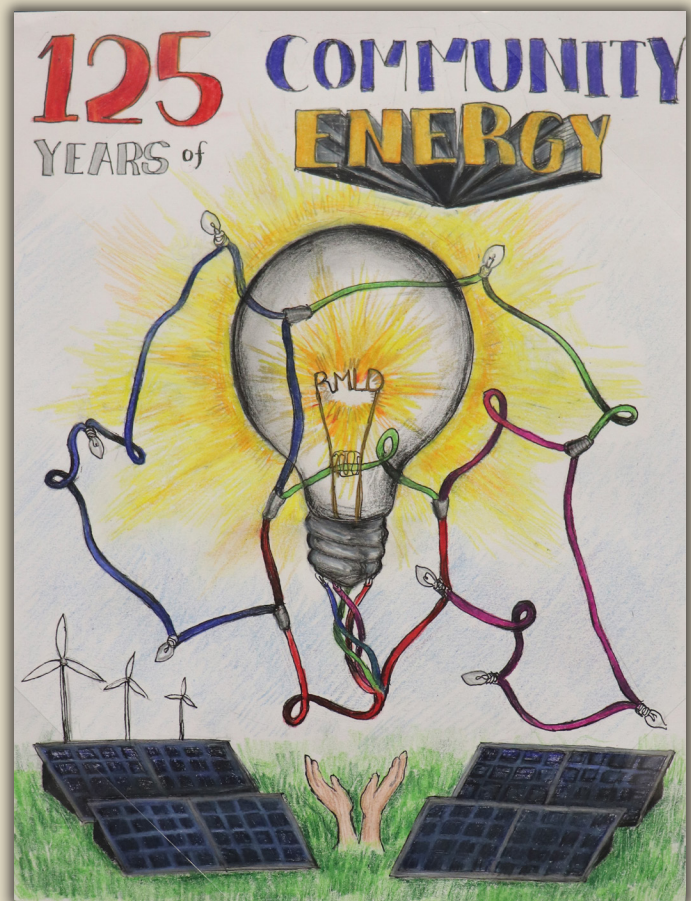
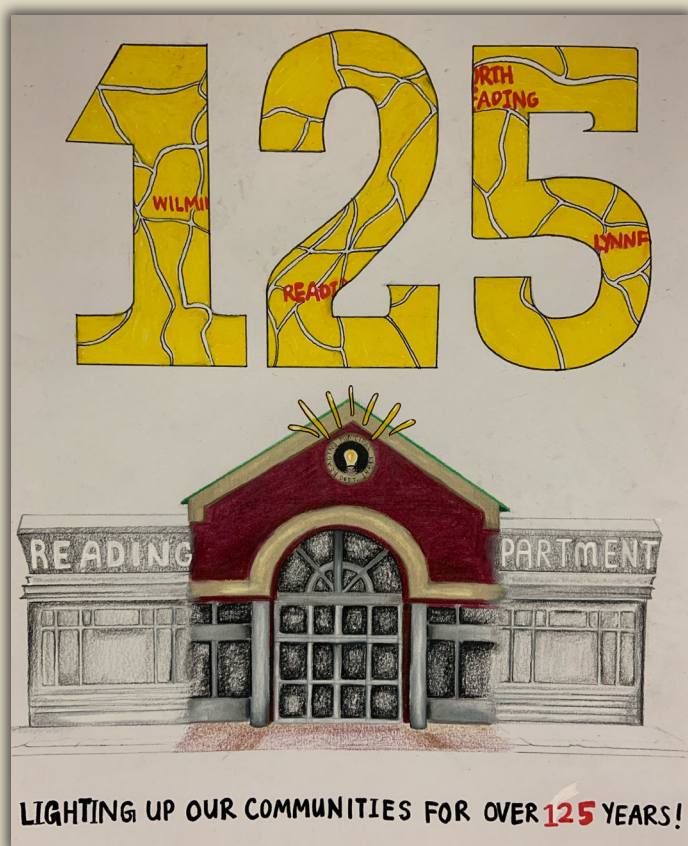


# Reading Municipal Light Department --- ANNUAL REPORT 2019



**THE  
POWER  
OF  
COMMUNITY**

# HIGH SCHOOL STUDENT ART CONTEST WINNERS PICTURED ON COVER

**Top Right**

**“Light up as a Community”  
Jesse Ding, Grade 11  
Wilmington**

---

**Bottom Right**

**“125 Years Through History”  
Yuzhe (Charlie) Tian, Grade 11  
Reading**

---

**Top Left**

**“125 Years of Connection”  
Nessren Ourdyl, Grade 11  
North Reading**

---

**Bottom Left**

**“Continuing to Thrive at 125”  
Laura Buscemi, Grade 12  
North Reading**



# READING MUNICIPAL LIGHT DEPARTMENT

Founded in 1894, Reading Municipal Light Department (RMLD) is a municipal electric utility serving over 68,000 residents in the towns of Reading, North Reading, Wilmington, and Lynnfield Center. RMLD has over 29,000 meter connections within its 51 square mile service territory. Residential customers account for approximately one-third of RMLD’s electricity sales while commercial, industrial, and municipal customers account for about two-thirds of sales. There are over 3,000 commercial and/or industrial customers in the communities RMLD serves.

RMLD is the largest (in terms of electrical load) of 41 Massachusetts municipal light utilities and is not-for-profit, locally owned, and locally controlled.

A five-member Board of Light Commissioners, elected by Reading voters, governs the utility. A Citizens’ Advisory Board, appointed by the four communities RMLD serves, makes recommendations to the Board of Commissioners.

Residents Served	Service Towns	Meters	Service Area
68K+	4	29K+	51 sq. miles

RMLD



Reading Municipal Light Department  
RELIABLE POWER



# BOARD OF COMMISSIONERS



**David Talbot**  
Chair



**John Stempeck**  
Vice-Chair



**David Hennessy**  
Commissioner



**Philip Pacino**  
Commissioner



**Thomas O'Rourke**  
Commissioner

## CITIZENS' ADVISORY BOARD



*Top Row (left to right):*

**Dennis Kelley**  
Chair - Wilmington



**Jason Small**  
Vice-Chair - North Reading



**Vivek Soni**  
Secretary - Lynnfield (through June), Reading  
(August forward)

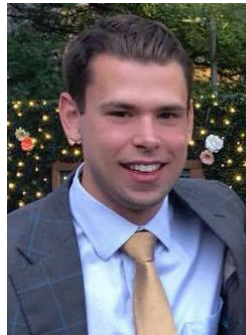


*Bottom Row (left to right):*

**George Hooper**  
Wilmington Representative



**Neil Cohen**  
Reading Representative (through July)



**Joseph Markey**  
Lynnfield Representative (October forward)

# To Our Customers

Each year the RMLD chooses a theme for its Annual Report that reflects on a mission goal. These themes become building blocks and do not end with each year, but rather compound forward for continued process improvement:

2014 - Be Efficient, Get Greener, Go Paperless

2015 - Peak Performance

2016 - Shred the Peak

2017 - Strategic Vision

2018 - Electrification

**2019 - The Power of Community**

Every theme is inspired by our customers. This year's theme, The Power of Community, reflects our ability to achieve anything if we work together, both as a utility and as a community. While change can often be met with some level of apprehension, together we continue to achieve the goals of the themes.

As a community-owned public power utility, community is the basis for many of RMLD's initiatives. RMLD programs, learning videos, civic events, rebate incentives, etc. are developed and continuously refined through community response; adapted internally and rolled out externally.

One such initiative in 2019 was the completion and operation of a 10 megawatt-hour lithium ion Battery Energy Storage System (BESS) to help RMLD "Shred the Peak." This project was completed in partnership with stakeholders from the clean energy sector, state and local government, and private industry. The unit is operated when New England power supply demand is at its highest, reducing related transmission and capacity fees, a direct savings for RMLD customers. The BESS can also help to reduce the need for less efficient and higher carbon emitting New England peaking generators, thereby helping the environment - a collective benefit for us all.

The development of RMLD's Community Shared Solar projects, Solar Choice I & II, and a third project planned for the future, is another excellent example of working together to achieve progress. Feedback from our customers who are not able to install roof top solar units but want to share in the benefits of cleaner energy made

these projects winning community ideas. In addition to participating customers receiving the capacity and transmission benefits of a large scale solar project within the RMLD service territory, the upcoming project further provides credits to those customers who elect to invest in individual panels as if they were on their own roof.

The Power of the Community is a fascinating phenomenon in change management and there is and may never again in our lives be a more pronounced illustration of that power than in the ongoing COVID-19 crisis. It is by the Power of the Community that immediate steps were taken to establish, organize and implement the changes needed to keep our community safe through this unprecedented time. Social distancing measures, remote work locations, virtual public meetings, and immediate care for those in need of support are all community actions taken. This collective adaptation makes us proud of being able to stand and work together.

As the RMLD selected this year's theme and pondered each finalist high school student's artwork for the cover, it became apparent that each was a true representation of the Power of the Community. Young adults who made volunteer community time to listen to the themed goals of the RMLD and to depict in a visually creative art form how they envision the RMLD as a part of a whole, was empowering and impressive. A testament by the next generation that the Power of the Community works to enable success of our community goals.

Wishing all of the RMLD staff and each of our customers wellness and safety.

**Coleen O'Brien**  
General Manager



# HIGHLIGHTS

RMLD continues to advance its programs and initiatives to improve overall electric system performance and increase organizational efficiency and productivity. Highlights from 2019 include:

- Continued strategic planning to address revenue generating opportunities through economic development and programs.
- Completed the installation of a 5 MW, 10 MHW Battery Energy Storage System (BESS) at the North Reading Substation to support Shredding the Peak; the unit became operational in June and is successfully offsetting peak wholesale market costs.
- Continued installation and testing of the system components that make up the Customer Notification System (CNS) including the SpryEngage opt-in portal, the Outage Management System (OMS), and the Integrated Voice Response (IVR) System. Once complete, the CNS will provide automated unplanned outage communications via phone, text, and email. Additional alert categories will be rolled out in Phase 2.
- Participated in the Commonwealth's Municipal Light Plant (MLP) Solar Rebate program by designating \$250,000 in funding, which was matched by the Commonwealth, to offer a more attractive rebate to customers installing solar systems that are 25 kW in size or less; offered a solar workshop to customers interested in learning more about installing solar.
- Expanded residential Plug-in Electric Vehicle (PEV) Charging Station Rebate Program and continued PEV education and outreach; began planning process for additional electrification related rebate programs.
- Completed significant system reliability upgrades throughout RMLD's service territory.
- Continued planning and design for new Wilmington substation to address existing capacity.
- Continued to study and implement reorganizational changes to reflect best business utility practices.

Staff's 2019 accomplishments are detailed on the following pages.

## 2019 STATISTICS

### Earned American Public Power Association's Certificate of Excellence in Reliability

**System Peak Demand** - 155,117 kW occurring on July 30, 2019, at 2:00 pm. This was 10.07% lower than the highest peak demand of 172,493 kW set in August 2006.

**Retail Sales** - 647,214,654 kWh

**Pole Installations and Replacements** - 75

**Meter Replacements** - 507

**DigSafe Calls** - 5,313

#### **New Services:**

Reading – 189 residential; 10 commercial/industrial; Wilmington – 32 residential; 11 commercial/industrial; North Reading – 123 residential; 15 commercial/industrial; Lynnfield – 4 residential; 1 commercial/industrial

TOTAL: 348 new residential services represent a 138% increase from those installed in 2018. 37 new commercial/industrial services represent a 37% increase from those installed in 2018.



# LEADERSHIP

- Continued to engage, inspire, motivate, and support the impact of change management for continued RMLD success.
- Continued to educate the reactive and proactive nature of the electric utility model through the development of emergency/non-emergency procedures and short- and long-term range planning.
- Staffed vacant HR position with a highly qualified HR professional to manage HR programs, Career Development Plan, employment law compliance, benefits administration, talent acquisition/management, succession planning, and management-labor business/negotiations.
- Continued cyclic policy review for Board of Commissioner approval and legal compliance.
- Continued to study and implement reorganizational changes to reflect best business utility practices.
- Continued implementation of long-term Reliability Study recommendations.
- 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.
- Continued development of internal efficiency and automation measures within the electric and business continuity processes including SharePoint documentation organization, division dashboards, and electronic signature implementation.
- Continued strategic planning efforts within each division and holistically as the RMLD; generated and/or updated roadmaps in all divisions: Integrated Resources (wholesale power supply, retail programs/rebates, customer service), Finance, Engineering and Operations (system reliability), and Communications.
- Continued implementation of new smart grid system and Outage Management System.
- Ensured all capital and maintenance work was achieved as delineated in the plan.
- Provided significant legislative advocacy in support of public power; Provided critical input to Washington D.C. legislators in support of RMLD and other Massachusetts MLPs while attending NEPPA legislative rally; Original pioneer of the concept of the proposed "Golden Bill" which would establish greenhouse gas emissions standards for Massachusetts MLPs.
- Implemented recommended renewable and sustainable portfolio resources to address greenhouse gas emissions.
- Continued 6-year transparent budget and financial plan.
- Successfully transitioned from fiscal to calendar year for financial alignment with DPU with avoided costs; received clean audit results with no management letter.
- Held quarterly business/financial meetings with the Town of Reading to strengthen communications and improve collaboration.
- Continued to obtain substantial savings for our customers through avoided costs resulting from the following efforts: redirect OT, aggressive predictive and preventative inspection and testing program, in-house certification training to mitigate outside services costs, battery and generator operation to "Shred the Peak" for capacity and transmission reductions, and development of new rebate program incentives to reduce carbon.



*Original Power Station (now decommissioned)*

# COMMUNICATIONS AND COMMUNITY RELATIONS

- Created campaign and materials to commemorate RMLD's 125th anniversary.
- Held a Homeowner Information Session in each of the four communities to educate residential customers regarding their electric service, RMLD programs, and ways to be more energy efficient.
- Held a Commercial Customer Information Session to educate small businesses regarding their electric service and available energy efficiency programs.
- Held 6th Annual Public Power Open House.
- Held ribbon cutting ceremony for new Battery Energy Storage System (BESS), which became operational in June.
- Held Electric Car Show at the Wilmington Farmers Market In partnership with local EV dealers and owners to provide hands-on education to customers regarding plug-in electric vehicles.
- Held Solar Workshop to provide education and information to customers interested in installing solar at their home or business.
- Continued annual school education programs including Elementary Student Art Contest and High School Student Art Contest.
- Held successful coat drive in conjunction with the distribution of the 2020 historical calendar, donating approximately 325 collected coats to Anton's Cleaners Coats for Kids campaign.
- Hosted multiple scout groups, presenting tailored educational programs covering electricity, electrical safety, and energy conservation.
- Split bi-monthly newsletter by class to provide more targeted information to customers.
- Continued residential Shred the Peak program, expanding the opt-in email list for alerts to approximately 2,400 customers.
- Continued use and promotion of Twitter to communicate area outage information and Shred the Peak alerts.
- Continued monthly welcome email to educate new RMLD customers on available programs and services.
- Met with Town Managers and Boards of Selectman bi-annually and provided presentation updates.
- Continued Storm Liaison role to provide Town leadership a direct line of communication with RMLD during storms.
- Worked to develop a strong communication effort between Town Selectmen, RMLD Board of Commissioners, and CAB members.
- 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.
- Continued relationship with ENE government affairs spokesperson from North Reading to support municipal agendas on The Hill.
- Provided critical advocacy in support of RMLD and other Massachusetts MLPs to Washington D.C. legislators while attending NEPPA legislative rally.



# BUSINESS/FINANCE AND INFORMATION TECHNOLOGY

- Successful completion of the Financial Audit with positive results.
- Successful completion and approval of Operating Budget.
- Successful Department of Public Utilities return compilation and filing.
- Completed documentation of Strategic Plan outline for the Business Division.
- Successful recording, reporting, and receipts of approximately \$200K in FEMA reimbursements.
- Continual revision and documentation of accounting and billing processes and procedures.
- Held quarterly business/financial meetings with the Town of Reading to strengthen communications and improve collaboration.
- Replaced all Virtual Machine physical servers and updated to new version.
- Migrated vCenter Server from Windows to Linux appliances which provides more functionality and is more secure.
- Installed Eaton UPS(s) for power backup in both 1st & 2nd floor data centers.
- Extended wireless internet access to cover complete garage and surrounding areas.
- Updated SharePoint Online to Office 365 version: redesigned the home page and search page results, and improved the search engine for RMLD's stored documents.
- Updated backup system and migrated to a new server.
- Oversaw successful migration from Win 7 to Win 10 on all workstations, including replacing old desktops and laptops with new ones.
- Security:
  - Reviewed entire internal network; reconfigured and updated Active Directory.
  - Managed the process of installing multiple antivirus protections on all endpoints.
  - Decommissioned all MS Server 2003-2008 software and related components.
  - Added new domain controller for enhanced security.
  - Installed and configured additional email protection.
  - Created and configured point-to-point VPNs with trusted vendors.
  - Added mandatory password changes and multifactor authentication for all employees.
  - Implemented advanced threat protection, including performing simulated attacks to assure cyber security.
- Database:
  - Successfully downloaded ISO forecast and real-time hourly reads.
  - Created a monthly report that captures all components of retail bills by rate category for billing determinants, and provided exception list to appropriate departments to check errors.
  - Created cloud data warehouse.
  - Created transformer load report that tracks utilization for the purpose of managing lifespan for improved system reliability.
  - Identified multiple residential customers missing transformer information and brought to the attention of appropriate staff for resolution.
  - Created Integrated Resources Power BI dashboard.
  - Built or modified SmartLists and SQL Server Reporting Services reports.
- Billing:
  - Completed streetlight review for all 4 towns.
  - Worked with Invoice Cloud to redirect payments to go through their new payment processing vendor (Chase).

# TALENT MANAGEMENT AND HUMAN RESOURCES

- Staffed vacant HR position with a highly qualified HR professional to manage HR programs, Career Development Plan, employment law compliance, benefits administration, talent acquisition/management, succession planning, and management-labor business/negotiations.
- Automated and consolidated all human resources files.
- Continued Phase II of updating department job descriptions.
- Working with RMLD software vendor and insurance vendor to continue automation of some HR functions.
- Continued review and updating of RMLD HR policies.
- Completed DOT Drug/Alcohol Supervisor's training.
- Completed biannual CPR/Defibrillator training for office and management staff.



***Lineman Demo at RMLD Annual Public Power Open House***



# INTEGRATED RESOURCES

## POWER SUPPLY/RATES, REBATE PROGRAMS, CUSTOMER SERVICE

- Continued efforts to offset wholesale power supply (capacity and transmission) costs related to peak demand (“Shred the Peak”). The following efforts produced a net savings of approximately \$1,071,000; these savings are passed directly to RMLD customers:
  - Completed installation of 5 MW, 10 MWh lithium ion Battery Energy Storage System (BESS) Project at Substation 3. The unit became operational June 1, 2019 and is successfully offsetting peak wholesale market costs.
  - Utilized 2.5 MW Distributed Generator located at Substation 3 during expensive peak hours.
  - Promoted residential Shred the Peak program and continued to enroll customers for email alerts (over 2,400 currently). An estimated 1,200 customers shred a cumulative 0.6 MW.
- Continued Peak Demand Reduction (PDR) Program for our “500 Club” commercial, industrial, and municipal customers to effectively promote demand management and reward key accounts who achieve load shed during events. Thirteen of our customers enrolled in the PDR Program achieved a total load-shedding of about 6.8 MW for 2019, resulting in approximately \$58,000 in earned credits.
- Solar Choice 1, with a rating of 1 MW, produced 1,549,000 kWh. Solar Choice 2, with a rating of 1.7 MW, produced 2,314,378 kWh. The output from these two Solar Choice Projects during peak demand hours saved a combined total of about \$49,000 in 2019; these savings were distributed amongst program participants.
- Launched updated residential plug-in electric vehicle charging station rebate to offer more attractive incentives to customers while encouraging charging during off-peak hours and obtaining charging data for utility analysis.
- Held National Drive Electric Week Electric Car Show event to promote understanding of electric vehicles and awareness of RMLD’s plug-in electric vehicle programs.
- Partnered with the Massachusetts Department of Energy Resources to offer customers installing solar systems that are 25 kw in size or less a more lucrative rebate through the MLP Solar Rebate program. Half of the funding for this limited-time rebate is provided by the DOER, and the other half is provided by the RMLD. In 2019, five projects were completed under this program.



***Completed Battery Energy Storage System (BESS)***

# INTEGRATED RESOURCES (CONT.)

## POWER SUPPLY/RATES, REBATE PROGRAMS, CUSTOMER SERVICE

- Conducted a Solar Workshop to increase awareness of solar energy and opportunities for RMLD ratepayers to acquire solar energy resources, either individually or collectively, within RMLD's service territory.
- Continued promotion of RMLD's online energy efficiency store.
- Continued Risk Management Strategy for power supply procurement utilizing price and time triggers.
- Continued Renewable Energy Credit (REC) sales.
- Continued power supply strategic planning with the goal of stabilizing wholesale power supply costs and mitigating various portfolio risks.
- Attended ISO-NE's Participant Committee Meetings with State Regulators and ISO-NE Boardmembers.
- Actively participated in Towns' economic development discussions.
- Attended several technical seminars on Energy Storage applications for the Utility Industry.
- Filled two IRD positions with new hires that bring staffing levels to just shy of full, allowing IRD to significantly advance electrification, efficiency, and carbon-free generation efforts.
- Re-acquired stock and a Board seat in Energy New England (ENE); ENE provides wholesale and retail support services to RMLD and other municipal electric systems throughout New England.
- Developed new tools for tracking performance and evaluating economics of power supply portfolio resources.
- Developed or augmented in-house analysis templates to assist customers in evaluating solar options and other customer-specific energy activities.
- Developed or augmented templates to improve in-house support functions for data analysis and forecasting; this effort will enhance planning and operating efforts throughout RMLD.

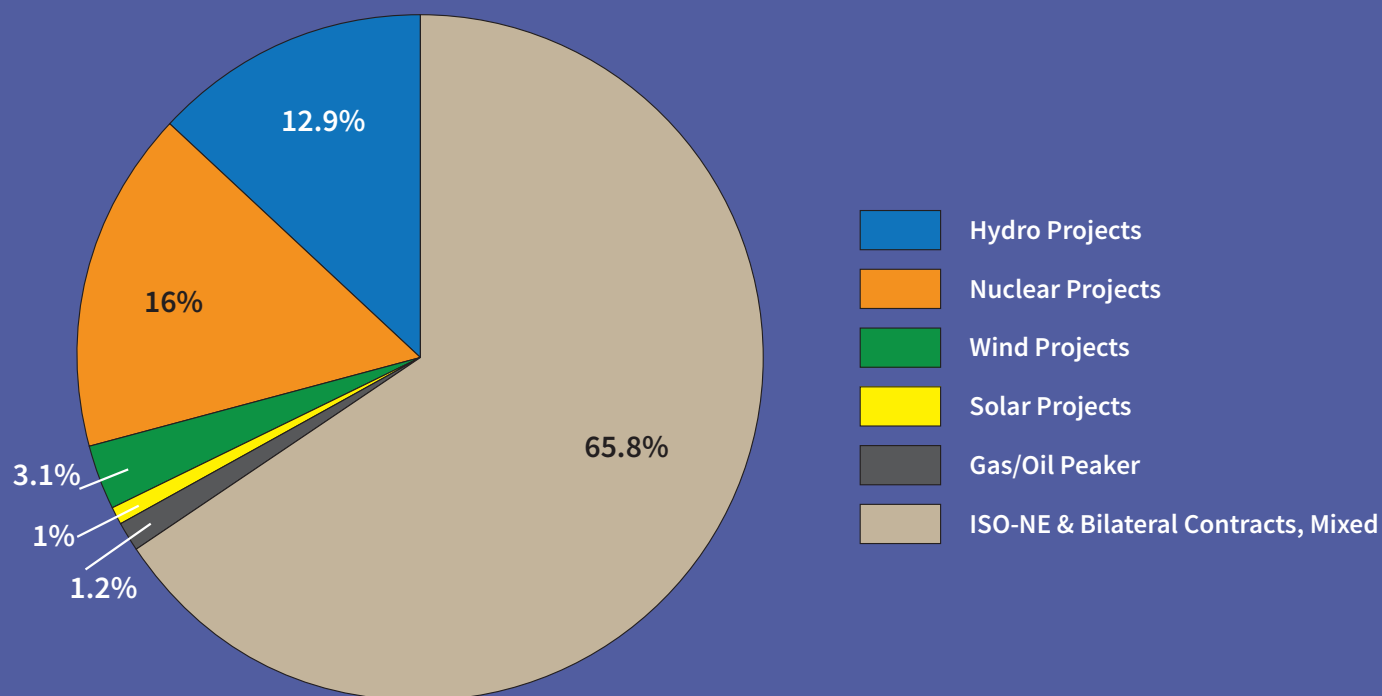
### PROGRAM PARTICIPATION

<b>Energy and Lighting Rebates (commercial)</b>	<b>24</b>
<b>Solar - RMLD and MLP Rebates (residential)</b>	<b>9</b>
<b>Energy Star Appliance Rebates (residential)</b>	<b>805*</b>
<b>Electric Vehicle Charging Station Rebates (residential)</b>	<b>28*</b>
<b>Home Energy Assessments (residential)</b>	<b>230*</b>
<b>Energy Savings (kWh and kW)</b>	<b>1,963,350 kWh, 464.5 kW savings</b>

\*Updated on August 3, 2020 to reflect corrected values.



# POWER SUPPLY BY RESOURCE 2019



## HYDRO PROJECTS

NAME	DURATION	MWH	%
NYPA	2002-2025	30,551	4.5%
FIRST LIGHT	2019-2023	13,241	2.0%
ASPINOOK	2016-2022	12,511	1.9%
COLLINS	2013-2028	4,772	0.7%
HOISERY MILLS	2014-2024	4,213	0.6%
INDIAN RIVER	2011-2026	2,087	0.3%
PEPPERELL	2011-2026	7,610	1.1%
TURNERS FALLS	2011-2026	1,036	0.2%
WORONOCO	2011-2026	6,020	0.9%
PIONEER	2013-2028	5,378	0.8%

## GAS/OIL PEAKER

NAME	DURATION	MWH	%
STONY BROOK INTERMEDIATE	LIFE OF UNIT	6,468	1.0%
STONY BROOK PEAKING	LIFE OF UNIT	297	0.0%
BRAINTREE WATSON	2009-2029	1,239	0.2%

## NUCLEAR PROJECTS

NAME	DURATION	MWH	%
MILLSTONE	1986-2045	38,369	5.7%
SEABROOK	1990-2050	69,943	10.3%

## WIND PROJECTS

NAME	DURATION	MWH	%
JERICHO	2015-2035	5,976	0.9%
SADDLEBACK	2015-2035	15,173	2.2%

## SOLAR PROJECTS

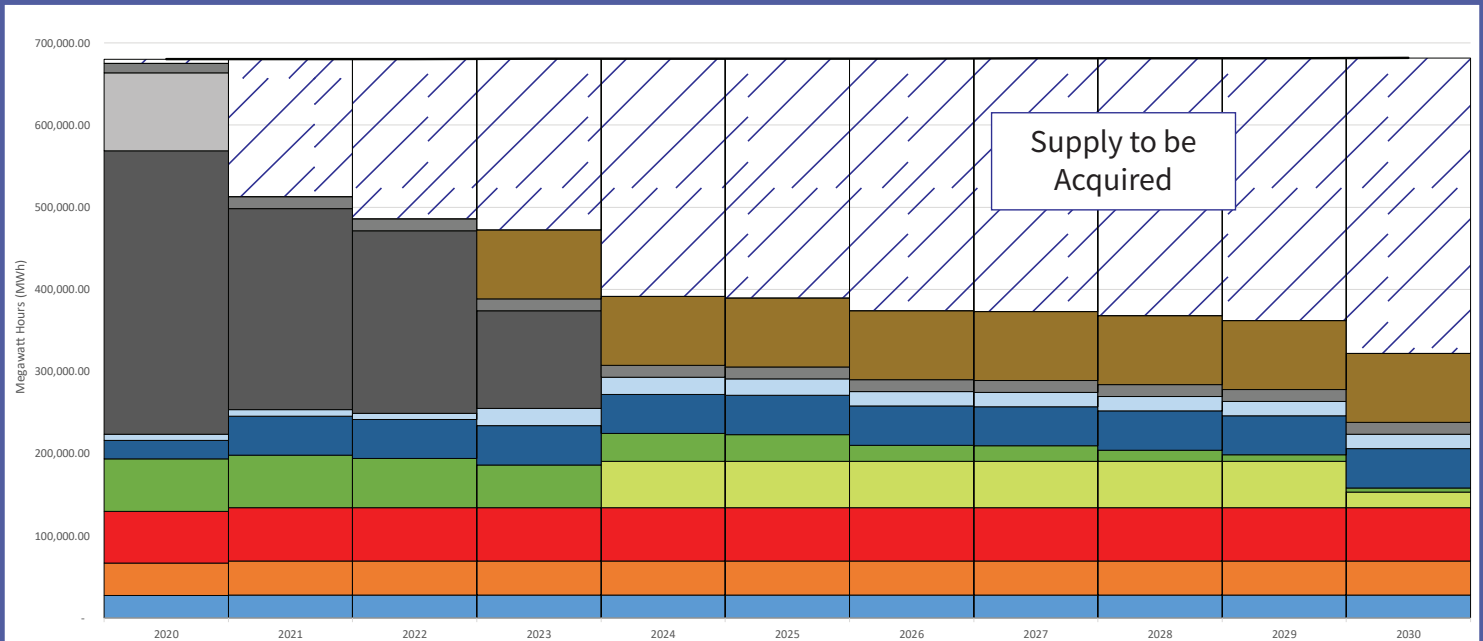
NAME	DURATION	MWH	%
KEARAGE	2017-2037	2,314	0.3%
ALTUS POWER	2017-2037	1,549	0.2%
ONE BURLINGTON	2015-2025	2,702	0.4%

## ISO-NE & BILATERAL CONTRACTS, MIXED

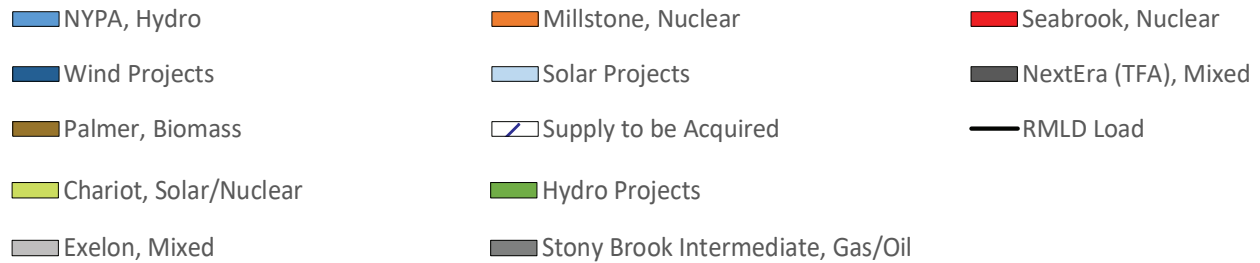
NAME	DURATION	MWH	%
EXELON	2016-2019	76,694	11.3%
NEXTERA	2016-2023	367,667	54.4%

# POWER SUPPLY OUTLOOK

2020 - 2030



As of April 1, 2020





# SYSTEM RELIABILITY

- Continued Implementation of long-term reliability study recommendations and utility best practices.
- Fiber was installed and terminated at Station 4 and spliced together with Eversource's fiber on the 115Kv transmission poles. This fiber extension was necessary for the NPCC mandated Directory 1 Project, which is establishing relay communication between bulk power transmission substations via fiber for more reliable bulk power relay protection. The fiber will also be utilized for communication between Eversource and RMLD for load data, meter data, and the status of RMLD's substation equipment at Station 3 and 4.
- Continued Implementation of Long-Term Distribution Automation Roadmap.
- Installed four Scada-Mate switches (two in Wilmington and two in Reading) bringing the total number of Scada-Mate switches system-wide to 16. Installed two IntelliRupter switches (one in Wilmington and one in Reading) bringing the total number of switches system-wide to four.
- Installed Outage Management System (OMS) and Interactive Voice Response (IVR) System to integrate with Customer Notification System (CNS), enabling automated communication to customers regarding unplanned outages and restoration timelines.
- Continued expansion of mesh network and installation of AMI meters.
- Switchgear Upgrade at Industrial Parks Continued:
  - Replaced four (4) pad-mounted Switchgear at Jonspin Road in Wilmington.
- Substation Upgrades:
  - Continued updates to configuration as well as maintenance for improved functionality and operation including 115kV personal grounding equipment at Station 3 and 4, and remote racking device at Station 3.
  - Continued negotiations for land to build new substation in Wilmington to replace Substation 5.
- Comprehensive On-Going System Maintenance Programs:
  - Pole Inspection and Replacement Program: 4,075 poles have been inspected and 277 poles have been replaced since 2015
  - Manhole Inspections: on-going
  - Aged Transformer Replacement Program: 59 overhead and 24 pad-mount transformers were replaced
  - Porcelain Cutout Replacement Program: 92% complete
  - Tree Trimming and Vegetation Management Program: 1,331 spans trimmed
  - Annual inspection of 13.8kV/35kV Distribution Feeders: all circuits inspected
  - Secondary Main and Service Inspection/Upgrade Program: ongoing
  - Infrared Scan of Substations and Major Underground Facilities at Business Parks: ongoing
  - Substation Equipment Testing and Maintenance (i.e., relays, transformers, breakers, etc.): on track with cyclic maintenance program
- Safety:
  - Quarterly Electrical Safety Committee meetings
  - Safety inspection of job sites
  - NEPPA on-site safety training
  - Continued implementation and remediation to meet state-wide OSHA requirements
- Regulatory:
  - Filed all NERC mandated compliance standards to ensure RMLD stays in compliance

# SYSTEM RELIABILITY (CONT.)

## System Upgrades

### Reading:

- 4W5/4W12 Getaway Upgrades - Separated 4W5 and 4W12 getaways, and installed a cable tray system and associate hardware to improve feeder capacity. Project also included installation of two (2) new riser poles and upgrade or replacement of poles and associated hardware from Station 4 to West Street.
- 4W6 Getaway Replacement - upgrade of 1,635 circuit feet of underground cable from Station 4 to West Street.
- 4W16 Getaway Replacement - upgrade of 2,500 circuit feet of underground cable from Station 4 to Causeway Road/Lowell Street.
- Franklin & Grove Street Pole Upgrade - Pole 36 on Grove Street was upgraded to alleviate excess loading. This required the installation of an intermediate pole on Franklin Street as well as a new pole and associated hardware to replace the failing pole (#36) on Grove Street.
- Deborah Drive Area Upgrade - replaced nine (9) poles, primary and secondary cable, transformers, and services, as necessary.
- Applegate Lane/Covey Hill Road Area Upgrade - replaced five (5) poles and upgraded approximately 1,100 feet of primary cable. Upgrade to ~800 feet of secondary cable and upgrade of secondary services.
- Back Bay Court - replaced one pad-mount transformer
- Gazebo Circle - replaced one pad-mount transformer
- Lafayette Road - replace one pad-mount transformer
- Scotland Road - replaced one overhead transformer

### Wilmington:

- Replaced approximately 1,000 feet of open wire primary cable with 336 AL spacer cable between Andover Street and Salem Street on the 5W5 circuit. This included five new poles and associated hardware.
- Installed 2,050 feet of three-phase underground cable and 1,000 feet of overhead spacer cable and related hardware to upgrade the service feeding Marion Street and Eleanor Drive.
- McDonald Road Conversion - converted the distribution voltage in the McDonald Road area from 2,400 volts to 7,970 volts. The distribution voltage was raised to 7,970 by de-energizing the area, changing the ratio switches on each transformer from 2,400 to 7,970, changing all the fuses, disconnecting and removing the stepdown transformer that are used to feed the area, and then re-energizing at 7,970 volts directly from circuit 5W8 on Salem Street.
- Grove Avenue Area Conversion - de-energized and removed the stepdown transformer, changed the ratio switches on each transformer to the 7,960 volt tap position, replaced the fuses for the new distribution voltage and re-energized the area at 7,960 volts.

### North Reading:

- Burditt Road Area Upgrade - Seven sections of open wire secondary were replaced with 4/0 ACSR secondary, and seven sections of #4 copper primary were replaced with 1/0 ACSR primary. Any copper services were upgraded with 1/0 ACSR triplex. Replaced two poles on Kingston Street and replaced two sections of primary and secondary. Three transformers serving this area were upgraded.

# SYSTEM RELIABILITY (CONT.)

- Abbott Road - replaced one overhead transformer.
- Gloria Lane - replaced one pad-mount transformer as well as the riser pole and all underground cable.

## Lynnfield:

- Gerry/Drury Road Area Upgrade (13.8kV Step-down) - Verizon replaced 40 poles, and RMLD replaced all primary cable, secondary cable, transformers, and services. The area was converted from 4kV distribution to 13.8kV distribution.
- Thomas, Putney, Bancroft and Atherton Area Upgrade (13.8kV Step-down) - Verizon replaced 44 poles, and RMLD replaced eleven transformers, all primary conductors, all secondary conductors, and residential service feeds. The area was converted from 4kV distribution to 13.8kV distribution.
- Essex Street Conversion - converted the distribution voltage from the stepdown transformer on pole 58 on Essex Street from 2,400 volts to 7,970 volts providing service to one pole mount transformer on Essex Street, and four pad-mount transformers in Woodwind Estates (Jordan Road, Currie Circle and Evans Road). Upgraded three of four transformers in Woodwind Estates and the pole mount transformer on Essex Street. The conversion was completed by de-energize the area, changing the ratio switches on each transformer from 2,400 to 7,970, changing all the fuses, disconnecting and removing the stepdown transformer, and re-energizing at 7,970 volts directly from circuit 3W8 on Essex Street.
- Todd Lane and Cranberry Lane, Lynnfield - two (2) pad-mount transformers and secondary connections in the manholes were replaced as well as 2,860 feet of primary underground cable.
- Friendship Lane - Replaced one aged pad-mount transformer and underground cable.
- Moran Road - Replaced one aged pad-mounted transformer and underground cable.

## Notable Service Additions or Upgrades

### Reading:

- PostMark Square, 136 Haven Street (temp service)
- School House Commons, 172 Woburn Street
- Lincoln Street Apartments, 35 Lincoln Street
- Old Reading School House Condos, 52 Sanborn Street
- Reading Woods, 16 Taylor Drive

### Wilmington:

- Heilind Electronics, 58 Jonspin Road
- NER Construction Management, 867 Woburn Street
- Analog Devices, 804 Woburn Street

### North Reading:

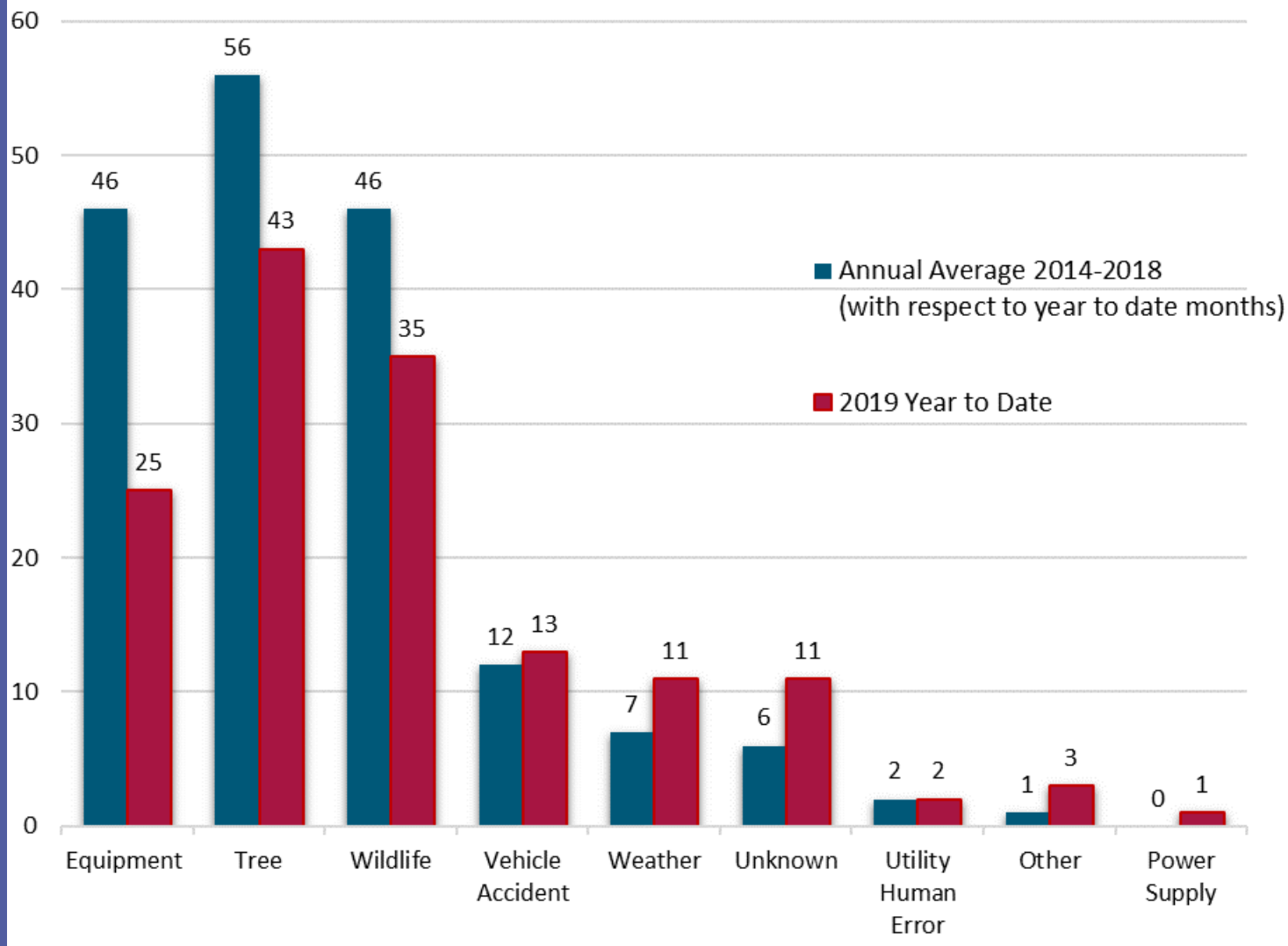
- Arenhall Corporation, 35 Main Street
- Martins Landing, 200-230 Martins Landing
- Pluff Realty, LLC, 291 Main Street



# OUTAGE CAUSES

## FROM ERELIABILITY WEBSITE

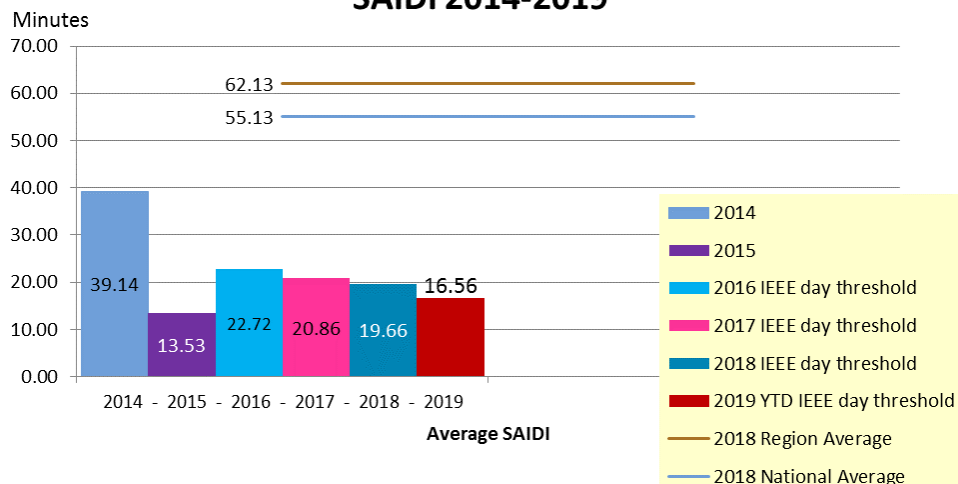
Causes of Outages as of December 2019



# SYSTEM RELIABILITY INDICES

Key industry standard metrics have been identified to enable the RMLD to measure and track system reliability. In 2019, RMLD earned the American Public Power Association's Certificate of Excellence in Reliability for its System Average Interruption Frequency Index (SAIFI).

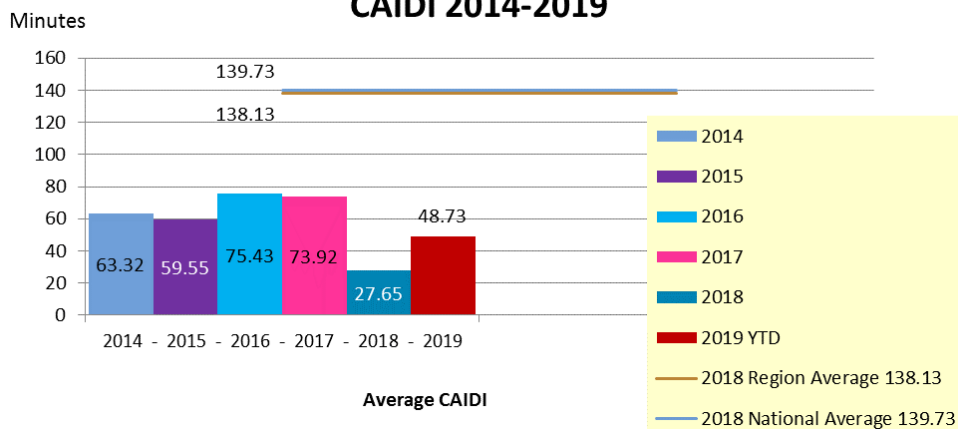
## SAIDI 2014-2019



**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.

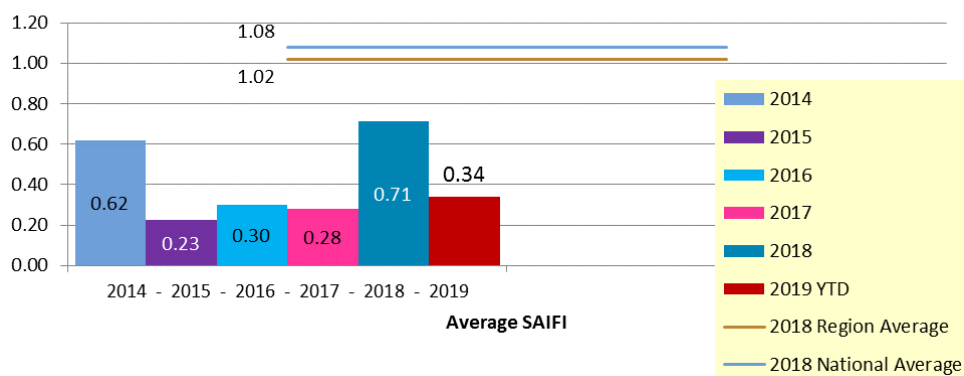
## CAIDI 2014-2019



**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.

## SAIFI 2014-2019



**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.

RMLD



Reading Municipal Light Department  
RELIABLE POWER

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

Financial Statements  
For the Year Ended December 31, 2019

(With Independent Auditors' Report Thereon)



## Reading Municipal Light Department

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## INDEPENDENT AUDITORS' REPORT

To the Municipal Light Board  
Town of Reading Municipal Light Department

### 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 December 31, 2019 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

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Greenfield, Massachusetts  
Ellsworth, Maine

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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 December 31, 2019, 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.

### **Other Matters**

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and certain Pension and OPEB schedules 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.

Andover, Massachusetts  
July 23, 2020



## 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 December 31, 2019. 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 Statement of Net Position, (2) the Proprietary Fund Statement of Revenues, Expenses and Changes in Net Position, (3) the Proprietary Fund Statement of Cash Flows, (4) the Fiduciary Funds Statement of Fiduciary Net Position, (5) the Fiduciary Funds Statement 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 business-type 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 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 Statement of Net Position is designed to indicate our financial position at a specific point in time. At December 31, 2019, it shows our net worth of \$116,708,945 which comprises \$80,350,454 invested in capital assets, \$8,334,981 and \$6,365,431 restricted for depreciation fund and the pension trust, and \$21,658,079 unrestricted.

The Proprietary Fund Statement 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 December 31, 2019 was \$4,319,136.

The Proprietary Fund Statement of Cash Flows provide information about cash receipts, cash payments, investing, and financing activities during the accounting period. A review of our Proprietary Fund Statement of Cash Flows indicates that cash receipts from operating activities adequately covered our operating expenses in the year ended December 31, 2019.

The following is a summary of the Department's financial data for the year ended December 31, 2019 (in thousands).

### Summary of Net Position

	<u>2019</u>
Current assets	\$ 31,399
Noncurrent assets	<u>113,544</u>
Total assets	144,943
Deferred outflows of resources	8,102
Current liabilities	10,220
Noncurrent liabilities	<u>24,152</u>
Total liabilities	34,372
Deferred inflows of resources	1,964
Net investment in capital assets	80,351
Restricted for depreciation fund	8,335
Restricted for pension trust	6,365
Unrestricted	<u>21,658</u>
Total net position	<u><u>\$ 116,709</u></u>

### Summary of Change in Net Position

	<u>2019</u>
Operating revenues	\$ 88,312
Operating expenses	<u>(83,725)</u>
Operating income	4,587
Non-operating revenues (expenses)	<u>(268)</u>
Change in net position	4,319
Beginning net position	<u>112,390</u>
Ending net position	<u><u>\$ 116,709</u></u>

For the year ended December 31, 2019 electric sales (net of discounts) were \$89,475,079. For the year ended December 31, 2019, kilowatt hours sold were 647,214,654.

Operating expenses totaled \$83,724,868 for the year ended December 31, 2019. The largest portion of this total, \$61,027,184, was for purchase power costs. Other operating expenses included \$16,602,020 for general operating and maintenance costs, \$1,569,667 for voluntary payments to Towns, and depreciation expense of \$4,525,997. For the year ended December 31, 2019 the depreciation rate was 3.0%. Change in net position of \$4,319,136 results primarily from rates and charges set a level to fund capital improvements.

In the year ended December 31, 2019, the Department contributed \$2,039,462 to the Reading Municipal Light Department Employees' Retirement Trust ("Pension Trust") and the Pension Trust contributed \$1,781,345 to the Town of Reading Contributory Retirement System on behalf of the Department's employees.

For the year ended December 31, 2019, the Department contributed \$434,937 to the Other Post-Employment Benefits Trust ("OPEB Trust"). Additional information on the Department's OPEB Trust Fund can be found in Note 18 this report.

### C. CAPITAL ASSET AND DEBT ADMINISTRATION

**Capital assets.** Total investment in land at year end amounted to \$1,265,842. Total investment in depreciable capital assets at year-end amounted to \$79,084,612 (net of accumulated depreciation), an increase of \$1,867,142 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 obligations.** At the end of the current fiscal year, the Department had no outstanding bonded debt.



Additional information on capital assets and other long-term obligations 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:

Director of Business, Finance, and Technology  
Town of Reading Municipal Light Department  
230 Ash Street  
Reading, Massachusetts 01867

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

BUSINESS-TYPE PROPRIETARY FUND  
STATEMENT OF NET POSITION

DECEMBER 31, 2019

**Assets**

Current:

Unrestricted cash and short-term investments	\$ 20,028,398
Receivables, net of allowance for uncollectable	7,114,247
Prepaid expenses	2,433,739
Inventory	<u>1,822,376</u>

Total current assets 31,398,760

Noncurrent:

Restricted cash and short-term investments	29,569,761
Restricted investments	2,659,416
Investment in associated companies	802,212
Land	1,265,842
Capital assets, net of accumulated depreciation	79,084,612
Other	<u>162,451</u>

Total noncurrent assets 113,544,294

**Deferred Outflows of Resources**

Related to pensions	7,652,907
Related to OPEB	<u>449,209</u>

Total Assets and Deferred Outflows of Resources 153,045,170

**Liabilities**

Current:

Accounts payable	6,400,929
Accrued liabilities	334,184
Customer deposits	1,308,651
Customer advances for construction	2,152,241
Current portion of long-term liabilities:	
Compensated absences	<u>24,227</u>

Total current liabilities 10,220,232

Noncurrent:

Net pension liability	14,610,001
Net OPEB liability	7,094,569
Compensated absences	<u>2,447,147</u>

Total noncurrent liabilities 24,151,717

**Deferred Inflows of Resources**

Related to pensions	1,775,159
Related to OPEB	<u>189,117</u>

Total Liabilities and Deferred Inflows of Resources 36,336,225

**Net Position**

Net investment in capital assets	80,350,454
Restricted for:	
Depreciation fund	8,334,981
Pension trust	6,365,431
Unrestricted	<u>21,658,079</u>

Total Net Position \$ 116,708,945

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

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

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

FOR THE YEAR ENDED DECEMBER 31, 2019

**Operating Revenues**

Electric sales, net of discounts of \$3,938,532	\$ 89,475,079
Purchase power adjustments:	
Fuel charge adjustment	(1,117,760)
Capacity and transmission adjustment	<u>(45,342)</u>
Total Operating Revenues	88,311,977

**Operating Expenses**

Purchase power	61,027,184
Operating	14,529,908
Maintenance	2,072,112
Voluntary payments to towns	1,569,667
Depreciation	<u>4,525,997</u>
Total Operating Expenses	<u>83,724,868</u>
Operating Income	4,587,109

**Nonoperating Revenues (Expenses)**

Interest income	969,188
Intergovernmental grants	173,550
Contributions in aid of construction	338,448
Return on investment to Town of Reading	(2,480,506)
Loss on disposal of capital assets	(81,563)
Other	<u>812,910</u>
Total Nonoperating Revenues (Expenses), Net	<u>(267,973)</u>

Change in Net Position	4,319,136
------------------------	-----------

Net Position at Beginning of Year	<u>112,389,809</u>
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Net Position at End of Year	<u><u>\$ 116,708,945</u></u>
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The accompanying notes are an integral part of these financial statements.

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

BUSINESS-TYPE PROPRIETARY FUND  
STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED DECEMBER 31, 2019

**Cash Flows From Operating Activities**

Receipts from customers and users	\$ 91,177,144
Payments to vendors and employees	(82,622,371)
Customer purchase power adjustments	<u>(1,163,102)</u>

Net Cash Provided By Operating Activities 7,391,671

**Cash Flows From Noncapital Financing Activities**

Return on investment to Town of Reading	(2,480,506)
Other	<u>834,149</u>

Net Cash (Used For) Noncapital Financing Activities (1,646,357)

**Cash Flows From Capital and Related Financing Activities**

Acquisition and construction of capital assets	(6,474,699)
Contributions in aid of construction	227,971
Intergovernmental revenues	<u>152,312</u>

Net Cash (Used For) Capital and Related Financing Activities (6,094,416)

**Cash Flows From Investing Activities**

Investment income	969,188
Increase in investments	<u>(681,944)</u>

Net Cash Provided By Investing Activities 287,244

Net Change in Cash and Short-Term Investments (61,858)

Cash and Short-Term Investments, Beginning of Period 49,660,017

Cash and Short-Term Investments, End of Period \$ 49,598,159

**Reconciliation of Operating Income (Loss) to Net Cash**

Operating income	\$ 4,587,109
Adjustments to reconcile operating income to net cash provided by (used for) operating activities:	
Depreciation expense	4,525,997
Changes in assets, liabilities, and deferred outflows/inflows	
Accounts receivable	1,591,167
Prepaid and other assets	(380,792)
Inventory	(335,906)
Deferred outflows - related to pensions	(2,613,517)
Deferred outflows - related to OPEB	291,259
Accounts payable and accrued liabilities	(3,791,765)
Net pension liability	3,828,182
Net OPEB liability	(279,677)
Deferred inflows - related to pensions	(330,401)
Deferred inflows - related to OPEB	189,117
Other	<u>110,898</u>

Net Cash Provided By Operating Activities \$ 7,391,671

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



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

FIDUCIARY FUNDS  
STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2019

	Other Post Employment Benefits <u>Trust Fund</u>
<b>Assets</b>	
Cash and short-term investments	\$ <u>4,087,576</u>
Total Assets	<u>4,087,576</u>
<b>Net Position</b>	
Total net position held in trust for other post employment benefits	\$ <u><u>4,087,576</u></u>

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

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

FIDUCIARY FUNDS  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED DECEMBER 31, 2019

	Other Post Employment Benefits <u>Trust Fund</u>
<b>Additions</b>	
Contributions:	
Employers	\$ <u>1,012,408</u>
Total Contributions	1,012,408
Investment Income:	
Interest	<u>90,920</u>
Net investment income	<u>90,920</u>
Total additions	1,103,328
<b>Deductions</b>	
Benefit payments to plan members, beneficiaries and other systems	<u>577,471</u>
Total deductions	<u>577,471</u>
Net increase	525,857
<b>Net position restricted for OPEB purposes</b>	
Beginning of year	<u>3,561,719</u>
End of year	\$ <u><u>4,087,576</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 70,000 residents within the towns of Reading, North Reading, Wilmington, and Lynnfield Center.
- 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 nonoperating 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 year.
- 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 8% 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 is 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 8% rate of return, which is calculated by adding the book value of net plant and the investment in associated companies multiplied by 8%. 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 December 31, 2019 are classified in the accompanying financial statements as follows:

### Proprietary Fund:

Unrestricted cash and short-term investments	\$ 20,028,398
Restricted cash and short-term investments	29,569,761
Restricted investments	2,659,416

### Fiduciary Funds:

Cash and short-term investments - OPEB Trust	<u>4,087,576</u>
Total cash and investments	<u>\$ 56,345,151</u>

Total cash and investments at December 31, 2019 consist of the following:

Deposits with financial institutions	\$ <u>56,345,151</u>
Total cash and investments	<u>\$ 56,345,151</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 December 31, 2019, 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 December 31, 2019, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying maturity dates as follows:

	Proprietary Fund	Maturity Date
<u>Corporate Bonds</u>		
AT&T Inc	\$ 448,590	12/01/22
General Electric Cap Corp	422,744	01/09/23
Wells Fargo & Co	424,596	08/15/23
Simon Property	412,312	06/15/27
Rabobank Nederland Bank	522,510	11/09/22
BNP Paribas	428,664	03/03/23
Total	\$ <u>2,659,416</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 December 31, 2019, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying ratings as follows:

<u>Investment Type</u>	Proprietary Fund	Moody's <u>Rating</u>
	<u>Restricted Investments</u>	
Corporate bonds:		
AT&T Inc	\$ 448,590	BAA2
General Electric Cap Corp	422,744	BAA1
Wells Fargo & Co	424,596	A3
Simon Property	412,312	A2
Rabobank Nederland Bank	522,510	BAA1
BNP Paribas	428,664	AA3
Total	\$ <u>2,659,416</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 December 31, 2019, 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 December 31, 2019, cannot be reasonably determined.

As of December 31, 2019, 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.

		Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Description	Value			
Investments by fair value level:				
Debt securities				
Corporate bonds	\$ 2,659,416	\$ 2,659,416	\$ -	\$ -
Total	\$ 2,659,416			

### 3. Restricted Cash and Investments

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

	12/31/19	
	<u>Cash</u>	<u>Investments</u>
Depreciation fund	\$ 8,334,981	\$ -
Deferred fuel reserve	4,067,288	-
Deferred energy conservation reserve	377,319	-
Rate stabilization	8,354,133	-
Reserve for uncollectible accounts	200,000	-
Sick leave benefits	1,141,666	1,329,708
Hazardous waste fund	750,000	-
Customer deposits	1,308,651	-
Pension trust	5,035,723	1,329,708
Total	\$ 29,569,761	\$ 2,659,416

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.
- 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. Accounts Receivable



#### 4. Accounts Receivable

Accounts receivable consists of the following at December 31, 2019:

Customer Accounts:		
Billed	\$	2,289,647
Less allowances:		
Uncollectible accounts		(200,000)
Sales discounts		<u>(112,133)</u>
Total billed		1,977,514
Unbilled, net		<u>4,927,365</u>
Total customer accounts		6,904,879
Other Accounts:		
Liens and other		<u>209,368</u>
Total other accounts		<u>209,368</u>
Total net receivables	\$	<u><u>7,114,247</u></u>

#### 5. Prepaid Expenses

Prepaid expenses consist of the following:

Insurance and other	\$	1,783,636
Purchase power		(3,329)
NYPA prepayment fund		307,573
WC Fuel - Watson		<u>345,859</u>
Total	\$	<u><u>2,433,739</u></u>

#### 6. Inventory

Inventory comprises supplies and materials at December 31, 2019, and is valued using the average cost method.

#### 7. Investment in Associated Companies

Investment in associated companies consists of the following, at December 31, 2019:

New England Hydro-Transmission (NEH & NHH)	\$	266,224
Energy New England		488,233
Black Rock Funding - Saddleback Ridge		<u>47,755</u>
Total	\$	<u><u>802,212</u></u>

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 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.

In April 2019, the Department invested in 8.334% shares of Energy New England (ENE). The Department's equity position at December 31, 2019 is based on ENE's capital, retained earnings, and the net profit from April through December of 2019.

In December 2013, the Department signed a purchase power agreement with Saddleback Ridge Wind, LLC for the output of Saddleback Ridge Wind located in Carthage, Maine. The contract for Saddleback Ridge Wind is effective from January 1, 2015 through December 31, 2035. The Department receives energy plus all attributes for this contract. The average annual generation is estimated to be approximately 15,820 megawatt-hours per year

## 8. Capital Assets

The following is a summary of the year ended December 31, 2019 activity in capital assets (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance
<b>Business-Type Activities</b>				
Capital assets, being depreciated:				
Structures and improvements	\$ 20,302	\$ 331	\$ -	\$ 20,633
Equipment and furnishings	34,907	641	(46)	35,502
Infrastructure	<u>95,657</u>	<u>5,487</u>	<u>(639)</u>	<u>100,505</u>
Total capital assets, being depreciated	150,866	6,459	(685)	156,640
Less accumulated depreciation for:				
Structures and improvements	(10,233)	(550)	-	(10,783)
Equipment and furnishings	(22,800)	(917)	46	(23,671)
Infrastructure	<u>(40,616)</u>	<u>(3,059)</u>	<u>573</u>	<u>(43,102)</u>
Total accumulated depreciation	<u>(73,649)</u>	<u>(4,526)</u>	<u>619</u>	<u>(77,556)</u>
Total capital assets, being depreciated, net	77,217	1,933	(66)	79,084
Capital assets, not being depreciated:				
Land	<u>1,266</u>	<u>-</u>	<u>-</u>	<u>1,266</u>
Total capital assets, not being depreciated	<u>1,266</u>	<u>-</u>	<u>-</u>	<u>1,266</u>
Capital assets, net	<u>\$ 78,483</u>	<u>\$ 1,933</u>	<u>\$ (66)</u>	<u>\$ 80,350</u>

**9. Deferred Outflows of Resources**

Deferred outflows of resources represent the consumption of net position by the Department 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 and OPEB, in accordance with GASB Statements No. 68 and 75, are more fully discussed in the corresponding pension and OPEB notes.

**10. Accounts Payable**

Accounts payable represent fiscal 2019 expenses that were paid after December 31, 2019.

**11. Accrued Liabilities**

Accrued liabilities consist of the following at December 31, 2019:

Accrued payroll	\$	234,523
Accrued sales tax		77,200
Other		<u>22,461</u>
Total	\$	<u><u>334,184</u></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 is 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. Long-Term Debt

### Changes in General Long-Term Obligations

During the year ended December 31, 2019, the following changes occurred in long-term obligations (in thousands):

	<u>Beginning Balance</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending Balance</u>	<u>Less Current Portion</u>	<u>Equals Long-Term Portion</u>
Net pension liability	\$ 10,782	\$ 3,828	\$ -	\$ 14,610	\$ -	\$ 14,610
Net OPEB liability	7,144	-	(49)	7,095	-	7,095
Compensated absences	<u>2,999</u>	<u>-</u>	<u>(528)</u>	<u>2,471</u>	<u>(24)</u>	<u>2,447</u>
Totals	<u>\$ 20,925</u>	<u>\$ 3,828</u>	<u>\$ (577)</u>	<u>\$ 24,176</u>	<u>\$ (24)</u>	<u>\$ 24,152</u>

## 16. 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. Deferred inflows of resources related to pension and OPEB will be recognized as expense in future years and is more fully described in the corresponding pension and OPEB notes.

## 17. 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 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 on or 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.

### Participant Retirement Benefits

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.

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-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 100%, 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.



There are four classes of membership in the retirement system, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

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.

#### Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminating at the members death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree's beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member's designated beneficiary (who may be the

spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or “pops up” to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable “pops up” to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

#### 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%.

#### 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 December 31, 2019 was \$1,781,345 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 December 31, 2019, the Department reported a liability of \$14,610,001 for its proportionate share of the System’s net pension liability. The net pension liability was measured as of December 31, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1,

2019. 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, 2018, the Department's proportion was 28.35%.

For the year ended December 31, 2019, the Department recognized pension expense of \$2,665,607. In addition, the Department reported deferred outflows of resources and deferred (inflows) of resources related to pensions from the following sources:

	Deferred Outflows of <u>Resources</u>	Deferred (Inflows) of <u>Resources</u>
Differences between expected and actual experience	\$ 3,097,261	\$ (313,290)
Changes of assumptions	1,040,478	(1,245,759)
Net difference between projected and actual investment earnings on pension plan	1,633,631	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	100,192	(216,110)
Contributions subsequent to the measurement date	<u>1,781,345</u>	<u>-</u>
Total	\$ <u><u>7,652,907</u></u>	\$ <u><u>(1,775,159)</u></u>

The amount reported as deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date and before the end of the fiscal year will be included as a reduction of the net pension liability in the year ended December 31, 2020.

Other 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 December 31:

2020	\$ 1,538,107
2021	887,482
2022	548,263
2023	1,073,381
2024	<u>49,170</u>
Total	\$ <u><u>4,096,403</u></u>

#### *D. Actuarial Assumptions*

The total pension liability was determined by an actuarial valuation as of January 1, 2019 using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation Date	January 1, 2019
Actuarial Cost Method	Entry Age Normal Cost Method
Actuarial Assumptions:	
Investment rate of return	7.50%, net of pension plan investment expense, including inflation
Projected salary increases	4.25%-6.00% for Groups 1 and 2
Inflation rate	3.00% Annually
Post-retirement cost-of-living adjustment	3.00% of first \$12,000

Mortality rates were based on the RP-2000 Mortality Table (base year 2009) with full generational mortality improvement using Scale BB. For disabled members, RP-2000 Mortality Table (base year 2012) with full generational mortality improvement using Scale BB.

#### *E. Target Allocations*

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, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-term Expected Rates of Return</u>
Global equity	39.00%	4.75%
Fixed income	15.00%	1.05%
Private equity	13.00%	8.15%
Hedge funds and portfolio completion	11.00%	3.76%
Real estate	10.00%	3.43%
Value-added fixed income	8.00%	4.58%
Timber/natural resources	<u>4.00%</u>	4.00%
Total	<u>100.00%</u>	

*F. Discount Rate*

The discount rate used to measure the total pension liability was 7.50%. 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.

*G. 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 7.50%, 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 or 1 percentage-point higher than the current rate:

<u>1% Decrease (6.50%)</u>	<u>Current Discount Rate (7.50%)</u>	<u>1% Increase (8.50%)</u>
\$ 20,461,756	\$ 14,610,001	\$ 9,640,661

#### *H. Pension Plan Fiduciary Net Position*

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

#### *I. 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, 2019. However, the actuarial valuation does not take into account the fiduciary net position of the Department's Pension Trust at December 31, 2018 (the measurement date). As of December 31, 2018, the value of the pension trust was \$5,878,179.

### **18. Other Post-Employment Benefits (GASB 74 and GASB 75)**

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (OPEB)*, replaces the requirements of *Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. This applies if a trust fund has been established to fund future OPEB costs. In fiscal year 2010, the Department established an OPEB Trust Fund to provide funding for future employee health care costs.

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, replaces the requirements of *Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. The Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. This Statement identifies the methods and assumptions that are required to be used to project benefit payments, discounted projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service.

All the following OPEB disclosures are based on a measurement date of December 31, 2019.



#### A. General Information about the OPEB Plan

##### Plan Description

The Department provides post-employment healthcare benefits for retired employees through the Department's plan. The Department provides health insurance coverage through Blue Cross Blue Shield. The benefits, benefit levels, employee contributions, and employer contributions are governed by Chapter 32 of the Massachusetts General Laws.

##### Benefits Provided

The Department provides medical and prescription drug insurance to retirees and their covered dependents. All active employees who retire from the Department and meet the eligibility criteria will receive these benefits.

##### Funding Policy

The Department's funding policy includes financing the implicit subsidy on a pay-as-you-go basis, as required by statute. Additional contributions are based on actuarially determined amounts.

##### Plan Membership

At June 30, 2018 (Actuarial Valuation date), the following employees were covered by the benefit terms:

Inactive employees or beneficiaries	
currently receiving benefit payments	95
Active employees	<u>56</u>
Total	<u><u>151</u></u>

#### B. Investments

The OPEB trust fund assets consist of cash and short-term investments. The plan expects to invest with the State Retiree Benefit Trust Fund (SRBTF) in the Pension Reserves Investment Trust (PRIT).

*Rate of return.* For the year ended December 31, 2019, the annual money-weighted rate of return on investments, net of investment expense, was not available. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

### *C. Actuarial Assumptions and Other Inputs*

The net OPEB liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	3.00%
	6.00% decreasing to 4.25% based on service for Group 1
Salary increases	and Group 2
Investment rate of return	7.25%
Discount rate	7.25%
Healthcare cost trend rates	Medical/Prescription Drug: 7.00% decreasing by 0.25% for 10 years to an ultimate level of 4.50% per year. Contributions: Retiree contributions are expected to increase with medical trend.
Participation rate	100% of active employees

Mortality rates were based on:

- Pre-Retirement: RP-2014 Blue Collar Employee Mortality Table projected generationally using Scale MP-2018
- Healthy: RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally using Scale MP-2018
- Disabled: RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally using Scale MP-2018

The actuarial assumptions used in the valuation were based on the results of an actuarial experience study as of June 30, 2018.

### *D. Target Allocations*

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, 2018 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	17.50%	6.16%
International developed markets equity	15.50%	6.69%
Hedge fund, GTAA, risk parity	13.00%	3.68%
Core fixed income	12.00%	1.89%
Private equity	12.00%	10.00%
High-yield fixed income	10.00%	4.00%
Real estate	10.00%	4.58%
International emerging markets equity	6.00%	9.47%
Commodities	4.00%	4.77%
Total	<u>100.00%</u>	

*E. Discount Rate*

The discount rate used to measure the net OPEB liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate.

Based on those assumptions, the OPEB plan fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

*F. Net OPEB Liability*

The components of the net OPEB liability, measured as of December 31, 2019, were as follows:

Total OPEB liability	\$ 11,182,145
Plan fiduciary net position	<u>4,087,576</u>
Net OPEB liability	<u>\$ 7,094,569</u>

The fiduciary net position has been determined on the same basis used by the OPEB Plan. For this purpose, the Plan recognizes benefit payments when due and payable.

### G. Changes in the Net OPEB Liability

The following summarizes the changes in the net OPEB liability for the past year.

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances, beginning of year	\$ 10,705,890	\$ 3,561,719	\$ 7,144,171
Changes for the year:			
Service cost	245,905	-	245,905
Interest	799,729	-	799,729
Contributions - employer	-	1,012,408	(1,012,408)
Net investment income	-	90,920	(90,920)
Differences between expected and actual experience	260,248	-	260,248
Changes in assumptions or other inputs	(252,156)	-	(252,156)
Benefit payments	<u>(577,471)</u>	<u>(577,471)</u>	<u>-</u>
Net Changes	<u>476,255</u>	<u>525,857</u>	<u>(49,602)</u>
Balances, end of year	\$ <u><u>11,182,145</u></u>	\$ <u><u>4,087,576</u></u>	\$ <u><u>7,094,569</u></u>

Change of assumptions and other inputs reflect the following:

- Change in the discount rate from 7.50% in prior years to 7.25% in calendar year 2019.
- The per capital costs, retiree contributions and trends were updated to reflect current experience.
- The mortality assumptions were updated based on experience with similar retirement systems.
- The excise tax on high cost health plans was repealed effective December 20, 2019. The excise tax is not included in the December 31, 2019 accounting liabilities.

*H. 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 one percentage-point lower or one percentage-point higher than the current discount rate:

<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
\$ 7,235,457	\$ 7,094,569	\$ 6,921,895

*I. 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 one percentage-point lower or one percentage-point higher than the current healthcare cost trend rates:

<u>1% Decrease</u>	<u>Current Healthcare Cost Trend Rates</u>	<u>1% Increase</u>
\$ 5,814,020	\$ 7,094,569	\$ 8,602,787

*J. OPEB Expense and Deferred Outflows of Resources and Deferred (Inflows) of Resources Related to OPEB*

For the year ended December 31, 2019, the Department recognized an OPEB expense of \$836,057. At December 31, 2019, the Department reported deferred outflows of resources related to OPEB from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred (Inflows) of Resources</u>
Difference between expected and actual experience	\$ 195,186	\$ -
Change in assumptions	-	(189,117)
Net difference between projected and actual OPEB investment earnings	<u>254,023</u>	<u>-</u>
Total	<u>\$ 449,209</u>	<u>\$ (189,117)</u>

Amounts reported as deferred outflows and (inflows) of resources related to OPEB will be recognized in OPEB expense as follows:

<u>Year Ended December 31:</u>		
2020	\$	73,863
2021		73,863
2022		73,862
2023		<u>38,504</u>
Total	\$	<u><u>260,092</u></u>

**19. Participation in Massachusetts Municipal Wholesale Electric Company**

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 operates the Stony Brook Intermediate Project and the Stony Brook Peaking Project, both fossil-fueled power plants. MMWEC has the Nuclear Mix No 1 Project, Nuclear Project Three, Nuclear Project Four, Nuclear Project Five and Project Six, which comprise an 11.6% ownership interest in the Seabrook Station nuclear generating unit operated by NextEra Energy Seabrook, LLC and a 4.8% ownership interest in the Millstone Unit 3 nuclear unit, operated by Dominion Nuclear Connecticut, Inc. The operating license for Seabrook Station extends to March 15, 2050. The operating license for the Millstone Unit 3 nuclear unit extends to November 25, 2045.

On July 19, 2019, MMWEC sold its 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.

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). The Light Department has entered into PSAs with MMWEC. Under the PSAs the Department is required to make certain payments to MMWEC payable solely from Municipal Light Department revenues. 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. 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. Project Participants have



covenanted to fix, revise and collect rates at least sufficient to meet their obligations 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).

Pursuant to the PSAs, the MMWEC 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 Millstone and Seabrook 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.

As of July 1, 2019, MMWEC has no debt service obligations outstanding relating to the Projects. 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.

The total capital expenditures and annual capacity, fuel and transmission costs (which include debt service and decommissioning expenses as discussed above) associated with the Department's Project Capability of the Projects in which it participates for the years ended December 31, 2019 and 2018, respectively are listed in the table below.

PROJECTS	PERCENTAGE SHARE	READING MUNICIPAL LIGHT DEPARTMENT YEARS ENDED		
		TOTAL CAPITAL EXPENDITURES	CAPACITY, FUEL & TRANSMISSION BILLED	CAPACITY, FUEL & TRANSMISSION BILLED
		2019	2019	2018
Stony Brook Peaking Project	19.52%	11,655,859	712,108	906,309
Stony Brook Intermediate Project	15.92%	28,510,622	2,065,782	3,182,035
Nuclear Mix No. 1-Seabrook	14.72%	1,487,536	80,366	76,204
Nuclear Mix No. 1-Millstone	14.72%	8,911,367	863,083	997,615
Nuclear Project No. 3-Millstone	5.26%	7,789,578	620,134	718,976
Nuclear Project No. 4-Seabrook	12.56%	37,581,471	1,835,491	1,792,507
Nuclear Project No. 5-Seabrook	6.12%	4,961,078	229,475	224,704
Project No. 6-Seabrook	0.00%	-	-	-
		<u>\$100,897,511</u>	<u>\$6,406,439</u>	<u>\$7,898,350</u>

## 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 year ending December 31, 2019 REC activity and balances is as follows:

<u>REC Holdings at December 31, 2019</u>		
	<u>Projected Certificates</u>	<u>Estimated Value</u>
CT Class I	2,171	\$ 86,840
MA Class I & II	3,080	116,145
MA/RI/NH I/ME	2,784	82,128
MA/CT/RI/NH I	6,859	267,501
VT Class I	<u>435</u>	<u>218</u>
Total	<u>15,329</u>	<u>\$ 552,832</u>

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 December 31, 2019 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, 2020. Following is the future minimum rental income to be received by the Department under the terms of this lease for the year ending December 31:

2020	\$ <u>8,984</u>
Total	\$ <u><u>8,984</u></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, 2018. 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, 2020. Following is the future minimum rental expense to be paid by the Department for the year ending December 31:

2020	\$ <u>67,228</u>
Total	\$ <u><u>67,228</u></u>

## 22. Subsequent Events

Management has evaluated subsequent events through July 23, 2020, which is the date the financial statements were available to be issued.

### COVID-19

The COVID-19 outbreak in the United States and across the globe resulted in economic uncertainties. There is considerable uncertainty around the duration and scope of the economic disruption. The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the outbreak, special acts or legislation by the state or federal government, and the impact on our taxpayers, customers, employees, and vendors, all of which are uncertain and cannot be predicted. At this point, the extent to which COVID-19 may impact our financial condition or results of operations is uncertain. Additionally, the Department has not experienced any disruptions in operations or supply chains as of the date of the Financial Statements.

## **23. Commitments and Contingencies**

Outstanding Legal Issues - On an ongoing basis, there are typically pending legal issues in which the Department is involved. The Department's management is of the opinion that the potential future settlement of these issues would not materially affect its financial statements taken as a whole.

## **24. New Pronouncements**

The Governmental Accounting Standards Board (GASB) has issued Statement No. 84, *Fiduciary Activities*, effective for the Department beginning with its calendar year ending December 31, 2021. This statement establishes guidance on how to address the categorization of fiduciary activities for financial reporting and how fiduciary activities are to be reported, and may require reclassification of certain funds.

The Governmental Accounting Standards Board (GASB) has issued Statement No. 87, *Leases*, effective for the Department beginning with its calendar year ending December 31, 2022. This statement establishes new reporting and disclosure requirements, including the recording of various operating leases in the financial statements.

**TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT**  
**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF PROPORTIONATE SHARE**  
**OF THE NET PENSION LIABILITY (GASB 68)**

DECEMBER 31, 2019  
(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>
December 31, 2019	December 31, 2018	28.35%	\$14,610,001	\$ 6,513,347	224.31%	72.56%
December 31, 2018	December 31, 2017	29.15%	\$10,781,819	\$ 6,938,057	155.40%	79.32%
June 30, 2018	December 31, 2017	29.15%	\$10,781,819	\$ 6,938,057	155.40%	79.32%
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%

*Schedule is 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**  
**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF PENSION CONTRIBUTIONS (GASB 68)**

DECEMBER 31, 2019  
(Unaudited)

Reading Contributory Retirement System						
<u>Fiscal Year</u>	<u>Measurement Date</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>
December 31, 2019	December 31, 2018	\$ 1,781,345	\$ 1,781,345	\$ -	\$ 6,513,347	27.35%
December 31, 2018	December 31, 2017	\$ 1,691,058	\$ 1,691,058	\$ -	\$ 6,938,057	24.37%
June 30, 2018	December 31, 2017	\$ 1,650,416	\$ 1,650,416	\$ -	\$ 6,938,057	23.79%
June 30, 2017	December 31, 2016	\$ 1,579,345	\$ 1,579,345	\$ -	\$ 6,393,765	24.70%
June 30, 2016	December 31, 2015	\$ 1,461,650	\$ 1,461,650	\$ -	\$ 6,147,851	23.77%
June 30, 2015	December 31, 2014	\$ 1,401,638	\$ 1,401,638	\$ -	\$ 5,908,694	23.72%

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See Independent Auditors' Report.

**TOWN OF READING, MASSACHUSETTS**  
**MUNICIPAL LIGHT DEPARTMENT**  
OTHER POST-EMPLOYMENT BENEFITS (OPEB)  
REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY (GASB 74 AND 75)

(Unaudited)

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB Liability</b>			
Service cost	\$ 245,905	\$ 238,384	\$ 230,880
Interest on unfunded liability - time value of \$	799,729	766,539	733,280
Differences between expected and actual experience	260,248	-	-
Changes of assumptions	(252,156)	-	-
Benefit payments, including refunds of member contributions	<u>(577,471)</u>	<u>(552,351)</u>	<u>(504,917)</u>
Net change in total OPEB liability	476,255	452,572	459,243
Total OPEB liability - beginning	<u>10,705,890</u>	<u>10,253,318</u>	<u>9,794,075</u>
Total OPEB liability - ending (a)	11,182,145	10,705,890	10,253,318
<b>Plan Fiduciary Net Position</b>			
Contributions - employer	1,012,408	1,159,476	813,663
Net investment income	90,920	75,522	35,045
Benefit payments, including refunds of member contributions	<u>(577,471)</u>	<u>(552,351)</u>	<u>(504,917)</u>
Net change in plan fiduciary net position	525,857	682,647	343,791
Plan fiduciary net position - beginning	<u>3,561,719</u>	<u>2,879,072</u>	<u>2,535,281</u>
Plan fiduciary net position - ending (b)	<u>4,087,576</u>	<u>3,561,719</u>	<u>2,879,072</u>
Net OPEB liability (asset) - ending (a-b)	<u>\$ 7,094,569</u>	<u>\$ 7,144,171</u>	<u>\$ 7,374,246</u>

*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)  
REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULES OF NET OPEB LIABILITY, CONTRIBUTIONS, AND INVESTMENT RETURNS (GASB 74 AND 75)

(Unaudited)

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Schedule of Net OPEB Liability</b>			
Total OPEB liability	\$ 11,182,145	\$ 10,705,890	\$ 10,253,318
Plan fiduciary net position	<u>4,087,576</u>	<u>3,561,719</u>	<u>2,879,072</u>
Net OPEB liability (asset)	<u>\$ 7,094,569</u>	<u>\$ 7,144,171</u>	<u>\$ 7,374,246</u>
Plan fiduciary net position as a percentage of the total OPEB liability	36.55%	33.27%	28.08%
Covered employee payroll	\$ unavailable	\$ unavailable	unavailable
Participating employer net OPEB liability (asset) as a percentage of covered employee payroll	\$ unavailable	\$ unavailable	unavailable

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Schedule of Contributions</b>			
Actuarially determined contribution	\$ 1,146,987	\$ 991,048	\$ 932,387
Contributions in relation to the actuarially determined contribution	<u>1,012,408</u>	<u>1,159,476</u>	<u>813,663</u>
Contribution deficiency (excess)	<u>\$ 134,579</u>	<u>\$ (168,428)</u>	<u>\$ 118,724</u>

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Schedule of Investment Returns</b>			
Annual money weighted rate of return, net of investment expense	unavailable	unavailable	unavailable

*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.