueled power plants. MMWEC has a 3.7% interest in the W.F. Wyman Unit No. 4 plant, which is operated and owned by its majority owner, FPL Energy Wyman IV, LLC, a subsidiary of NextEra Energy Resources LLC, and a 4.8% ownership interest in the Millstone Unit 3 nuclear unit, operated by Dominion Nuclear Connecticut, Inc. (DNCI), the majority owner and an indirect subsidiary of Dominion Resources, Inc. DNCI also owns and operates the Millstone Unit 2 nuclear unit. The operating license for the Millstone Unit 3 nuclear unit extends to November 25, 2045.

MMWEC A substantial portion of MMWEC's plant investment and financing program is an 11.6% ownership interest in the Seabrook Station nuclear generating unit operated by NextEra Energy Seabrook, LLC (NextEra Seabrook) the majority owner and an indirect subsidiary of NextEra Energy Resources LLC. The operating license for Seabrook Station extends to March 15, 2030. NextEra Seabrook has submitted an application to extend the Seabrook Station operating license for an additional 20 years.

Pursuant to the PSAs, the MMWEC Seabrook and Millstone Project Participants are liable for their proportionate share of the costs associated with decommissioning the plants, which costs are being funded through monthly Project billings. Also, the Project Participants are liable for their proportionate share of the uninsured costs of a nuclear incident that might be imposed under the Price-Anderson Act (Act). Originally enacted in 1957, the Act has been renewed several times. In July 2005, as part of the Energy Policy Act of 2005, Congress extended the Act until the end of 2025.

The Reading Municipal Light Department has entered into PSAs and Power Purchase Agreements (PPAs) with MMWEC. Under both the PSAs and PPAs, the Department is required to make certain payments to MMWEC payable solely from Department revenues. Under the PSAs, each Participant is unconditionally obligated to make payments due to MMWEC whether or not the Project(s) is completed or operating and notwithstanding the suspension or interruption of the output of the Project(s).

MMWEC is involved in various legal actions. In the opinion of management, the outcome of such litigation or claims will not have a material adverse effect on the financial position of the company.

After the July 1, 2017 principal payment, total capital expenditures amounted to \$1,704,467,000, of which \$126,846,000 represents the amount associated with the Department's Project Capability. MMWEC's debt outstanding for the Projects from Power Supply System Revenue Bonds totals \$10,680,000, of which \$182,000 is associated with the Department's share of Project Capability. After the July 1, 2017 principal payment, MMWEC's total future debt service requirement on outstanding bonds issued for the Projects is \$11,540,000, of which \$190,000 is anticipated to be billed to the Department in the future.

The aggregate amount of the Department's required payments under the PSAs and PPAs, exclusive of the Reserve and Contingency Fund billings, to MMWEC at June 30, 2017 and estimated for future years is shown below.

	<u>Annual Costs</u>
For years ending June 30, 2018	\$ <u>190,000</u>
Total	\$ <u><u>190,000</u></u>

In addition, under the PSAs, the Department is required to pay to MMWEC its share of the Operation and Maintenance (O& M) costs of the Projects in which it participates. The Department's total O& M costs including debt service under the PSAs were \$9,548,000 and \$11,894,000 for the years ended June 30, 2017 and 2016, respectively.

20. Renewable Energy Certificates

In 2003, the Massachusetts Department of Energy and Environmental Affairs adopted the Massachusetts Renewable Energy Portfolio Standard (RPS), a regulation that requires Investor Owned Utilities (IOUs) to purchase mandated amounts of energy generated by renewable resources (Green Energy) as a percentage of their overall electricity sales. The Massachusetts RPS applies only to IOUs, so the Department is currently exempt from this mandate.

Energy suppliers meet their annual RPS obligations by acquiring a sufficient quantity of RPS-qualified renewable energy certificates (RECs) that are created and recorded at the New England Power Pool (NEPOOL) Generation Information System (GIS). Suppliers can purchase RECs from electricity generators or from other utilities that have acquired RECs.

As part of its ongoing commitment to Green Energy, the Department has entered into Purchase Power Agreements (PPAs) with Swift River Hydro LLC and Concord Steam Corporation to purchase power generated from renewable energy resources. These PPAs include the Department taking title to RECs, which certify that the energy produced was the product of a renewable resource. Because the Department is exempt from the RPS provisions, it has the option of holding these RECs until they expire or selling them through the NEPOOL GIS.

Information regarding the Department's fiscal year 2017 REC activity and balances is as follows:

REC Sales During Fiscal 2017

	<u>Certificates</u>	<u>Unit Price</u>	<u>Amount</u>
CT Class I	9,173	\$ 16.00	\$ 146,768
MA Class I	2,770	\$ 9.50	26,315
MA Class II	3,827	\$ 24.00	91,848
MA/RI/CT Class I	14,934	\$ 9.50	141,873
CT Class I	<u>3,155</u>	\$ 9.50	<u>29,973</u>
Total	<u>33,859</u>		<u>\$ 436,777</u> ⁽¹⁾

⁽¹⁾ Sale proceeds netted against fiscal year 2017 purchased power fuel charge

REC Holdings at June 30, 2017

	<u>Banked Certificates</u>	<u>Projected Certificates</u>	<u>Total Certificates</u>	<u>Estimated Value</u>
MA Class I & II	8,655	8,580	17,235	\$ 275,380
CT Class I	2,218	3,356	3,356	89,184
RI Class I	<u>8</u>	<u>20</u>	<u>20</u>	<u>828</u>
Total	<u>10,881</u>	<u>11,956</u>	<u>20,611</u>	<u>\$ 365,392</u>

A banked REC is a REC that has been processed by the NEPOOL GIS Coordinator and is in the Department's GIS account. A projected REC is the Department's estimate of what will be received based on invoices generated by REC-producing projects that the Department has entitlements to.

Because there is no formal accounting guidance under GAAP or IFRS for RECs and the Department does not have a formal policy for the future disposition of RECs, the estimated fair value of the Department's REC holdings at June 30, 2017 are not recognized as an asset on the proprietary fund Statements of Net Position.

21. Leases

Related Party Transaction - Property Sub-Lease

The Department is the lessor of facilities that are currently sub-leased to the Reading Town Employees Federal Credit Union. The original sub-lease agreement commenced in December 2000 and was extended by various amendments through November 30, 2017. Following is the future minimum rental income to be received by the Department under the terms of this lease for the year ending June 30:

2018	\$ <u>4,084</u>
Total	\$ <u>4,084</u>

Operating Lease - Warehouse

The Department is the lessee of a warehouse facility owned by JCM Real Estate Trust. The original lease agreement for this facility commenced in December 1998 and was extended by various amendments through May 31, 2016. Under the terms of the most recent lease amendment, the Department has exercised the option to extend the lease for an additional 24 months until May 31, 2018. Following is the future minimum rental expense to be paid by the Department for the year ending June 30:

2018	\$ <u>147,902</u>
Total	\$ <u>147,902</u>

22. Beginning Net Position Restatement and Reclassification

In fiscal year 2017 the Governmental Accounting Standards Board released Implementation Guide No. 2017-1. The implementation guide states that a municipality cannot reduce their net pension liability by the value of a separate pension trust. Furthermore, the implementation guides states that the pension trust should be presented as part of the proprietary statement of net position and not a separate fiduciary fund. As a result of this implementation guide, the beginning (July 1, 2015) net position of the Department's proprietary and fiduciary funds has been restated and reclassified as follows:

	<u>Business-Type Activities</u>	<u>Fiduciary Funds</u>
	Proprietary <u>Fund</u>	Pension Trust <u>Fund</u>
As previously reported	\$ 101,445,083	\$ 5,450,833
Reclassification to Business-Type Activities	5,450,833	(5,450,833)
GASB 68 Restatement	<u>(5,440,472)</u>	<u>-</u>
As restated	<u>\$ 101,455,444</u>	<u>\$ -</u>

23. Implementation of New GASB Standard

The Governmental Accounting Standards Board (GASB) has issued Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions, replacing requirements of Statements No. 45 and 57, effective for the Department beginning with its year ending June 30, 2018. This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. In addition, this Statement details the recognition and disclosure requirements for employers with payables to defined benefit OPEB plans that are administered through trusts that meet the specific criteria and for employers whose employees are provided with defined contribution OPEB.

TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

SCHEDULE OF PROPORTIONATE SHARE
OF THE NET PENSION LIABILITY (GASB 68)

JUNE 30, 2017
(Unaudited)

Reading Contributory Retirement System						
<u>Fiscal Year</u>	<u>Measurement Date</u>	<u>Proportion of the Net Pension Liability</u>	<u>Proportionate Share of the Net Pension Liability</u>	<u>Covered Payroll</u>	<u>Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll</u>	<u>Plan Fiduciary Net Position Percentage of the Total Pension Liability</u>
June 30, 2017	December 31, 2016	29.15%	\$13,076,538	\$ 6,393,765	204.52%	73.43%
June 30, 2016	December 31, 2015	28.25%	\$12,862,732	\$ 6,147,851	209.22%	72.17%
June 30, 2015	December 31, 2014	28.25%	\$8,464,663	\$ 5,908,694	143.26%	79.89%

Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

SCHEDULE OF PENSION CONTRIBUTIONS (GASB 68)

JUNE 30, 2017
(Unaudited)

Reading Contributory Retirement System					
<u>Fiscal Year</u>	<u>Contractually Required Contribution</u>	<u>Contributions in Relation to the Contractually Required Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll</u>	<u>Contributions as a Percentage of Covered Payroll</u>
June 30, 2017	\$ 1,579,345	\$ 1,579,345	\$ -	\$ 6,393,765	24.70%
June 30, 2016	\$ 1,461,650	\$ 1,461,650	\$ -	\$ 6,147,851	23.77%
June 30, 2015	\$ 1,401,638	\$ 1,401,638	\$ -	\$ 5,908,694	23.72%

Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

See Independent Auditors' Report.

**TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT
SCHEDULE OF OPEB FUNDING PROGRESS (GASB 45)**

**June 30, 2017
(Unaudited)**

Other Post-Employment Benefits

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percent- age of Covered Payroll [(b-a)/c]
06/30/17	\$ 2,857,072	\$ 10,015,425	\$ 7,158,353	28.53%	N/A	N/A
06/30/14	\$ 1,846,042	\$ 7,726,667	\$ 5,880,625	23.89%	N/A	N/A
06/30/13	\$ 1,495,511	\$ 7,588,993	\$ 6,093,482	19.71%	N/A	N/A
06/30/11	\$ 1,167,161	\$ 8,643,438	\$ 7,476,277	13.50%	N/A	N/A
06/30/08	\$ -	\$ 8,085,388	\$ 8,085,388	0.00%	N/A	N/A

See Independent Auditors' Report.

**TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT
OTHER POST-EMPLOYMENT BENEFITS (OPEB)**

Schedule of Changes in the Net OPEB Liability (GASB 74)

(Unaudited)

	<u>2017</u>
Total OPEB liability	
Service cost	\$ 245,842
Interest on unfunded liability - time value of \$	698,939
Benefit payments, including refunds of member contributions	<u>(485,573)</u>
Net change in total OPEB liability	459,208
Total OPEB liability - beginning	<u>9,556,217</u>
Total OPEB liability - ending (a)	<u>\$ 10,015,425</u>
 Plan fiduciary net position	
Contributions - employer	\$ 794,319
Net investment income	22,484
Benefit payments, including refunds of member contributions	<u>(485,573)</u>
Net change in plan fiduciary net position	331,230
Plan fiduciary net position - beginning	<u>2,525,842</u>
Plan fiduciary net position - ending (b)	<u>\$ 2,857,072</u>
 Net OPEB liability (asset) - ending (a-b)*	<u>\$ 7,158,353</u>

*Materially agrees with Statement of Fiduciary Net Position

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See notes to the Department's financial statements for summary of significant actuarial methods and assumptions.

See Independent Auditors' Report.

**TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT
OTHER POST-EMPLOYMENT BENEFITS (OPEB)**

Schedules of Net OPEB Liability, Contributions, and Investment Returns (GASB 74)

(Unaudited)

Schedule of Net OPEB Liability

	<u>2017</u>
Total OPEB liability	\$ 10,015,425
Plan fiduciary net position	<u>2,857,072</u>
Net OPEB liability (asset)	<u><u>\$ 7,158,353</u></u>
Plan fiduciary net position as a percentage of the total OPEB liability	28.5%
Covered payroll	unavailable
Participating employer net OPEB liability (asset) as a percentage of covered payroll	unavailable

Schedule of Contributions

	<u>2017</u>
Actuarially determined contribution	\$ 932,387
Contributions in relation to the actuarially determined contribution	<u>794,319</u>
Contribution deficiency (excess)	<u><u>\$ 138,068</u></u>
Covered payroll	unavailable
Contributions as a percentage of covered payroll	unavailable

*Schedules are intended to show information for 10 years.
Additional years will be displayed as they become available.*

See notes to Department's financial statements for summary of significant actuarial methods and assumptions.

See Independent Auditors' Report.

