

**Reading Municipal Light Board of Commissioners**  
**Regular Session**  
**230 Ash Street**  
**Reading, MA 01867**  
**October 20, 2016**

**Start Time of Regular Session: 7:37 p.m.**

**End Time of Regular Session: 9:40 p.m.**

**Commissioners:**

**Thomas J. O'Rourke, Chairman**

**Philip B. Pacino, Vice Chair**

**Dave Hennessy, Commissioner – Absent**

**David Talbot, Commissioner – Remote Participant**

**John Stempeck, Commissioner, Secretary, Pro Tem**

**Staff:**

**Coleen O'Brien, General Manager**

**Hamid Jaffari, Director of Engineering and Operations**

**Tracy Schultz, Executive Assistant**

**Jeanne Foti, Executive Assistant**

**Jane Parenteau, Director of Integrated Resources**

**Citizens Advisory Board**

**Dennis Kelley, Member**

**Guests:**

**Frank Biron, Melanson Heath & PC**

**Zackary Fentross, Melanson Heath & PC**

**Call Meeting to Order**

Chairman O'Rourke called the meeting to order and announced that the meeting is a live broadcast in the Town of Reading. Due to technical limitations, the meeting is also being videotaped for distribution at community television stations in North Reading, Wilmington and Lynnfield.

**Opening Remarks**

Chairman O'Rourke read the RMLD Board of Commissioners Code of Conduct and announced that Mr. Hennessy would not be in attendance that evening. Since Mr. Talbot would be participating in the meeting remotely, via conference call, all votes must be done by roll call per Massachusetts Open Meeting Law. Mr. Talbot confirmed via speakerphone that he was on the line and able to hear what was being discussed at the meeting.

**Introductions**

Chairman O'Rourke then acknowledged the presence of CAB representative Dennis Kelley and asked Mr. Stempeck to serve as Board Secretary, to which Mr. Stempeck agreed. Chairman O'Rourke suggested starting with the Audit presentation, and invited Frank Biron and Zachary Fentross, from Melanson Heath & PC, to take the floor.

**Presentation of Fiscal Year 2016 Audit (Attachment 1)**

**Melanson Heath & PC, Frank Biron Zackary Fentross**

Frank Biron, President, Melanson Heath, introduced himself and Zachary Fentross, the supervisor who performed the RMLD audit. Mr. Biron explained that he would be going over highlights from the June 30, 2016 financial statements and directed the Commissioners' attention to the Independent Auditors' Report. Mr. Biron stated that his firm was hired to provide an opinion on RMLD's financial statements. RMLD was given a clean opinion, which is the best opinion that can be received from an independent outside audit; RMLD's financial statements were in accordance with generally accepted accounting principles. Mr. Biron then referenced the Statement of Net Position, which summarizes the assets, liabilities, and the equity of the Department as of June 30, 2016, RMLD's numbers, between 2015 and 2016, were consistent and strong. The Department is in a very strong financial position and is consistent with past years. The unrestricted cash balance of about \$13 million in 2016, was the same as the previous year. Receivables totaled \$8 million, which is not a large amount considering overall revenues are \$80 million. Approximately one month's worth of revenues is sitting in receivables; most of this \$8 million is unbilled. There are very few delinquent accounts, the Department has done a good job collecting receivables.

Mr. Biron continued, stating that the number that changed the most from the previous year was net pension liability, which doubled. This was due to the town's retirement investments performing worse than expected, a downturn that was beyond RMLD's control. In 2016, the net pension liability was \$8,833,549 compared to 2015 when it was about \$4.5 million-it almost doubled. This increase in liability was due to investment results of the town's retirement system not meeting anticipated targets. The earnings goal was 7 ¾ % earnings, while the actual earnings were only ¾ %. RMLD's net pension liability represents the Department's proportionate share of the town's overall liability.

**Presentation of Fiscal Year 2016 Audit (Attachment 1)**

**Melanson Heath & PC, Frank Biron Zackary Fentross**

Mr. Biron continued, pointing out that the RMLD has no bonds payable, which puts the Department in a strong financial position. Additionally, all the Department's capital assets, which are in excess of \$72 million, have been acquired through the rate process.

No liability is being reported for OPEB (Other Post-Employment Benefits) because the Department has been setting aside money into a trust fund equal to what the actuaries suggested. However, there is going to be a change in accounting standards in two years. In 2018, Government Accounting Standard Board (GASB) Statement 75 will replace GASB Statement 45, and will require that the entire actuarially calculated liability of OPEB (health employment benefits for retired employees) be reported, just as the net pension liability is currently reported. If there is no additional funding, the unfunded amount, that is not currently shown on RMLD's financial statements, but will in two years, will appear as a \$6 million liability.

Mr. Biron then referred to the Statement of Revenues, Expenses, and Changes in New Position. The numbers were consistent with the previous year, with revenues up despite the number of kilowatt hours sold going down about 2 percent. This was due to rate increases in response to the cost to purchase power increasing. All other revenues and expenses were also consistent. The Department's net income (what revenues beat expenses by) was \$3,369,404. This was similar to the previous year. Since the state sets the income limit of municipal utilities to eight percent of the value of fixed (capital) assets, \$3 million is almost at the maximum of what the Department can earn. There was only \$300,000 left in possible earnings, giving the Department a strong bottom line.

Fiduciary funds are monies set aside for future pension costs and future OPEB costs. What RMLD put into the pension trust was close to what was paid out to the town's retirement system, about \$1.5 million. That leaves \$5.6 million set aside in the RMLD trust fund. The OPEB trust took in \$308,000 from operations, which is the amount that actuaries recommended be set aside. That plus investment results of \$14,000 equaled an increase of \$322,000, which means \$2.5 million set aside for OPEB costs. However, the unfunded \$6 million must be reported in two years.

Mr. Biron concluded that RMLD's numbers are strong. Cash balance receivables are in good shape and the Department has very little debt. The financial department did a good job closing its books in a timely manner-this is the first municipal audit that Melanson Heath completed this year. The accounting records are in good shape and the Department did a good job handling changes in the financial department.

**Report of the Committee, Audit Committee-Vice Chair Pacino**

Mr. Pacino reported that the Board of Commissioners' Audit Committee, which consists of himself and Mr. Stempeck, plus four members of the Audit Committee of the Town of Reading (himself, a representative from the Board of Selectmen, a representative from the Town's Finance Committee, and an at-large member), reached a quorum and recommended that the Commission accept the Audit as presented. The vote of the Board was 2:0; the vote of the Town Audit Committee was 4:0.

Mr. Pacino made a motion, seconded by Mr. Stempeck, that the Board of Commissioners accept the Audit Report from Melanson Heath, Fiscal Year ended June 30, 2016 as presented.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Stempeck, Aye; Mr. Talbot, Aye.

**Motion carried 4:0:0.**

**Public Comment**

No public comment.

**Report of the Chairman, Board Response to NEPPA**

Chairman O'Rourke explained that there had been concern from one of the Commissioners regarding a climate change denialist who spoke at the NEPPA conference this year. A communication has been received back from NEPPA and Chairman O'Rourke will now send a response. Chairman O'Rourke asked Mr. Talbot if he had any comments to add. Mr. Talbot reiterated that he was dismayed that NEPPA had hosted a speaker who proliferated misinformation about a very important topic but is pleased that there will be a Board response to the letter from NEPPA. Chairman O'Rourke reiterated that he would be writing a closure response.



### **RMLD Citizens' Advisory Board Meeting**

Chairman O'Rourke stated that the absent Mr. Hennessy attended the CAB meeting on October 12, 2016. Chairman O'Rourke then invited Mr. Kelley to provide updates from that meeting. Mr. Kelley stated that the CAB was wondering how many of the Commissioners had enrolled in the solar program.

Chairman O'Rourke stated that he had spoken with Mr. Hennessy, who had reported that there was discussion at the CAB meeting in regards to the Town of Reading not having a CAB representative. Chairman O'Rourke then inquired if any of the Board members knew the process and the next step for getting that position filled.

Mr. Pacino explained that the Town posts the vacancy. Mr. Pacino then made an appeal to the residents of Reading, asking that someone please volunteer. The idea of the CAB is to represent the ratepayers, help the Town of Reading, and give the Board of Commissioners input. Currently, the electric customers of Reading aren't represented.

Mr. Kelley voiced his concern that being short one person means that the CAB cannot get a quorum if one of the current members cannot attend a meeting. Chairman O'Rourke stated that Mr. Hennessy has a few possible recommendations and Ms. O'Brien said that she will soon be meeting with Reading's Town Manager and will reiterate the need for a Reading volunteer on the Citizens' Advisory Board. Mr. Pacino then emphasized that there is no special training required to be on the CAB-only general knowledge is needed to represent the ratepayers.

### **General Manager's Report (Attachment 2)**

Ms. O'Brien reported that RMLD's Open House was held on Thursday, October 6 from 2 p.m. to 5 p.m., in conjunction with Public Power Week. The event was well attended and was a great success. Ms. O'Brien stated that she is always looking for feedback to make it better and that there were lots of educational tools available-kids liked the linemen and bucket truck rides but there was also information about solar and electric vehicles. Chairman O'Rourke remarked that he stopped by and that the event was very well-done: it was a great family day for kids and grandkids and there was a pole install. Ms. O'Brien added that the event was both educational and tactile.

Ms. O'Brien continued, announcing that the revised art contest for students is in full swing. In previous years, RMLD ran a t-shirt design contest. This year is now an art contest: third graders from each town in the service territory were given watercolor paper and pencils and educational materials. The theme is *Shred the Peak*. The contest schedule will be the same as the t-shirt design contest of past years-winners will be announced the second Thursday of January. This year a print will be made of the winning works of art and they will be displayed in recycled frames in the RMLD building. There will also be a reception. The number of winners and the prizes for the schools have been increased. The hope is to implement a second phase of the art contest with local high schools and different types of mediums for more art. The intention is to keep the whole school system educated and promote conservation.

Chairman O'Rourke asked if there would still be a calendar. Ms. O'Brien replied that the historic calendar is in the proofing process and will be coming out in November. Chairman O'Rourke asked if a calendar similar to the t-shirt calendar of past years would be produced. Ms. O'Brien answered yes, RMLD would be issuing a calendar with the winners' artwork on it, as had been previously done with the t-shirts.

Ms. O'Brien announced that the Town of Reading Holiday Tree Lighting will be held on November 27 from 2 p.m. to 4:30 p.m. in Reading Center. Additionally, the towns need to check their strands of holiday lights-RMLD will replace any that are no longer working.

### **Quarterly Update Organizational and Reliability Report**

Mr. Jaffari reported that Organizational and Reliability studies were conducted in 2015 by Leidos and Booth and Associates, respectively. The results of the Organizational Study were 17 areas that Leidos felt needed attention. Recommendations were made. The Booth and Associates Reliability study identified 45 areas that demanded addressing. These 45 were combined with the results of a study performed on the substations by Booth and recommended by UPG, for a total of 71 recommendations. To date, 22 out of these 71 recommendations have been completed-7 of those 22 have been completed since the last report. RMLD is on target and on track, with many of the recommendations in progress and with repairs being made.

Chairman O'Rourke remarked that was a lot of progress. Mr. Jaffari concurred, stating that RMLD is getting a lot done.

### **Quarterly Update Organizational and Reliability Report**

Mr. Jaffari then addressed the Organizational Study updates. The goal of the study was to compare RMLD's business model to best business practices, which identified 17 areas that needed attention, as presented by Mr. Jaffari, are:

1. Establish Planning Culture: New organization requires new strategic planning, which will be completed in 2017. The last strategic plan was completed in 2008. The Six Year Plan is being presented to the board annually and spending is being planned. The IRD group has a plan in progress. The system planning, which includes the GIS technology roadmap and 20-year planning study, is done.
2. Develop an Effective Sustainable Workforce: Workforce development requires Leidos support; job descriptions are currently being worked on. This goes hand in hand with Career Development Plans, which are given to Leidos, with the necessary adjustments to the descriptions being made. Succession planning is being implemented. However, there are still vacancies that need to be filled.
3. Improve Organizational Effectiveness: This is tied to the union negotiations that are underway; job descriptions and career development plans have been updated, and therefore must be presented to the union, which has slowed down the process. IRD has been completed, Engineering and Business Finances are in progress. External communications to customers, such as Tweeting and e-mailing, has been implemented, with more programs in progress. Communications to employees have also increased.
4. Develop Leadership Capabilities: Leadership training is ongoing and is tied to Career Development Plans. Staff meetings are occurring, with management communicating with employees on a weekly basis. The General Manager is meeting with communities to bring Town Managers/Administrators up to date with RMLD's activities.
5. Establish Project Management Culture: Project management policies and procedures are being developed. Employees will be undergoing project management training to ensure that time and resource management are on target.
6. Ensure Competitively Priced Services: Integrated Resources is educating customers on time of use, demand side management, solar programs, and energy resources. The IRD has been doing a phenomenal job, as evidenced by the new Solar Choice rate.
7. Improve Financial Planning and Risk Management: The review and updating of operations, negotiations, fuel, OPEB, and sick time buyback processes in progress. Accounting and financial business processes are being formalized.
8. Strengthen Safety Culture: Safety policies are being continuously reviewed and developed. There are two safety committees-operational and general. All employees have an opportunity to participate and make recommendations to make the work environment safer.
9. Diversify Resources: This involves crafting a roadmap for distributed generation. A 10 Year Plan has been developed for solar battery storage and gas generation. It is being reviewed and assessed based on financial realities. Additionally, the cost effectiveness of end-use measures is being evaluated annually.
10. Establish a Culture of Compliance: This requires Leidos support; Leidos is developing a plan.
11. Improve Customer Service: A service survey plan and customer communication plan for 2017 are being developed.
12. Plan for Future Technologies: A technology roadmap for the next 15 to 20 years has been completed. An IRD roadmap has also been developed.
13. Focus on Asset Management: Asset management plan involves integrating GIS and Cogsdale. Developing asset management tracking; cost benefit analysis will then be performed. A customer service manual has been developed and is on the website. The manual outlines customer and utility responsibilities.
14. Leverage Geographic Information Systems: A robust GPS-based inventory of assets and infrastructure is being conducted and will be completed in 2017. CDM and Davey's Resource Group (DRG) are collecting GIS data and developing a GIS model. This model will be converted to another model that engineering will use and will be updated, analyzed, reviewed, and adjusted as needed.
15. Formalize and Enhance Work Management: A plan is being developed to streamline the work order management system: MIS, CIS, and GIS will all work together. Leidos is assisting in developing short and long term IT plans to eliminate redundancies and ensure cost efficiency.



### **Quarterly Update Organizational and Reliability Report**

Chairman O'Rourke asked if this required a new business system.

Mr. Jaffari responded yes, this will require new software. There may be some integration difficulties.

16. Plan for Resiliency: A disaster recovery plan and emergency operation procedures have both been completed.

Chairman O'Rourke asked if there was a recovery site if the building was not accessible. Mr. Jaffari explained that most data are backed up in the Cloud.

17. Enhance Facilities: The fleet study is completed.

### **Power Supply Report-August 2016-Ms. Parenteau (Attachment 3)**

Ms. Parenteau began by stating that she would be reporting on the August power supply. There is a preliminary indication that the ISO peak occurred on August 12, 2016 at 4 p.m. Over the last three years, RMLD's load was an extremely small portion of ISO's peak compared to the total load: about 0.6 percent. In 2014 ISO peaked on July 23 at 5 p.m., in 2015 ISO's peak occurred on July 29 at 6 p.m. 2016 is the only recent year that our peak coincided with ISO. In previous years, RMLD peaked at different hours. The "Shave the Peak" campaign targets ISO's peak, not necessarily RMLD's peak. This year was relatively in line: every year our use during ISO's peak is about 0.64 %. Moving forward, RMLD's future target is a significant decrease in that percentage. This will serve as the benchmark for progress.

Ms. Parenteau then directed attention to real time pricing during the peak month of 2014, 2015, and 2016. The last two summers real time prices were relatively flat. This year the peak went up about five percent, resulting in volatile pricing. The price was about \$300 dollars a megawatt hour, as opposed to the current price, which is around \$20 a megawatt hour. How did that effect RMLD? RMLD's portfolio cost and average fuel cost were examined. Our sales totaled almost 69 million kWh, which is considerably higher than previous years' peak months. The average cost per kwh is down to a little over 4.3 cents. Due to portfolio management, our generators gave more to the system than what was used, and RMLD received payment for that. This is the advantage of having the portfolio. Savings is passed along to customers through the fuel charge, which the Commissioners all agreed was great.

### **Solar Choice Rate**

Chairman O'Rourke remarked that the Solar Choice Rate was CAB approved on October 12, 2016.

Ms. Parenteau stated that the solar project has been in the works for about a year. Certain customers are unable to install solar panels, so RMLD wanted to do a community shared solar project in the service territory. A one megawatt-1,000 kilowatt project is now located on Ballardvale Street in Wilmington. 500 customers will receive the cost and the benefit of the solar project. The cost of the energy is fixed for a 20-year term. When customers sign up they are fixing a portion of their fuel charge for the next 10 years. Currently, in the first year the cost of solar is slightly higher than the cost of RMLD's fuel charge, resulting in a small \$5 per month premium for the first 12 months. A \$3 or \$4 credit is being forecast beginning in month 13. The solar achieves benefit during peak period, and that capacity and transmission benefit go directly to the Solar Choice customers. A \$300 net benefit is currently being forecast over the 10-year period. The \$60 cost of the first year will be made up after the third year, resulting in net positive. The rate has almost reached its enrollment goal, with a waiting list being established and another project then being planned.

Mr. Pacino made a motion, seconded by Mr. Stempeck, that the RMLD Board of Commissioners approve the Solar Choice Rate MDPU 269 to be effective on billings after December 1, 2016 on the recommendation of the General Manager.

### **Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

### **Engineering and Operations Report-August 2016-Mr. Jaffari (Attachment 4)**

Mr. Jaffari presented the Engineering and Operations Report for August, 2016. RMLD spent \$54,385 on Capital Improvement Projects, bringing the year to date total to \$94,196. Expenditures on Routine Construction for the month of August were \$191,849, bringing the year to date total to \$324,827. Routine Maintenance transformers replaced 21.24 percent of pad mount transformers and about 15 percent of overhead. The second round of pole inspections was completed, with 187 poles being replaced.

**Engineering and Operations Report-August 2016-Mr. Jaffari (Attachment 4)**

Chairman O'Rourke asked if that was just for 2016. Mr. Jaffari answered in the affirmative. 670 poles have been inspected, with approximately 30 percent failing the test. There have also been some condemned poles, which are immediately replaced. 110 of 187 pole transfers have been completed. To date, 614 manhole inspections have been completed. Porcelain cutout replacements are 91 percent complete, with 256 remaining. 110 tree spans were trimmed in August, bringing the year-to-date up to 176 spans. The August substation infrared scan showed no hot spots. As for double poles: there are about 16,000 poles in RMLD's system, with 50 percent owned by Verizon and 50 percent owned by RMLD. Reading's ownership is similarly split. North Reading's poles are owned by RMLD, while Lynnfield and Wilmington's poles are owned by Verizon. NJUNS shows what poles have issues and what actions need to be taken to complete pole transfers. Lynnfield had 5 pending transfers in August. North Reading had 16 pending transfers, 1 pending set, and 45 poles awaiting a pull. Reading had 55 pending transfers and 39 pending pull poles. Wilmington had 42 poles waiting for transfer, 4 pending pull poles and 1 guy install. Mr. Jaffari explained that the numbers go up and down. RMLD tries to keep up with the transfers; it is a dynamic process.

Mr. Jaffari then addressed August's reliability indices. SAIDI was slightly over the regional average but well under the national average. RMLD is still playing catch up with long overdue maintenance. 25 percent of YTD outages have been due to equipment, 34 percent from trees, and 29 percent wildlife.

Mr. Kelley, referencing outage causes, commented that equipment failure was responsible for a larger portion of outages between 2011 to 2016, as compared to just 2016. Mr. Kelley then asked if this reduction was due to the new maintenance programs. Mr. Jaffari answered yes, RMLD has approximately 1,800 aged transformers and the system has not been maintained for over 20 years. Some of the 40/45 year transformers have been replaced. There have been some hairy situations that RMLD has caught before problems arose. It is a good program and there is a lot to do in the next 10 years.

**RMLD Procurement Requests Requiring Board Approval (Attachment 5)**

**IFP 2017-15 Capacitor Bank**

Mr. Jaffari explained that RMLD needs to install more capacitors to stabilize voltage and to reduce system losses.

Mr. Stempeck remarked that it was surprising that only one bid was received. Mr. Jaffari replied that one other bid was received, but since it was sent via e-mail and not as a sealed proposal it was rejected.

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-15 for Capacitor Bank be awarded to WESCO for \$54,480.00 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

**IFP 2017-20 750 MCM Cable**

Mr. Jaffari stated that three companies bid to supply getaway cables for substation. Booth and Associates recommended beefing up said cables.

Mr. Pacino announced that he would be abstaining from the vote, citing a potential conflict of interest.

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-20 for 750 MCM Cable be awarded to Arthur Hurley Company, Inc. for \$104,513.10 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye. Mr. Pacino: Abstained.

**Motion carried 3:0:1.**

**IFP 2017-22 Single Phase Step Voltage Regulator**

Mr. Jaffari stated that this will enable better voltage management. The boosters will address some issues RMLD has been having with marginal voltage-regulators are needed to better manage and maintain voltage. This is a proactive installation.



**RMLD Procurement Requests Requiring Board Approval (Attachment 5)**

**IFP 2017-22 Single Phase Step Voltage Regulator**

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-22 for Single Phase Step Voltage Regulator be awarded to Graybar Electric for \$146,090.00 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

**IFP 2017-24 15kV Single Phase Submersible Transformers**

Mr. Jaffari explained that these are temporary transformers that will be used when pad mount or underground equipment needs to be switched out. The repairs can sometimes take days and this will ensure that customers have electric service during the replacement. Mr. Stempeck remarked that it must be an interesting process. Mr. Jaffari agreed, saying that it was not unlike performing bypass surgery.

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-24 for Single Phase Submersible Transformers be awarded to Central Moloney, Inc. for \$19,794.00 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

**IFP 2017-25 Control Devices for Substation 3**

Mr. Jaffari said that there have been deficiencies at station 3 because the wrong equipment was originally installed; it is obsolete. This new equipment will give more capability, better management of the substation load and increased SCADA control.

Chairman O'Rourke inquired if there was a reason the bid was awarded to two companies.

Mr. Jaffari answered that there are several items involved: some went to one bidder; some went to the other. Chapter 164 allows RMLD to pick and choose.

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-25 for Control Devices for Substation 3 be awarded to WESCO for \$62,866.00 and Graybar Electric for \$64,401.28 for a total cost of \$127,267.28 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

**IFB 2017-28 Material Handle with Trade-In**

Mr. Jaffari explained that per Chapter 164 the award didn't have to go to the lowest bidder. 3 bidders replied; the lowest took too long to respond and was thus not eligible; the long second lowest was from a bidder who uses parts from different manufacturers and then assemble them together. This leads to the warranty becoming an issue as none of the manufacturers of said parts want to take ownership for any problems if something goes wrong. Therefore, the bid is being awarded to a company that makes and assembles its own parts so that there is one warranty and if any problems arise they will come and fix the issue onsite.

Mr. Pacino made a motion seconded by Mr. Stempeck that proposal 2017-28 for one Material Handler with Trade-In be awarded to James A. Kiley Company for \$221,715.00 pursuant to M.G.L. c. 164 § 56D on the recommendation of the General Manager.

**Chairman O'Rourke called for a poll of the vote:**

Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.

**Motion carried 4:0:0.**

**General Discussion**

There was none.

**BOARD MATERIAL AVAILABLE BUT NOT DISCUSSED**  
**E-Mail responses to Account Payable/Payroll Questions**  
**Rate Comparisons, October 2016**

**Subsequent Town Meeting**  
**Monday, November 14, 2016**

**RMLD Board Meetings**  
**No RMLD Board Meeting in November**  
**Thursday, December 15, 2016**

**RMLD Committee Meetings**  
**Thursday, November 10, 2016 RMLD Board Policy Committee Meeting**

**CAB Meetings**  
**Wednesday, November 16, 2016**  
Mr. Pacino volunteered to cover the upcoming CAB meeting.

**General Manager Committee Meeting**  
Chairman O'Rourke asked to schedule online; Ms. Foti agreed, stating she would be in touch via e-mail. Mr. Pacino asked about town presentation and annual meeting and said that would be a good place to ask for a CAB volunteer.

**Executive Session**  
At 8:45 p.m. Mr. Pacino made a motion seconded by Mr. Stempeck that the Board go into Executive Session to approve the Executive Session Meeting minutes of September 29, 2016, to consider the purchase of real property and discuss strategy with respect to collective bargaining and return to Regular Session for the sole purpose of adjournment.

**Chairman O'Rourke called for a poll of the vote:**  
Mr. Pacino, Aye; Chairman O'Rourke, Aye; Mr. Talbot, Aye; Mr. Stempeck, Aye.  
**Motion carried 4:0:0.**

**Adjournment**  
At 9:40 p.m. Mr. Pacino made a motion seconded by Mr. Stempeck that the RMLD Board of Commissioners move to adjourn the Regular Session. Mr. Talbot was not present for the vote.  
**Motion carried 3:0:0.**

A true copy of the RMLD Board of Commissioners minutes  
as approved by a majority of the Commission.

John Stempeck, Secretary Pro Tem  
RMLD Board of Commissioners



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

**Annual Financial Statements**

**For the Year Ended June 30, 2016**

**DRAFT**

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 June 30, 2016 and the related notes to the financial statements, which collectively comprise the Department's basic financial statements as listed in the Table of Contents.

### **Management's Responsibility for the Financial Statements**

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

### **Auditors' Responsibility**

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

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

by management, as well as evaluating the overall presentation of the financial statements.

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

### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate remaining fund information of the Town of Reading Municipal Light Department as of June 30, 2016, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### **Report on Summarized Comparative Information**

We have previously audited the Department's fiscal year 2015 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated October 29, 2015. In our opinion, the summarized comparative information presented herein as of and for the fiscal year ended June 30, 2015 is consistent, in all material respects, with the audited financial statements from which it has been derived.

### **Other Matters**

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of OPEB Funding Progress, Schedule of Proportionate Share of the Net Pension Liability, and Schedule of Pension Contributions 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.

\_\_\_\_\_, 2016



## MANAGEMENT'S DISCUSSION AND ANALYSIS

Within this section of the Town of Reading Municipal Light Department's ("the Department") annual financial report, management provides a narrative discussion and analysis of the Department's financial activities for the year ended June 30, 2016. The Department's performance is discussed and analyzed within the context of the accompanying financial statements and disclosures following this section.

### A. OVERVIEW OF THE FINANCIAL STATEMENTS

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

The Proprietary Fund Statements of Net Position is designed to indicate our financial position at a specific point in time. At June 30, 2016, it shows our net worth of \$104,814,487 which comprises \$72,202,413 invested in capital assets, \$4,494,953 restricted for depreciation fund, and \$28,117,121 unrestricted.

The Proprietary Fund Statements of Revenues, Expenses and Changes in Net Position summarize our operating results and reveal how much, if any, of a profit was earned for the year. As discussed in more detail below, our net profit for the year ended June 30, 2016 was \$3,369,404.

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

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

#### **Summary of Net Position**

	<u>2016</u>	<u>2015</u>
Current assets	\$ 23,903,277	\$ 23,184,226
Noncurrent assets	95,390,705	93,572,180
Deferred outflows of resources	<u>6,338,218</u>	<u>1,547,815</u>
Total assets and deferred outflows of resources	<u>\$ 125,632,200</u>	<u>\$ 118,304,221</u>
Current liabilities	\$ 8,244,530	\$ 9,330,904
Noncurrent liabilities	11,690,011	7,528,234
Deferred inflows of resources	<u>883,172</u>	<u>-</u>
Total liabilities and deferred inflows of resources	20,817,713	16,859,138

(continued)

(continued)

Net position:		
Net investment in capital assets	72,202,413	69,916,349
Restricted for depreciation fund	4,494,953	5,434,308
Unrestricted	<u>28,117,121</u>	<u>26,094,426</u>
Total net position	<u>104,814,487</u>	<u>101,445,083</u>
Total liabilities and net position	<u>\$ 125,632,200</u>	<u>\$ 118,304,221</u>

#### Summary of Changes in Net Position

	<u>2016</u>	<u>2015</u>
Operating revenues	\$ 88,735,983	\$ 85,005,786
Operating expenses	<u>(84,146,744)</u>	<u>(80,359,819)</u>
Operating income	4,589,239	4,645,967
Non-operating revenues (expenses)	<u>(1,219,835)</u>	<u>(1,404,691)</u>
Change in net position	3,369,404	3,241,276
Beginning net position	<u>101,445,083</u>	<u>98,203,807</u>
Ending net position	<u>\$ 104,814,487</u>	<u>\$ 101,445,083</u>

#### B. FINANCIAL HIGHLIGHTS

Electric sales (net of discounts) were \$88,353,905 in fiscal year 2016, an increase of 5.20% from the prior year. In fiscal year 2016, kilowatt hours sold decreased by 1.97% to 676,128,060, compared to 689,722,742 in fiscal year 2015. In fiscal year 2016, customers received credits of \$63,410 in purchase power fuel charge adjustments, compared to charges of \$1,047,590 in fiscal year 2015.

In fiscal year 2015, the Department restructured its rates and began billing customers purchase power capacity and transmission costs separately from the base rate. In fiscal year 2016, customers were charged purchase power capacity and transmission adjustments of \$445,488.

Operating expenses totaled \$84,146,744 in fiscal year 2016, an overall increase of 4.71% from fiscal year 2015. The largest portion of this total, \$63,700,338, was for purchase power costs. Other operating expenses included \$15,101,267 for general operating and maintenance costs, \$1,400,347 for voluntary payments to Towns, and depreciation expense of \$3,944,792. In fiscal year 2016, the depreciation rate was 3.0%.

In fiscal year 2016, the Department contributed \$1,500,000 to the Reading Municipal Light Department Employees' Retirement Trust ("Pension Trust") and the Pension Trust contributed \$1,464,711 to the Town of Reading Contributory Retirement System on behalf of the Department's employees.



In fiscal year 2016, the Department contributed \$308,795 to the Other Post-Employment Benefits Trust ("OPEB Trust"), which was equal to its actuarially determined liability at June 30, 2016. As a result, the Department had no unfunded OPEB liability at June 30, 2016. Additional information on the Department's OPEB contributions can be found in Note 17 on pages 21-24 of this report.

### **C. CAPITAL ASSET AND DEBT ADMINISTRATION**

**Capital assets.** Total investment in land at year end amounted to \$1,265,842; there was no change from the prior year. Total investment in depreciable capital assets at year-end amounted to \$70,936,570 (net of accumulated depreciation), an increase of \$2,286,063 from the prior year. This investment in depreciable capital assets includes structures and improvements, equipment and furnishings, and infrastructure assets.

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

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

### **REQUESTS FOR INFORMATION**

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

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

TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND  
STATEMENTS OF NET POSITION

JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b>ASSETS</b>		
Current:		
Unrestricted cash and short-term investments	\$ 13,123,605	\$ 13,151,862
Receivables, net of allowance for uncollectable	8,203,587	7,314,059
Prepaid expenses	985,756	1,137,898
Inventory	1,590,329	1,580,407
Total current assets	23,903,277	23,184,226
Noncurrent:		
Restricted cash and short-term investments	21,815,636	22,344,776
Restricted investments	1,345,663	1,284,061
Investment in associated companies	26,994	26,994
Land	1,265,842	1,265,842
Capital assets, net of accumulated depreciation	70,936,570	68,650,507
Total noncurrent assets	95,390,705	93,572,180
<b>DEFERRED OUTFLOWS OF RESOURCES</b>	6,338,218	1,547,815
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	125,632,200	118,304,221
<b>LIABILITIES</b>		
Current:		
Accounts payable	5,484,732	5,097,838
Accrued liabilities	449,404	585,104
Customer deposits	901,905	846,361
Customer advances for construction	1,007,142	889,774
Due to Pension Trust	-	1,500,000
Due to OPEB Trust	-	345,382
Current portion of long-term liabilities:		
Accrued employee compensated absences	401,347	66,445
Total current liabilities	8,244,530	9,330,904
Noncurrent:		
Accrued employee compensated absences	2,856,462	3,004,043
Net pension liability	8,833,549	4,524,191
Total noncurrent liabilities	11,690,011	7,528,234
<b>DEFERRED INFLOWS OF RESOURCES</b>	883,172	-
<b>TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES</b>	20,817,713	16,859,138
<b>NET POSITION</b>		
Net investment in capital assets	72,202,413	69,916,349
Restricted for depreciation fund	4,494,953	5,434,308
Unrestricted	28,117,121	26,094,426
<b>TOTAL NET POSITION</b>	<u>\$ 104,814,487</u>	<u>\$ 101,445,083</u>

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



TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT

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

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b>Operating Revenues:</b>		
Electric sales, net of discounts of \$3,294,567 and \$2,953,502 respectively	\$ 88,353,905	\$ 83,985,195
Purchase power adjustments:		
Fuel charge adjustment	(63,410)	1,047,590
Capacity and transmission adjustment	445,488	(26,999)
Total Operating Revenues	88,735,983	85,005,786
<b>Operating Expenses:</b>		
Purchase power	63,700,338	61,073,227
Operating	12,848,727	11,606,195
Maintenance	2,252,540	2,423,204
Voluntary payments to towns	1,400,347	1,395,728
Depreciation	3,944,792	3,861,465
Total Operating Expenses	84,146,744	80,359,819
Operating Income	4,589,239	4,645,967
<b>Nonoperating Revenues (Expenses):</b>		
Interest income	209,514	122,693
MMWEC surplus	250,690	212,689
Intergovernmental grants	125,000	62,500
Contributions in aid of construction	285,921	64,474
Return on investment to Town of Reading	(2,370,445)	(2,332,863)
Loss on disposal of capital assets	(85,561)	(58,296)
Other	365,046	524,112
Total Nonoperating Revenues (Expenses), Net	(1,219,835)	(1,404,691)
Change in Net Position	3,369,404	3,241,276
Net Position at Beginning of Year	101,445,083	98,203,807
Net Position at End of Year	<u>\$ 104,814,487</u>	<u>\$ 101,445,083</u>

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

TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND  
STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b><u>Cash Flows From Operating Activities:</u></b>		
Receipts from customers and users	\$ 87,519,922	\$ 84,638,647
Payments to vendors and employees	(81,064,473)	(76,424,486)
Customer purchase power adjustments	<u>382,077</u>	<u>1,020,591</u>
Net Cash Provided By (Used For) Operating Activities	6,837,526	9,234,752
<b><u>Cash Flows From Noncapital Financing Activities:</u></b>		
Return on investment to Town of Reading	(2,370,445)	(2,332,863)
MMWEC surplus	250,690	212,689
Other	<u>365,047</u>	<u>524,112</u>
Net Cash Provided By (Used For) Noncapital Financing Activities	(1,754,708)	(1,596,062)
<b><u>Cash Flows From Capital and Related Financing Activities:</u></b>		
Acquisition and construction of capital assets	(6,316,416)	(3,642,005)
Contributions in aid of construction	403,289	553,592
Intergovernmental revenues	<u>125,000</u>	<u>62,500</u>
Net Cash Provided By (Used For) Capital and Related Financing Activities	(5,788,127)	(3,025,913)
<b><u>Cash Flows From Investing Activities:</u></b>		
Investment income	209,514	122,693
(Increase) decrease in restricted cash and investments	<u>467,538</u>	<u>(3,116,820)</u>
Net Cash Provided By (Used For) Investing Activities	677,052	(2,994,127)
Net Change in Unrestricted Cash and Short-Term Investments	(28,257)	1,618,650
Unrestricted Cash and Short-Term Investments, Beginning of Year	<u>13,151,862</u>	<u>11,533,212</u>
Unrestricted Cash and Short-Term Investments, End of Year	<u>\$ 13,123,605</u>	<u>\$ 13,151,862</u>
<b><u>Reconciliation of Operating Income to Net Cash:</u></b>		
Operating income	\$ 4,589,239	\$ 4,645,967
Adjustments to reconcile operating income to net cash provided by (used for) operating activities:		
Depreciation expense	3,944,792	3,861,465
(Increase) decrease in:		
Accounts receivable	(889,528)	556,991
Prepaid and other assets	152,142	(365,132)
Inventory	(9,922)	(172,907)
Deferred outflows of resources	(4,790,403)	-
Accounts payable and accrued liabilities	438,515	834,214
Due to pension trust	(1,500,000)	125,462
Due to other postemployment benefits trust	(345,382)	345,382
Net pension liability	4,309,358	(519,874)
Deferred inflows of resources	883,172	-
Other	<u>55,543</u>	<u>(76,816)</u>
Net Cash Provided By (Used For) Operating Activities	<u>\$ 6,837,526</u>	<u>\$ 9,234,752</u>

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



TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS  
STATEMENTS OF FIDUCIARY NET POSITION

JUNE 30, 2016 AND 2015

	<u>Pension Trust</u>		<u>OPEB Trust</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b><u>ASSETS</u></b>				
Cash and short-term investments	\$ 4,264,442	\$ 2,666,772	\$ 2,525,843	\$ 1,857,738
Investments	1,345,663	1,284,061	-	-
Due from proprietary fund	-	1,500,000	-	345,382.00
<b>TOTAL ASSETS</b>	<u>5,610,105</u>	<u>5,450,833</u>	<u>2,525,843</u>	<u>2,203,120</u>
<b><u>NET POSITION</u></b>				
Total net position held in trust	<u>\$ 5,610,105</u>	<u>\$ 5,450,833</u>	<u>\$ 2,525,843</u>	<u>\$ 2,203,120</u>

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

TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS  
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

	<u>Pension Trust</u>		<u>OPEB Trust</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b>Additions:</b>				
Contributions from Reading Municipal Light Department	\$ 1,500,000	\$ 1,500,000	\$ 308,795	\$ 345,382
Investment income and change in fair value	<u>123,983</u>	<u>52,660</u>	<u>13,928</u>	<u>11,696</u>
Total additions	1,623,983	1,552,660	322,723	357,078
<b>Deductions:</b>				
Paid to Reading Contributory Retirement System	<u>1,464,711</u>	<u>1,401,638</u>	<u>-</u>	<u>-</u>
Total deductions	1,464,711	1,401,638	-	-
Increase in net position	159,272	151,022	322,723	357,078
<b>Net position:</b>				
Net Position, Beginning of Year	<u>5,450,833</u>	<u>5,299,811</u>	<u>2,203,120</u>	<u>1,846,042</u>
Net Position, End of Year	<u>\$ 5,610,105</u>	<u>\$ 5,450,833</u>	<u>\$ 2,525,843</u>	<u>\$ 2,203,120</u>

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



## Town of Reading, Massachusetts Municipal Light Department

### Notes to Financial Statements

#### 1. Summary of Significant Accounting Policies

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

- A. Business Activity - The Department purchases electricity for distribution to more than 25,000 customers within the towns of Reading, North Reading, Wilmington, and Lynnfield.

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

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

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

Municipal Light Board on December 30, 1966, pursuant to Chapter 64 of the General Laws of the Commonwealth of Massachusetts.

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

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

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

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

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

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

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

- I. Inventory - Inventory consists of parts and accessories purchased for use in the utility business for construction, operation, and maintenance purposes and is stated at average cost. Meters and transformers are capitalized when purchased.



- J. Capital Assets and Depreciation - Capital assets, which include property, plant, equipment, and utility plant infrastructure, are recorded at historical cost or estimated historical cost when purchased or constructed. Donated capital assets are recorded at estimated fair market value at the date of the donation.

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

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

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

- K. Accrued Compensated Absences - Employee vacation leave is vested annually but may only be carried forward to the succeeding year with supervisor approval and, if appropriate, within the terms of the applicable Department policy or union contract. Generally, sick leave may accumulate according to union and Department contracts and policy, and is paid upon normal termination at the current rate of pay. The Department's policy is to recognize vacation costs at the time payments are made. The Department records accumulated, unused, vested sick pay as a liability. The amount recorded is the amount to be paid upon normal termination at the current rate of pay.

- L. Long-Term Obligations - The proprietary fund financial statements report long-term debt and other long-term obligations as liabilities in the Statements of Net Position.
- M. Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures for contingent assets and liabilities at the date of the financial statements, and the reported amounts of the revenues and expenses during the fiscal year. Actual results could vary from estimates that were used.
- N. Rate of Return - The Department's rates must be set such that earnings attributable to electric operations do not exceed eight percent of the net cost of plant. The Department's audited financial statements are prepared

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

## 2. Cash and Investments

Total cash and investments as of June 30, 2016 are classified in the accompanying financial statements as follows:

Proprietary Fund:	
Unrestricted cash and short-term investments	\$ 13,123,605
Restricted cash and short-term investments	21,815,636
Restricted investments	1,345,663
Fiduciary Funds:	
Cash and short-term investments - Pension Trust	4,264,442
Cash and short-term investments - OPEB Trust	2,525,843
Investments - Pension Trust	1,345,663
Total cash and investments	<u>\$ 44,420,852</u>

Total cash and investments at June 30, 2016 consist of the following:

Cash on hand	\$ 3,000
Deposits with financial institutions	<u>44,417,852</u>
Total cash and investments	<u>\$ 44,420,852</u>



## Disclosures Relating to Interest Rate Risk

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

As of June 30, 2016, the Department (including the Pension Trust and OPEB Trust) held cash and short-term investments in pooled investments with the Massachusetts Municipal Depository Trust (MMDT), FDIC-insured savings accounts, and 90-day FDIC-insured bank certificates of deposit. Because of their immediate liquidity and/or short-term maturity, these funds are classified as cash and short-term investments in the accompanying financial statements and are not considered to be exposed to significant interest rate risk.

As of June 30, 2016, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying maturity dates as follows:

	Proprietary Fund	Fiduciary Funds	
	Restricted Investments	Pension Trust	Maturity Date
<u>Corporate bonds</u>			
AT&T Inc	\$ 221,559	\$ 221,559	12/01/22
General Electric Cap Corp	220,472	220,472	01/09/23
Wells Fargo & Co	214,864	214,864	08/15/23
Rabobank Nederland Bank	257,210	257,210	11/09/22
Teva Pharmaceut Fin BV	218,036	218,036	12/18/22
BNP Paribas	213,522	213,522	03/03/23
Total	<u>\$ 1,345,663</u>	<u>\$ 1,345,663</u>	

## Disclosures Relating to Credit Risk

Generally, credit risk is the risk that the issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assigning of a rating by a nationally recognized statistical rating organization. As of June 30, 2016, the Department and Pension Trust held investments in domestic and foreign fixed income bonds with varying ratings as follows:

<u>Investment Type</u>	<u>Proprietary Fund</u>	<u>Fiduciary Funds</u>	<u>Moody's Rating</u>
	<u>Restricted Investments</u>	<u>Pension Trust</u>	
Corporate bonds:			
AT&T Inc	\$ 221,559	\$ 221,559	BAA1
General Electric Cap Corp	220,472	220,472	A1
Wells Fargo & Co	214,864	214,864	A3
Rabobank Nederland Bank	257,210	257,210	A3
Teva Pharmaceut Fin BV	218,036	218,036	BAA1
BNP Paribas	213,522	213,522	A1
Total	<u>\$ 1,345,663</u>	<u>\$ 1,345,663</u>	

### Concentration of Credit Risk

The Department follows the Town of Reading's investment policy, which does not limit the amount that can be invested in any one issuer beyond that stipulated by Massachusetts General Laws. At June 30, 2016, 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.

As of June 30, 2016, none of the Department's (including Pension Trust and OPEB Trust) cash and short-term investments was exposed to custodial credit risk.



As of June 30, 2016, 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.

### 3. Restricted Cash and Investments

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

	6/30/16		6/30/15	
	<u>Cash</u>	<u>Investments</u>	<u>Cash</u>	<u>Investments</u>
Depreciation fund	\$ 4,494,953	\$ -	\$ 5,434,308	\$ -
Construction fund	1,500,000	-	1,400,000	-
Deferred fuel reserve	5,116,875	-	5,180,285	-
Deferred energy conservation reserve	717,418	-	584,606	-
Rate stabilization	6,822,339	-	6,771,634	-
Reserve for uncollectible accounts	200,000	-	200,000	-
Sick leave benefits	1,912,146	1,345,663	1,777,582	1,284,061
Hazardous waste fund	150,000	-	150,000	-
Customer deposits	901,905	-	846,361	-
Total	\$ 21,815,636	\$ 1,345,663	\$ 22,344,776	\$ 1,284,061

The Department maintains the following reserves:

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

- Hazardous waste fund - This reserve was set up by the Board of Commissioners to cover the Department's insurance deductible in the event of a major hazardous materials incident.
- Customer deposits - Customer deposits that are held in escrow.

#### 4. Accounts Receivable

Accounts receivable consists of the following at June 30, 2016:

Customer Accounts:		
Billed	\$ 2,085,964	
Less allowances:		
Uncollectible accounts	(200,000)	
Sales discounts	(83,691)	
Total billed		1,802,273
Unbilled, net		5,686,110
Total customer accounts		7,488,383
Other Accounts:		
Merchandise sales	116,253	
MMWEC surplus	258,318	
Intergovernmental grants	307,217	
Liens and other	38,416	
Total other accounts		715,204
Total net receivables		\$ 8,203,587

#### 5. Prepaid Expenses

Prepaid expenses consist of the following:

Insurance and other	\$ 345,837
Purchase power	72,930
NYPA prepayment fund	307,573
WC Fuel - Watson	259,416
Total	\$ 985,756

#### 6. Inventory

Inventory comprises supplies and materials at June 30, 2016, and is valued using the average cost method.



## 7. Investment in Associated Companies

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

Investment in associated companies consists of the following, at June 30, 2016:

New England Hydro-Transmission (NEH & NHH)	\$ 26,994
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## 8. Capital Assets

The following is a summary of fiscal year 2016 activity in capital assets (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance
<b>Business-Type Activities:</b>				
Capital assets, being depreciated:				
Structures and improvements	\$ 14,546	\$ 1,600	\$ -	\$ 16,146
Equipment and furnishings	31,725	915	(129)	32,511
Infrastructure	85,222	3,801	(970)	88,053
Total capital assets, being depreciated	131,493	6,316	(1,099)	136,710
Less accumulated depreciation for:				
Structures and improvements	(8,525)	(424)	-	(8,949)
Equipment and furnishings	(20,090)	(895)	129	(20,856)
Infrastructure	(34,228)	(2,625)	884	(35,969)
Total accumulated depreciation	(62,843)	(3,944)	1,013	(65,774)
Total capital assets, being depreciated, net	68,650	2,372	(86)	70,936
Capital assets, not being depreciated:				
Land	1,266	-	-	1,266
Total capital assets, not being depreciated	1,266	-	-	1,266
Capital assets, net	\$ 69,916	\$ 2,372	\$ (86)	\$ 72,202

## 9. Deferred Outflows of Resources

Deferred outflows of resources represent the Department's consumption of net position that is applicable to future reporting periods. Deferred outflows of resources have a positive effect on net position, similar to assets.

The following is a summary of deferred outflow of resources balances as of June 30, 2016:

	Proprietary Fund
Pension related:	
Net difference between projected and actual investment earnings on pension plan	\$ 1,905,088
Pension plan changes in assumptions	2,933,130
Pension plan contributions subsequent to the measurement date	<u>1,500,000</u>
Total	<u>\$ 6,338,218</u>

**10. Accounts Payable**

Accounts payable represent fiscal 2016 expenses that were paid after June 30, 2016.

**11. Accrued Liabilities**

Accrued liabilities consist of the following at June 30, 2016:

Accrued payroll	\$ 202,793
Accrued sales tax	212,176
Other	<u>34,435</u>
Total	<u>\$ 449,404</u>

**12. Customer Deposits**

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

**13. Customer Advances for Construction**

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

**14. Accrued Employee Compensated Absences**

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



## 15. Deferred Inflows of Resources

Deferred inflows of resources are the acquisition of net assets by the Department that are applicable to future reporting periods. Deferred inflows of resources have a negative effect on net position, similar to liabilities.

The following is a summary of deferred inflow of resources balances as of June 30, 2016:

	Proprietary Fund
Pension related:	
Differences between expected and actual experience	\$ 883,172
Total	\$ 883,172

## 16. Restricted Net Position

The proprietary fund financial statements report restricted net position when external constraints are placed on net position. Specifically, restricted net position represents depreciation fund reserves, which are restricted for future capital costs.

## 17. Post-Employment Health Care and Life Insurance Benefits

### Other Post-Employment Benefits

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

#### A. Plan Description

In addition to providing the pension benefits described in Note 18, the Department provides post-employment health and life insurance benefits to retired employees through the Town of Reading's participation in the Massachusetts Interlocal Insurance Association (MIIA) Health Benefits Trust. Benefits, benefit levels, employee contributions and employer contri-

butions are governed by Chapter 32 of the Massachusetts General Laws. As of June 30, 2014, the actuarial valuation measurement date, approximately 87 retirees and 51 active employees meet the eligibility requirements. The plan does not issue a separate financial report.

*B. Benefits Provided*

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

*C. Funding Policy*

As of the June 30, 2014, the actuarial valuation measurement date, retirees are required to contribute 29% of the cost of the medical and prescription drug plan, as determined by the MIIA Health Benefits Trust. Retirees also contribute 50% of the premium for a \$5,000 life insurance benefit. The Department contributes the remainder of the medical, prescription drug, and life insurance plan costs on a pay-as-you-go basis.

*D. Annual OPEB Costs and Net OPEB Obligation*

The Department's fiscal 2016 annual OPEB expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost per year and amortize the unfunded actuarial liability over a remaining period of sixteen years.

The following table shows the components of the Department's annual OPEB cost for the year ending June 30, 2016, the amount actually contributed to the plan, and the change in the Department's net OPEB obligation based on an actuarial valuation as of June 30, 2014.

Annual Required Contribution (ARC)	\$ 553,967
Interest on net OPEB obligation	<u>228,972</u>
Annual OPEB cost	782,939
Projected benefit payments	<u>(474,144)</u>
Increase in net OPEB obligation	308,795
Net OPEB obligation - beginning of year	-
Contributions to OPEB Trust	<u>(308,795)</u>
(1) Net OPEB obligation - end of year	<u>\$ -</u>

(1) See Part E for additional information



The Department's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for fiscal year 2016 and the two preceding fiscal years were as follows:

<u>Fiscal Year Ended</u>	<u>Annual OPEB Cost</u>	<u>Percentage of OPEB Cost Contributed</u>	<u>Net OPEB Obligation</u>
2016	\$ 782,939	100.00%	\$ -
2015	\$ 758,525	100.00%	\$ -
2014	\$ 768,378	100.00%	\$ -
2013	\$ 604,987	100.00%	\$ -

E. Funded Status and Funding Progress

The funded status of the plan as of June 30, 2014, the most recent actuarial valuation measurement date was as follows:

Actuarial accrued liability (AAL)	\$ 7,726,667
Actuarial value of plan assets	1,846,042
Unfunded actuarial accrued liability (UAAL)	\$ 5,880,625
Funded ratio (actuarial value of plan assets/AAL)	23.89%
Covered payroll (active plan members)	N/A
UAAL as a percentage of covered payroll	N/A

In 2010, the Department's Municipal Light Board voted to accept the provisions of Chapter 32B §20 of Massachusetts General Laws and create an *Other Post-Employment Benefits Liability Trust Fund* as a mechanism to set aside monies to fund its OPEB liability. In 2013, the Commissioners voted to create an OPEB trust instrument in alignment with the Town of Reading. In fiscal year 2016, the Department contributed \$308,795 to this trust, which was equal to all of its actuarially determined annual contributions through June 30, 2016. The assets and net position of this trust are reported in the Department's Fiduciary Funds Statements of Fiduciary Net Position.

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

trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability.

*F. Actuarial Methods and Assumptions*

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

In the June 30, 2014 actuarial valuation, the Projected Unit Credit actuarial cost method was used. The Department's actuarial value of plan assets was \$1,846,042. The actuarial assumptions included a 7.75% investment rate of return and an initial annual health care cost trend rate of 8.0% which decreases by 0.5% for six years to an ultimate level of 5.0% per year. The amortization costs for the initial UAAL is a level percentage of payroll amortization, with amortization payments increasing at 2.5% per year for a remaining period of 16 years.

**18. 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 publically available from the System's administrative offices located at Reading Town Hall, 16 Lowell Street, Reading, Massachusetts, 01867.

*B. Benefits Provided*

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular



compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation and group classification. Members become vested after 10 years of creditable service. A retirement allowance may be received upon reaching age 65 or upon attaining 20 years of service. The plan also provides for early retirement at age 55 if the participant (1) has a record of 10 years of creditable service, (2) was on the Department payroll on January 1, 1978, (3) voluntarily left Department employment on or after that date, and (4) left accumulated annuity deductions in the fund. 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.

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 percent, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, depending upon the number of years of creditable service, such employees are entitled to receive zero, fifty, or one hundred percent of the regular interest which has accrued upon those deductions. However, effective July 1, 2010, members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3% and do not forfeit any interest previously earned on contributions.

### C. Contributions

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

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



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

The Department's contribution to the System for the year ended June 30, 2016 was \$1,464,711, which was equal to its annual required contribution.

*D. 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.

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

At June 30, 2016, the Department reported a liability of \$8,833,549 for its proportionate share of the System's net pension liability. The net pension liability was measured as of December 31, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2015 rolled forward to December 31, 2015. 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, 2015, the Department's proportion was 28.25%.

*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 reported as a fiduciary fund type in the Department's basic financial statements.

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



2015 (the measurement date). Accordingly, the following reconciliation is provided:

	<u>2016</u>
Net pension liability, per actuarial valuation	\$ 12,862,732
Pension Trust Net Position	(5,610,105)
Pension Trust contributions subsequent to the net pension liability measurement date (reported as deferred outflows of resources in the proprietary fund Statements of Net Position)	1,500,000
Pension Trust investment income and fair value changes subsequent to the net pension liability measurement date	<u>80,922</u>
Net pension liability, as reported on the proprietary fund Statements of Net Position	<u>\$ 8,833,549</u>

For the year ended June 30, 2016, the Department recognized pension expense of \$1,955,548. In addition, the Department reported deferred outflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Net differences between expected and actual experience	\$ -	\$ 883,172
Changes of assumptions	2,933,130	-
Net difference between projected and actual investment earnings on pension plan	1,905,088	-
Contributions subsequent to the measurement date	<u>1,500,000</u>	<u>-</u>
Total	<u>\$ 6,338,218</u>	<u>\$ 883,172</u>

Deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date will be recognized as a reduction of the Department's net pension liability in the year ending June 30, 2017.

Amounts reported as deferred outflows of resources related to pensions will be recognized in the Department's pension expense as follows:

Year ended June 30:

2017	\$ 2,421,062
2018	921,062
2019	921,061
2020	909,108
2021	282,753
Total	<u>\$ 5,455,046</u>

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

Inflation	3.75% per year
Salary increases	6% - 4.25% for General Employees and 7% - 4.75% for Public Safety, depending on years of service
Investment rate of return	7.65%, net of pension plan investment expense,

Mortality rates were based on pre-retirement rates that reflect the RP-2014 Mortality Table, projected with fully generational mortality improvement using Scale MP-2014. Post retirement rates reflect the RP-2014 Table, projected with fully generational mortality improvement using Scale MP-2014. For disabled lives, the RP-2014 Disabled Mortality Table was used.

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



<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-term Expected Rates of Return</u>
Global equity	40.00%	8.02%
Fixed income	13.00%	3.72%
Value-Added Fixed Income	10.00%	6.86%
Private equity	10.00%	9.50%
Real estate	10.00%	6.50%
Timber/Natural Resources	4.00%	7.07%
Hedge funds	9.00%	6.50%
Other	4.00%	6.18%
Total	<u>100.00%</u>	

Discount Rate: The discount rate used to measure the total pension liability was 7.65%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that contributions from participating employers will be made in accordance with Sections 22D and 22F of Chapter 32 of the Massachusetts General Laws. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected benefit payments of current 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.

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

<u>Fiscal Year Ended</u>	<u>1% Decrease (6.65%)</u>	<u>Current Discount Rate (7.65%)</u>	<u>1% Increase (8.65%)</u>
June 30, 2016	\$ 14,076,273	\$ 8,833,549	\$ 4,367,178

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

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

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

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

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

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



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

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

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

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

After the July 1, 2016 principal payment, total capital expenditures amounted to \$1,694,153,000, of which \$126,048,000 represents the amount associated with the Department's Project Capability. MMWEC's debt outstanding for the Projects from Power Supply System Revenue Bonds totals \$112,510,000, of which \$4,099,000 is associated with the Department's share of Project Capability. After the July 1, 2016 principal payment, MMWEC's total future debt service requirement on outstanding bonds issued for the Projects is \$59,282,000, of which \$1,664,000 is anticipated to be billed to the Department in the future.

The aggregate amount of the Department's required payments under the PSAs and PPAs, exclusive of the Reserve and Contingency Fund billings, to MMWEC at June 30, 2016 and estimated for future years is shown below.

		<u>Annual Costs</u>
For years ending June 30,	2017	\$ 1,473,000
	2018	<u>191,000</u>
	Total	<u>\$ 1,664,000</u>

In addition, under the PSAs, the Department is required to pay to MMWEC its share of the Operation and Maintenance (O&M) costs of the Projects in which it participates. The Department's total O&M costs including debt service under the PSAs were \$11,894,000 and \$12,475,000 for the years ended June 30, 2016 and 2015, respectively.

## 20. Renewable Energy Certificates

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

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

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

Information regarding the Department's fiscal year 2016 REC activity and balances is as follows:

### REC Sales During Fiscal 2016

	<u>Certificates</u>	<u>Unit Price</u>	<u>Amount</u>
CT Class I	6,008	\$ 24.00	\$ 144,192
MA Class I	394	\$ 24.00	9,456
MA Class II	426	\$ 24.00	10,224
MA Class II	787	\$ 24.75	19,478
RI Class I	189	\$ 44.00	8,316
MA Class I	4,029	\$ 46.50	187,349
CT Class I	6,807	\$ 46.50	316,526
Total	<u>18,640</u>		<u>\$ 695,541 <sup>(1)</sup></u>

<sup>(1)</sup> Sale proceeds netted against fiscal year 2016 purchased power fuel charge



REC Holdings at June 30, 2016

	<u>Banked Certificates</u>	<u>Projected Certificates</u>	<u>Total Certificates</u>	<u>Estimated Value</u>
MA Class I & II	-	7,214	7,214	\$ 180,350
CT Class I	-	3,957	3,957	98,925
RI Class I	-	384	384	9,600
Total	-	11,555	11,555	\$ 288,875

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

Because there is no formal accounting guidance under GAAP or IFRS for RECs and the Department does not have a formal policy for the future disposition of RECs, the estimated fair value of the Department's REC holdings at June 30, 2016 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, 2016. Following is the future minimum rental income to be received by the Department under the terms of this lease for the year ending June 30:

2017	\$ <u>4,084</u>
Total	\$ <u>4,084</u>

Operating Lease - Warehouse

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

2017	\$ 161,348
2018	<u>147,902</u>
Total	\$ <u>309,250</u>

**TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT**  
**SCHEDULE OF OPEB FUNDING PROGRESS**  
**REQUIRED SUPPLEMENTARY INFORMATION**

June 30, 2016  
(Unaudited)

**Other Post-Employment Benefits**

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

See Independent Auditors' Report.



TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

SCHEDULE OF PROPORTIONATE SHARE  
OF THE NET PENSION LIABILITY  
REQUIRED SUPPLEMENTARY INFORMATION

JUNE 30, 2016  
(Unaudited)

Reading Contributory Retirement System

<u>Fiscal Year</u>	<u>Proportion of the Net Pension Liability</u>	<u>Proportionate Share of the Net Pension Liability</u>	<u>Covered Payroll</u>	<u>Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll</u>	<u>Plan Fiduciary Net Position Percentage of the Total Pension Liability</u>
June 30, 2016	28.25%	\$8,833,549	\$ 6,439,178	137.18%	72.17%
June 30, 2015	28.25%	\$4,524,191	\$ 5,908,693	76.57%	79.89%

Information above is presented as of the most recent measurement date.

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

See Independent Auditors' Report.

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TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

SCHEDULE OF PENSION CONTRIBUTIONS  
REQUIRED SUPPLEMENTARY INFORMATION

JUNE 30, 2016  
(Unaudited)

Reading Contributory Retirement System

<u>Fiscal Year</u>	<u>Contractually Required Contribution</u>	<u>Contributions in Relation to the Contractually Required Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll</u>	<u>Contributions as a Percentage of Covered Payroll</u>
June 30, 2016	\$ 1,464,711	\$ 1,464,711	\$ -	\$ 6,439,178	22.75%
June 30, 2015	\$ 1,401,638	\$ 1,401,638	\$ -	\$ 5,908,693	23.72%

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

See Independent Auditors' Report.



# LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline  
Recommendation Not Accepted

RMLD Proposed Timeline  
Recommendation Completed

CONSULTANT RECOMMENDATION		CY 2015				CY 2016				CY 2017				CY 2018		RMLD WORK-PLAN/COMMENTS		
		Q3		Q4		Q1		Q2		Q3		Q4		Q1			Q2	
1	ESTABLISH PLANNING CULTURE																	
1.1	Update 2008 Strategic Plan (New Strategic Plan)																	
1.2	Establish planning culture																On-going	
1.3	Update Integrated Resources plan																	
1.4	Update six-year plan																Annually	
1.5	Develop electric system master plan																Long-term Planning, GIS, and Technology Roadmap	
2	DEVELOP AN EFFECTIVE SUSTAINABLE WORKFORCE																	
2.1	Develop workforce development plan																Leidos Support	
2.2	Develop succession plans																Leidos Support - CY16 Q2 and Q3	
2.3	Update job descriptions																Leidos Support - CY16 Q2 and Q3	
2.4	Implement consistent performance review process																Leidos Support - CY16 Q2 and Q3	
2.5	Hire additional HR personnel																	
2.6	Increase efforts to fill vacant positions																On-going	
3	IMPROVE ORGANIZATIONAL EFFECTIVENESS																	
3.1	Reorganize to better align functions																On-going	
3.2	Create new Finance and Administration division																2 vacancies. Appointed new Director of Business Finance	
3.3	Align Customer Services under the Integrated Resources Division																Completed	
3.4	Reorganize & Expand Engineering group (Develop System Engineering Group)																Tied to IBEW negotiations. Posted two systems engineer positions	
3.5	Formalize business process and performance measurement																Assessing IT roadmap and staffing.	
3.6	Develop and implement internal and external communication plans																	
3.7	Assess organizational culture and employee satisfaction																Leidos Support	
4	DEVELOP LEADERSHIP CAPABILITIES																	
4.1	Assess leadership																Tied to union contracts	
4.2	Provide management and leadership training.																On-going	
4.3	Provide cross-divisional management training.																On-going	





# LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline  
Recommendation Not Accepted

RMLD Proposed Timeline  
Recommendation Completed

CONSULTANT RECOMMENDATION		CY 2015								CY 2016				CY 2017				CY 2018		RMLD WORK-PLAN/COMMENTS
		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2				
5	ESTABLISH PROJECT MANAGEMENT CULTURE																			
5.1	Develop project management policies and procedures																			
5.2	Establish project management training plan																		On-going	
5.3	Add project management experience and certifications to job descriptions																		HR to organize with Director of E&O	
5.4	Establish project management performance expectations																		On-going - job description revisions	
6	ENSURE COMPETITIVELY PRICED SERVICES																			
6.1	Continue regular cost of service and rate design review																			
6.2	Increase customer and engagement and education of alternate rates																		TOU, DSM, Education, Solar Choice	
7	IMPROVE FINANCIAL PLANNING AND RISK MANAGEMENT																			
7.1	Review and update reserve policies																		All policies	
7.2	Establish a risk management committee and enterprise risk management plan.																			
7.3	Develop a succession plan for the Manager of Accounting and Business																		Finalized	
7.4	Formalize financial and accounting business processes																		In Progress	
8	STRENGTHEN SAFETY CULTURE																			
8.1	Review Board Safety Policy																		All policies. Developed Safety Program.	
8.2	Develop injury and illness prevention program																		Review of existing manual and OSHA requirements	
9	DIVERSIFY RESOURCES																			
9.1	Develop distributed generation penetration study																		On-going	
9.2	Review cost effectiveness and economic potential for end-use measures																		Tangent and DSM	
10	ESTABLISH A CULTURE OF COMPLIANCE																			
10.1	Assign Compliance Manager and develop compliance plan and requirements.																		Leidos support	
11	IMPROVE CUSTOMER SERVICE																			
11.1	Conduct customer satisfaction surveys.																		Communication Plan	





# LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline  
Recommendation Not Accepted

RMLD Proposed Timeline  
Recommendation Completed

CONSULTANT RECOMMENDATION		CY 2015				CY 2016				CY 2017				CY 2018		RMLD WORK-PLAN/COMMENTS
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2	
11.2	Conduct post transaction surveys.															Communication Plan
11.3	Develop and implement customer engagement plan.															Service Requirements Handbook. Issued new Terms and Conditions.
12	PLAN FOR FUTURE TECHNOLOGIES															
12.1	Complete operating technology roadmap															
13	FOCUS ON ASSET MANAGEMENT															
13.1	Develop and implement an asset management plan															
13.2	Develop and implement asset management business processes															Asset management system - GIS/Cogsdale
13.3	Implement asset management system															
13.4	Develop customer service manual (Service Requirement Handbook)															
14	LEVERAGE GEOGRAPHIC INFORMATION SYSTEMS															Completed
14.1	Conduct robust GPS-based inventory of assets and infrastructure															CDM
14.2	Adopt and implement industry standard common information model															CDM
14.3	Develop and implement business processes for GIS management															CDM
14.4	Provide GIS training for Engineering and Operations (Add Other Divisions)															On-going
15	FORMALIZE AND ENHANCE WORK MANAGEMENT															
15.1	Develop work management business processes															Integrated with asset management plan.
15.2	Implement modern work management system															
16	PLAN FOR RESILIENCY															
16.1	Develop disaster recovery and business continuity plans															Emergency OP Procedure - completed.
17	ENHANCE FACILITIES															
17.1	Enhance current workspace															On-going





# BOOTH AND ASSOCIATES - 2015 RELIABILITY STUDY - RECOMMENDATIONS

	BOOTH	CONSULTANT RECOMMENDATION	YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
					ACCEPTED	ALTERNATE SOLUTION		
1	BOOTH	Replace cable trench covers at Sub 4 (should be expense, but most put large investments in capital)	2015-16	\$100,000	✓		completed	
2	BOOTH	Sub 5 bus duct from transformer to switchgear has reached the end of useful life and should be replaced with the switchgear replacement	2015-16	\$400,000		✓	in progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Scheduled for the first week in November.
3	BOOTH	Replace fence at Sub 4 and fix grounding issues	2015-16	\$100,000	✓		completed	
4	BOOTH	Rebuild pole line along Lowell Street	2015-16	\$375,000	✓		completed	
5	BOOTH	Complete AMI Upgrade and RF Mesh Network	2015-16	\$350,000	✓		in progress	Five gateways installed. Relays to be installed. Additional meters in stock. Working on communicating issue with 2 deployed meters.
6	BOOTH	Implement GIS Upgrade Program	2015-16	\$350,000 - \$750,000	✓		in progress	GIS asset survey is in progress
7	BOOTH	Implement Arc Flash Study Analysis	2015-16	\$30,000	✓		completed	
8	BOOTH	Develop construction standards	2015-16	In-house	✓		in progress	
9	BOOTH	Update Joint-Use Agreement with Verizon	2015-16	In-house	✓		in progress	
10	BOOTH	Replace bushings on Sub 4 transformer.	2015-16	\$150,000	✓		completed	
11	BOOTH	CT wiring at Sub 3 should be fixed. The CT circuits should only be bonded on grounding in exactly one spot	2015-16	O&M	✓		completed	CT's are grounded in only one location.
12	BOOTH	Sub 3 has NO under-frequency trips. Relay is not programmed to trip	2015-16	O&M		✓	completed	Station 3 has UF capability. RMLD is in compliance with ISO's UF requirement.
13	BOOTH	Fence grounding is not up to code@ Station 4. Fabric and barbed wire should be grounded.	2015-16	O&M	✓		completed	
14	BOOTH	Earth/gravel around fence at Sub 5	2015-16	O&M	✓		completed	
15	BOOTH	Interface GIS with GIS platform	2015-16	In-house	✓		in progress	GIS Data collection is in-progress
16	BOOTH	Create Milsoft Windmill* model	2015-16	In-house	✓		in progress	Being done in conjunction with GIS collection. As each feeder is completed by DRG it is being sent to Milsoft to create the model.
17	BOOTH	Complete SCADA software and hardware upgrade	2015-17	\$350,000	✓		in progress	nDimensions cyber security software complete.
18	BOOTH	Upgrade main feeder of Circuit 5W9 to 795 to address voltage and conductor capacity issues (1.6 miles)	2015-17	\$240,000	✓		in progress	The first 3000' has been reconducted. This work can only be done during the fall/winter months. May have a hurdle with Verizon and pole replacements.
19 (1)	BOOTH	Upgrade UG circuit 3W5, 3W13, 4W9, 3W14, 4W16, 4W23, 4W24, 4W28, 4W30, 5W4 exits to parallel 750 Cu	2015-19	\$850,000		✓		Can't parallel up the feeder get-a-ways at Station 4 and Station 5, no spare conduits available. Can't parallel up the feeder get-a-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.
20	BOOTH	Replace breakers at Sub 4 due to age and condition	2015-20	\$3,000,000	✓		completed	All 26 breakers were replaced by 1/10/2016.
21	BOOTH	Pole inspection and replacement program. RMLD currently inspects 10% of RMLD-owned poles per year. Negotiate with Verizon to address Verizon-owned poles. Total 13,000 poles.	2015-24	\$9,000,000	✓		in progress	2014 /2015 /2016 inspection completed. Pole replacement in-progress.
22	BOOTH	Continued implementation of Grid Modernization Plan (GMP) • Outage Management (OMS) • Transformer Loading Management (TLM) • Demand Response (DR) • Demand Side Management (DSM) • Distributed Generation Program	2015-24	\$100,000 \$100,000 \$100,000 \$100,000 \$11,000,000	✓ ✓ ✓ ✓ ✓		in progress in progress in progress in progress in progress	OMS installed waiting for GIS overhaul and AMI integration
23 (1)	BOOTH	Upgrade UG circuit exit 4W7 to parallel 750 Cu	2016	\$70,000		✓		Can't parallel up the feeder get-a-way at Station 4, no spare conduits available. Solution: Load relief by feeder switching and/or new Wilmington Substation.
24	BOOTH	Upgrade main feeder for Circuit 5W5 to 795 to address voltage and conductor capacity issues (2.5 miles)	2016-17	\$375,000	✓			Change construction years to FY17, FY18 and FY19. Hurdle: Verizon pole replacement area





CONSULTANT RECOMMENDATION			YEAR	COST (Booth Estimate)	RECOMMENDATION		RMLD WORK PLAN	
					ACCEPTED	ALTERNATE SOLUTION	STATUS	
25	BOOTH	New Wilmington Substation (land acquisition and design)	2016-17	\$750,000	✓		In progress	Searching for land in Wilmington
26	BOOTH	Upgrade main feeder of Circuit 4W24 to 795 to address voltage and conductor capacity issues (1.5 miles)	2016-17	\$225,000	✓			Change construction years to FY17, FY18 and FY19. Hurdle: Verizon pole replacement area
27	BOOTH	Complete comprehensive distribution system analysis upon GIS completion	2016-17	In-house	✓			
28	BOOTH	Complete the 4 kV Conversion Program	2016-19	\$1,500,000	✓		In progress	Change completion date to FY20. Multiple year project: 32 +/- stepdown areas in the service territory. Converted the Burrough's Road area October 22, 2015.
29	BOOTH	Sub 3 does have SEL relays but they are all legacy models that don't provide the function (especially communication) of today's versions. If the plan is to have a fully-automated system then: replace the SEL relays with the modern version. Should be able to replace in existing hole and wiring.	2016-19	\$200,000	✓		In progress	PLM designing upgrades. Materials out to bid September 2016; award pending.
30	BOOTH	New Wilmington Substation (procurement, design, construction and commission)	2017-19	\$4,250,000	✓		In progress	Searching for land near 115 KV lines in Ballardvale/Upton Rd area
31 (1)	BOOTH	Sub 5 Switchgear is at the end of useful life. The relaying needs to be updated for the system automation project. The existing breakers are 2008 vintage but should not be reused. They can be sold on the open market.	2017-19	\$1,200,000	✓	✓		As part of the planning for the proposed substation in Wilmington the need for the Wildwood Substation will be reviewed.
32 (1)	BOOTH	Upgrade UG circuit exits 3W7, 4W5, 5W5, SW9 to parallel 750 Cu to increase circuit capacity	2017-19	\$280,000		✓		Can't parallel up the feeder get-a-ways at Station 4 and Station 5, no spare conduits available. Can't parallel up the feeder get-a-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.
33	BOOTH	Feeder Automation - complete System Coordination Study in conjunction	2017-24	\$4,000,000	✓		In planning	
34	BOOTH	Upgrade main feeder of Circuit 4W28 to 1000 Cu to address voltage and conductor capacity issues (0.3 miles)	2018	\$60,000		✓		4W28 is the dedicated circuit for Analog Devices. Any type of load relief for feeder 4W28 will require the reconfiguration of ADI distribution system or an additional RMLD feeder to the site.
35	BOOTH	Substation automation	2019	\$112,000	✓		In progress	
36 (1)	BOOTH	Upgrade UG circuit exits 4W6, 5W8 to parallel 750 to increase circuit capacity.	2019	\$120,000		✓		Can't parallel up the feeder get-a-ways at Station 4 and Station 5, no spare conduits available. Can't parallel up the feeder get-a-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.
37	BOOTH	Upgrade main feeder of Circuit 4W23 to 795 to address voltage and conductor capacity issues (1.1 miles)	2020	\$165,000	✓			Change construction years to FY20, FY21 and FY 22. Hurdle: Verizon pole replacement area.
38 (1)	BOOTH	Upgrade UG circuit exits 3W18, 4W4, 4W10, 4W18 to parallel 750 to increase circuit capacity.	2021-23	\$370,000		✓		Can't parallel up the feeder get-a-ways at Station 4 and Station 5, no spare conduits available. Can't parallel up the feeder get-a-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.
39	BOOTH	Upgrade main feeder of Circuit 4W9 to 795 to address voltage and conductor capacity issues.	2021-23	\$75,000	✓			
40	BOOTH	Review and upgrade electric system comprehensive analysis	2024	\$100,000	✓			
41	BOOTH	Transformer D and E replacement at both Sub 4 and Sub 5. They are approaching their end of useful life.	2024-25	\$3,400,000	✓			
42	BOOTH	Install oil containment for Transformer D and E at Sub 4	2024-25	\$100,000	✓		completed	
43 (1)	BOOTH	Upgrade UG circuit exits 3W8, 4W12 to parallel 750 Cu to increase circuit capacity.	2024-26	\$180,000		✓		Can't parallel up the feeder get-a-ways at Station 4, no spare conduits available. Can't parallel up the feeder get-a-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.





CONSULTANT RECOMMENDATION			YEAR	COST (Booth Estimate)	RECOMMENDATION		RMLD WORK PLAN	
					ACCEPTED	ALTERNATE SOLUTION	STATUS	
44	BOOTH	Upgrade main feeder of Circuit 4W30 to 795 to address voltage and conductor capacity issues.	2024-26	\$165,000	✓			
45	BOOTH	Replace control panels for Ring bus at Sub 4	2024-26	\$200,000	✓		In progress	Design Complete. Material to arrive by 10/24/16. Construction to begin in early December 2016
46	UPG	Station 3 Transformers: #3. Adjust timing delay on the winding temperature trip.			✓		In progress	PLM designing upgrades. Materials out to bid September 2016; award pending.
47	UPG	Station 3 Transformers: #4. Add a low oil trip to transformers so they trip before any winding damage can occur.			✓		In progress	PLM designing upgrades. Materials out to bid September 2016; award pending.
48	UPG	Station 3 Transformers: #5. Replace LTC main braking rollers with the new design that has a brass sleeve for the roller to ride on.			✓		In progress	Scheduled for late November 2016
49	UPG	Station 3 Transformers: #6. Repair LTC control displays for #7A and #7B			✓		In progress	Temporary controls installed. Originals sent back for repair.
50	UPG	Station 3 Transformers: #7. Replace or repair the Trans-TB Hydran unit.			✓			
51	UPG	Station 3 Transformers: #8. Repair the Trans TB temperature differential unit which is in failure mode.			✓		completed	Quote received for replacement unit.
52	UPG	Station 3 15 kV Breakers #2: the close spring assembly needs to be replaced.			✓		In progress	
53	UPG	Station 3 15 kV Breakers: #3. DC control power fuses for trip, close, motor should be separated.			✓		In progress	Will be addressed during Station #3 upgrades
54	UPG	Station 3 15 kV Breakers: #4. Control handle trip should be separated from relay and should trip breaker directly.			✓		In progress	Will be addressed during Station #3 upgrades
55	UPG	Station 3 Relays: #1. The DC negative feed to the differential relay for the digital inputs should be altered to tie a DC negative via a fuse.			✓		In progress	Will be addressed during Station #3 upgrades
56	UPG	Station 3 Relays: #2. Review and alter the under voltage transfer scheme so that it operates like the same schemes at the other stations.					In progress	Will be addressed during Station #3 upgrades
57	UPG	Station 4 115 kV Breakers: #1 (GCB1). Replace the breaker.			✓		completed	
58	UPG	Station 4 Transformers: #1. Repair trans #110D cooling contactor for stage #2.			✓			Will need to follow-up with UPG for more information.
59	UPG	Station 4 Transformers: #2. Replace the trans #110D main tank pressure relief device contact.			✓		completed	
60	UPG	Station 4 Transformers: #3. Replace the trans #110D main tank low oil gauge.			✓		completed	
61	UPG	Station 4 Transformers: #4. Repair the DC control power supply control cabling.			✓		completed	
62	UPG	Station 4 Transformers: #5. Replace the trans 110E main tank low oil and pressure relief device cables from the devices to the conduit bodies.			✓		completed	
63	UPG	Station 4 Transformers: #6. Replace the trans 110E cooling fan mounted top left.			✓		completed	
64	UPG	Station 4 Transformers: #7. Replace all four bushings of Trans #110E and #110D.			✓		completed	See Item #10 (Booth Recommendation)
65	UPG	Station 4 15kV Breakers: #2. Check circuit 4W11 on a normal basis to insure that the heaters remain on to keep the breakers above ambient temperature so that no moisture condenses on the breaker insulation.			✓		completed	
66	UPG	Station 4 Breakers: #4. Replace the ground stab on 4W22.			✓		completed	
67	UPG	Station 5 Transformers: #1. Replace the trans #D main tank low oil and pressure relief divide output cable. Reconnect the LTC low oil level gauge wiring in the conduit body where the device cable terminates.			✓		completed	
68	UPG	Station 5 15kV Breakers: #1. Take bus out of service and check alignment and correct if possible.			✓		In progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16





CONSULTANT RECOMMENDATION		YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
				ACCEPTED	ALTERNATE SOLUTION		
69	UPG	Station 5 15kV Breakers: #2. Remove breaker SW9, inspect for corrosion, and correct misalignment of the Breaker contact Rosette and cell stab during maintenance cycle.		✓		In progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16
70	UPG	Station 5 15kV Breakers: #3. Take bus out of service and check alignment and correct if possible.		✓		In progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16
71	UPG	Station 5 15kV Breakers: #4. Take bus tie breaker out of service and check alignment and correct if possible.		✓		In progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16

**Note:** Recommendations and priorities are based on existing system conditions. Should conditions change, these priorities will likely require re-evaluation.

- (1) New Substation in Wilmington will address these recommendations; alternate solution provided in the meantime.





# Integrated Resources

October 20, 2016

RMLD Board of Commissioners Meeting

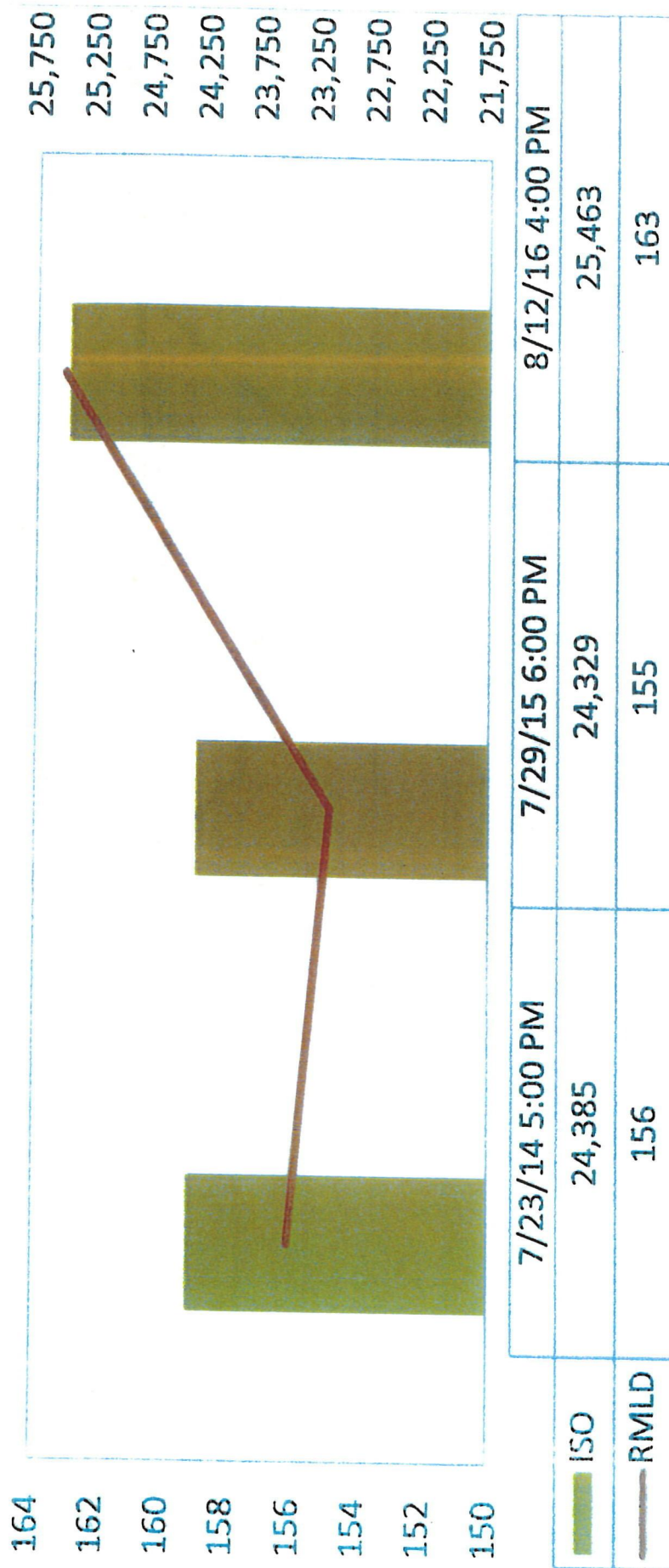
Reporting for August, 2016

Jane Parenteau  
Director of Integrated Resources

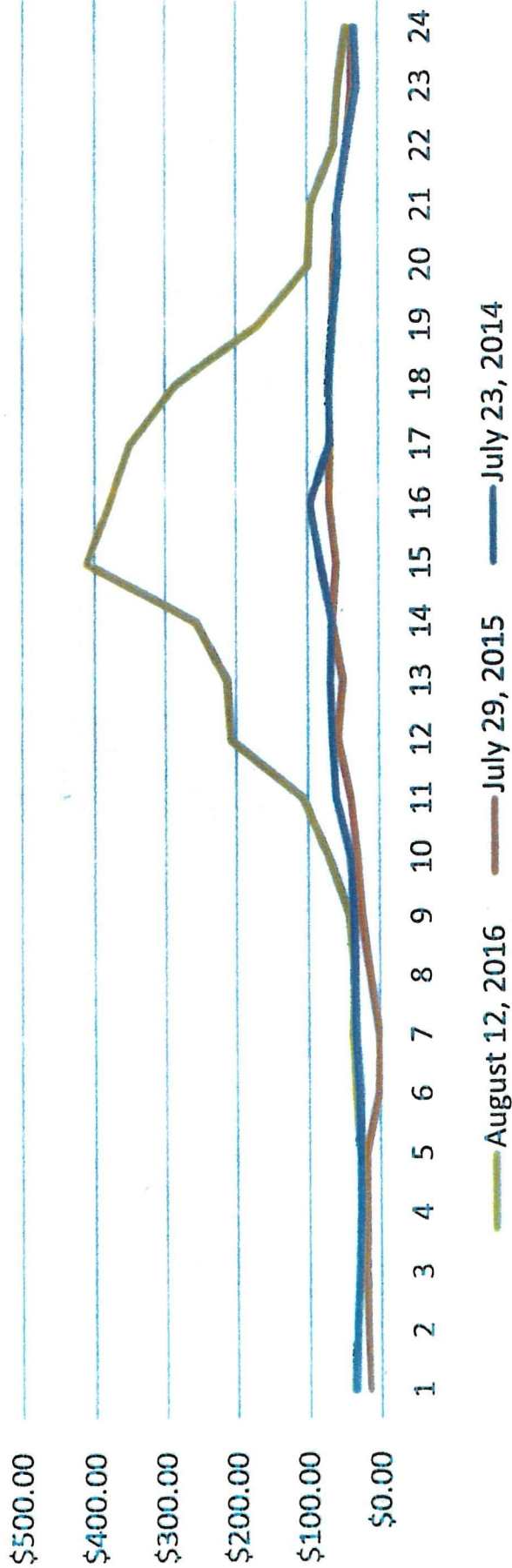




## ISO System Peak 2014-2016 Coincident with RMLD Load

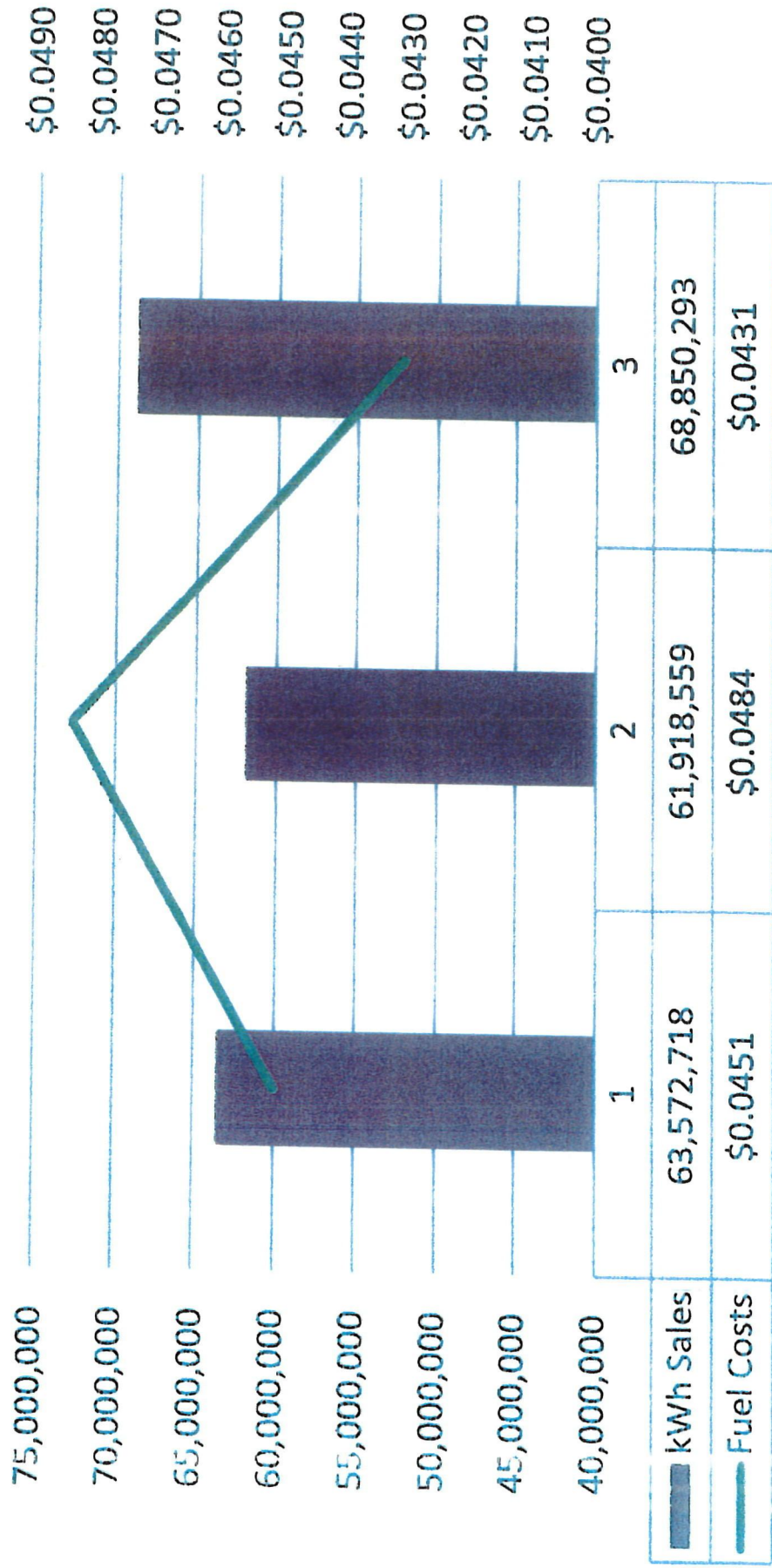


**Market Statistics  
Real Time Pricing  
ISO Peak 24 Hour Period  
2014-2016**





## Imbedded Fuel Costs vs. kWh Sales







To: Coleen O'Brien

From: Maureen McHugh, Jane Parenteau

Date: October 12, 2016

Subject: Purchase Power Summary – August, 2016

Energy Services Division (ESD) has completed the Purchase Power Summary for the month of August, 2016.

### **ENERGY**

The RMLD's total metered load for the month was 73,696,262 kWh, which is a 1.97% increase from the August, 2015 figures.

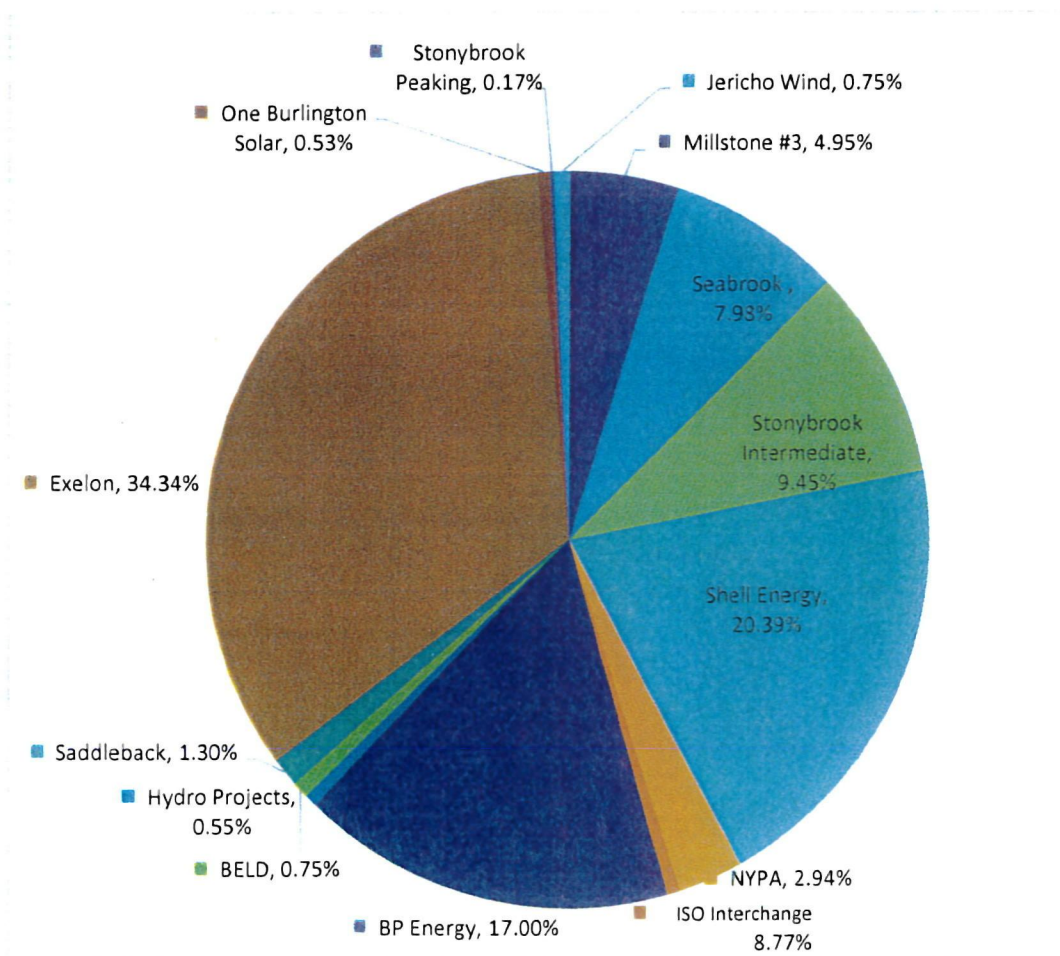
Table 1 is a breakdown by source of the energy purchases.

Table 1					
Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy	Total \$ Costs	\$ as a %
Millstone #3	3,649,666	\$6.76	4.93%	\$24,661	0.77%
Seabrook	5,882,459	\$6.32	7.94%	\$37,177	1.16%
Stonybrook Intermediate	6,961,625	\$35.16	9.40%	\$244,738	7.66%
Shell Energy	15,027,000	\$65.32	20.28%	\$981,620	30.73%
NYPA	2,167,620	\$4.92	2.93%	\$10,665	0.33%
ISO Interchange	(421,216)	\$0.00	-0.57%	-\$138,670	-4.34%
NEMA Congestion	0	\$0.00	0.00%	\$70,472	2.21%
Coop Resales	6,304	\$145.36	0.01%	\$916	0.03%
BP Energy	12,527,200	\$46.90	16.91%	\$587,526	18.39%
Hydro Projects*	408,778	\$81.36	0.55%	\$33,257	1.04%
Braintree Watson Unit	552,004	\$70.31	0.75%	\$38,811	1.22%
Saddleback/Jericho Wind	1,509,069	\$91.99	2.04%	\$138,827	4.35%
One Burlington Solar	390,650	\$70.00	0.53%	\$27,346	0.86%
Exelon	25,307,800	\$43.78	34.16%	\$1,108,057	34.69%
Stonybrook Peaking	123,109	\$233.06	0.17%	\$28,691	0.90%
Monthly Total	74,092,068	\$43.11	100.00%	\$3,194,092	100.00%
*Pepperell, Woronoco, Indian River, Turner Falls, Collins, Pioneer, Hosiery Mills, Summit Hydro					

Table 2 breaks down the ISO interchange between the DA LMP Settlement and the RT Net Energy for the month of August, 2016.

Table 2			
Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy
ISO DA LMP *	4,488,925	\$27.33	6.06%
Settlement			
RT Net Energy **	(4,910,141)	(\$52.65)	-6.63%
Settlement			
ISO Interchange (subtotal)	(421,216)	(\$32.93)	-0.57%
* Independent System Operator Day-Ahead Locational Marginal Price			
** Real Time Net Energy			

### AUGUST 2016 ENERGY BY RESOURCE





## CAPACITY

The RMLD hit a demand of 163,134 kW, which occurred on August 12, at 4 pm. The RMLD's monthly UCAP requirement for August, 2016 was 230,684 kW.

Table 3 shows the sources of capacity that the RMLD utilized to meet its requirements.

Table 3				
Source	Amount (kW)	Cost (\$/kW-month)	Total Cost \$	% of Total Cost
Millstone #3	4,950	33.34	\$165,020	8.59%
Seabrook	7,909	36.45	\$288,273	15.01%
Stonybrook Peaking	24,981	1.98	\$49,368	2.57%
Stonybrook CC	42,925	7.08	\$304,076	15.83%
NYPA	0	0.00	-\$6,506	-0.34%
Hydro Quebec	0	0	\$13,287	0.69%
Nextera	60,000	6.15	\$369,000	19.21%
Braintree Watson Unit	0	0.00	\$243,624	12.68%
ISO-NE Supply Auction	89,919	5.50	\$494,562	25.75%
<b>Total</b>	<b>230,684</b>	<b>\$8.30</b>	<b>\$1,920,704</b>	<b>100.00%</b>

Table 4 shows the dollar amounts for energy and capacity per source.

Table 4						
Resource	Energy	Capacity	Total cost	% of Total Cost	Amt of Energy (kWh)	Cost of Power (\$/kWh)
Millstone #3	\$24,661	\$165,020	\$189,681	3.71%	3,649,666	0.0520
Seabrook	\$37,177	\$288,273	\$325,449	6.36%	5,882,459	0.0553
Stonybrook Intermediate	\$244,738	\$304,076	\$548,814	10.73%	6,961,625	0.0788
Hydro Quebec	\$0	\$13,287	\$13,287	0.26%	-	0.0000
Shell Energy	\$981,620	\$0	\$981,620	19.19%	15,027,000	0.0653
NextEra	\$0	\$369,000	\$369,000	7.21%	-	0.0000
* NYPA	\$10,665	-\$6,506	\$4,159	0.08%	2,167,620	0.0019
ISO Interchange	-\$138,670	\$494,562	\$355,891	6.96%	(421,216)	-0.8449
Nema Congestion	\$70,472	\$0	\$70,472	1.38%	-	0.0000
BP Energy	\$587,526	\$0	\$587,526	11.49%	12,527,200	0.0469
* Hydro Projects	\$33,257	\$0	\$33,257	0.65%	408,778	0.0814
Braintree Watson Unit	\$38,811	\$243,624	\$282,435	5.52%	552,004	0.5117
* Saddleback/Jericho	\$138,827	\$0	\$138,827	2.71%	1,509,069	0.0920
* One Burlington Solar	\$27,346	\$0	\$27,346	0.53%	390,650	0.0700
Coop Resales	\$916	\$0	\$916	0.02%	6,304	0.1454
Exelon Energy	\$1,108,057	\$0	\$1,108,057	21.66%	25,307,800	0.0438
Stonybrook Peaking	\$28,691	\$49,368	\$78,060	1.53%	123,109	0.6341
<b>Monthly Total</b>	<b>\$3,194,092</b>	<b>\$1,920,704</b>	<b>\$5,114,796</b>	<b>100.00%</b>	<b>74,092,068</b>	<b>0.0690</b>
<b>* Renewable Resources</b>					<b>6.04%</b>	

## RENEWABLE ENERGY CERTIFICATES (RECs)

Table 5 shows the amount of banked and projected RECs for the Swift River Hydro Projects through August 2016, as well as their estimated market value.

<b>Table 5</b>				
<b>RECs Summary</b>				
<b>Period - January 2016 - June 2016</b>				
	<b>Banked RECs</b>	<b>Projected RECs</b>	<b>Total RECs</b>	<b>Est. Dollars</b>
Woronoco	0	7,555	7,555	\$188,875
Pepperell	0	3,805	3,805	\$95,125
Indian River	0	1,675	1,675	\$41,875
Turners Falls	0	1,135	1,135	\$0
Saddleback	0	5,152	5,152	\$128,800
Jericho	0	3,979	3,979	\$99,475
<b>Sub total</b>	<b>0</b>	<b>23,301</b>	<b>23,301</b>	<b>554,150</b>
RECs Sold	\$0		0	\$0
<b>Grand Total</b>	<b>0</b>	<b>23,301</b>	<b>23,301</b>	<b>\$554,150</b>

## TRANSMISSION

The RMLD's total transmission costs for the month of August, 2016 were \$1,370,117. This is an increase of 12.74% from the July transmission cost of \$1,215,292. In August, 2015 the transmission costs were \$1,309,072.

<b>Table 6</b>			
	<b>Current Month</b>	<b>Last Month</b>	<b>Last Year</b>
Peak Demand (kW)	163,134	155,230	153,225
Energy (kWh)	74,092,068	73,246,501	72,200,480
Energy (\$)	\$3,194,092	\$3,217,314	\$3,269,589
Capacity (\$)	\$1,915,137	\$1,506,547	\$1,723,853
Transmission(\$)	\$1,370,117	\$1,215,292	\$1,309,072
Total	\$6,479,345	\$5,939,153	\$6,302,514



# RMLD SOLAR CHOICE PROGRAM

Parameter	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Units
<b>Key Assumptions:</b>											
Solar Array Size in MW AC output	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	MW AC
Max Number of Participants	500	500	500	500	500	500	500	500	500	500	
Percentage of project output per Solar Share, %	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	%
Average Monthly Energy Use per Example Participant, kWhs/Month	750	750	750	750	750	750	750	750	750	750	kWhs/Month
Fuel Charge Rate, \$/kWh	\$0.0500	\$0.0508	\$0.0515	\$0.0523	\$0.0531	\$0.0539	\$0.0547	\$0.0555	\$0.0563	\$0.0572	\$/kWh
CSS Project PPA Rate, \$/kWh	\$0.0725	\$0.0736	\$0.0747	\$0.0758	\$0.0769	\$0.0781	\$0.0793	\$0.0805	\$0.0817	\$0.0829	\$/kWh
Average "Community Solar Supply", kWh/Month per Solar Share	267	267	267	267	267	267	267	267	267	267	kWhs/Month
Average "Community Solar Share Charge", \$/Month	\$5.00	\$6.03	\$6.06	\$6.09	\$6.12	\$6.15	\$6.18	\$6.21	\$6.24	\$6.27	\$/Month
Value of ICAP Peak Reduction Credit per Solar Share, \$/Month		-\$4.13	-\$5.92	-\$4.36	-\$4.36	-\$4.36	-\$4.36	-\$4.36	-\$4.36	-\$4.36	\$/Month
Value of Transmission Peak Reduction Credit per Solar Share, \$/Month		-\$1.81	-\$1.89	-\$1.96	-\$2.04	-\$2.12	-\$2.21	-\$2.30	-\$2.39	-\$2.49	\$/Month
Value of 5% of SREC Value per Solar Share, \$/Month		-\$3.33	-\$3.20	-\$3.07	-\$2.95	-\$2.83	-\$2.72	-\$2.61	-\$2.51	-\$2.41	\$/Month
Net Change in Monthly Bill =	\$5.00	-\$3.24	-\$4.95	-\$3.31	-\$3.24	-\$3.17	-\$3.11	-\$3.06	-\$3.02	-\$2.99	\$/Month
Net Change in Annual Bill =	\$60.00	-\$38.92	-\$59.43	-\$39.71	-\$38.83	-\$38.05	-\$37.36	-\$36.76	-\$36.26	-\$35.85	\$/Year
Running Total Payment/Savings =	\$60.00	\$21.08	-\$38.35	-\$78.05	-\$116.88	-\$154.93	-\$192.29	-\$229.05	-\$265.31	-\$301.16	
Percentage of Average Monthly Bill =	4.8%	-3.0%	-4.5%	-3.0%	-2.8%	-2.7%	-2.6%	-2.5%	-2.5%	-2.4%	%





## SOLAR CHOICE RATE

### Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

### Applicability:

The Solar Choice Program is RMLD's implementation of the Community Shared Solar model which meets Mass DOER eligibility criteria to qualify as a Community Shared Solar Generation Unit as defined under 225 CMR 14.02. The Solar Choice (SC) Rate is available to all customers of good credit standing receiving service under any rate schedule of the Department, subject to availability of solar array project capacity.

This rate will be an additional charge to the existing RMLD rate.

For the first twelve months of the Program, the SC Rate shall be \$5.00/month.

After the first twelve months of the Program, the SC Rate will be the total SC Component Charges/Credits calculated prior to each six month period based on budgeted expenses/savings from the SC Project and will be trued up to actual expenses/savings, with any adjustment being carried forward to the next six month period using the formulas defined below.

### SC Energy Component Charge:

SC Energy Component, in \$/kWh/Month = (SC Project PPA Rate) – (Fuel Charge Rate)

Monthly SC Project Solar Production per SC share = (The total monthly solar production, in kWh, produced by the SC Project) / (Total number of SC shares for that SC Project)

**SC Energy Component Charge, in \$/Month** = (SC Energy Component) x (Monthly SC Project Solar Production per SC share)

**Note:** For any month where the Fuel Charge Rate is greater than or equal to the SC Project PPA Rate, the SC Energy Component Charge will be a Credit for that month.

### SC Capacity Component Credit:

For each six month period, the SC Capacity Component Credit will be calculated based on the actual solar production output of the SC Project for that period and any Capacity Payment savings earned as a result of the SC Project output will be paid out as credits during the following six month period.

The SC Capacity Component Credit will be calculated as follows:

Rate Filed: October 28, 2016

Effective: On Billings on or After December 1, 2016

Filed By: Coleen M. O'Brien, General Manager

SC Capacity Component Credit per SC share, in \$ = (The total Capacity Payment or other Program savings, in \$, earned for that period as a result of the solar power produced by the SC Project during the Capacity Peak Hour) / (Total number of SC shares for that SC Project)

**SC Transmission Component Credit:**

For each six month period, the SC Transmission Component Credit will be calculated based on the actual solar production output of the SC Project for the completed six month period and any Transmission Payment savings earned for that period as a result of the SC Project output will be paid out as credits during the following six month period.

The SC Transmission Component Credit will be calculated as follows:

SC Transmission Component Credit per SC share, in \$ = (The total Transmission Payment savings, in \$, earned for that period as a result of the solar power produced by the SC Project during Transmission Peak Hours) / (Total number of SC shares for that SC Project)

**SC Rate:**

The SC Rate will be the total SC Charge/Credit, calculated as shown below. This Charge or Credit will be added to each participating customer's monthly bill.

SC Rate = (SC Energy Component Charge, in \$) – (SC Capacity Component Credit, in \$)  
– (SC Transmission Component Credit, in \$)

**Note:** For any specific month, this total bill adjustment may be positive (cost to the customer) or negative (savings to the customer).

**Term:**

A customer electing to be billed under this rate must be of good credit standing and shall remain on this rate for a minimum of ten years. After ten years on this rate a customer may elect to remain on this rate or discontinue it. If the RMLD does not receive an SC Rate termination request from the customer, it will be assumed that the customer elects to continue to be billed under this rate.

A thirty-day notice is required from customers who will no longer be able to participate in the SC Rate.

Since the number of participants/SC shares are limited for each SC Project, shares will be issued on a "first come/first served" basis and/or through a "lottery" system at the discretion of the

**Rate Filed: October 28, 2016**

**Effective: On Billings on or After December 1, 2016**

**Filed By: Coleen M. O'Brien, General Manager**

**Town of Reading, Massachusetts  
Municipal Light Department**

**MDPU #269 supersedes  
and cancels MDPU #196**

RMLD. The RMLD will maintain a "waiting list" which will be used to replace any customers who must leave the program and/or for new SC Projects as they become available.

Any customers joining an SC Project after the first twelve months of that SC Project will be charged a one-time enrollment fee of \$60.00 and then begin receiving the current monthly SC Rate program billing adjustment.

This rate will be subject to termination in the event that the RMLD is unable to procure power from the SC Project, or costs become prohibitive.


**General Terms and Conditions:**

Service hereunder is subject to the General Terms and Conditions which are incorporated herein and are a part of this rate schedule.

**Rate Filed: October 28, 2016  
Effective: On Billings on or After December 1, 2016  
Filed By: Coleen M. O'Brien, General Manager**







# Engineering & Operations Report

RMLD Board of Commissioners Meeting

October 20, 2016

August 2016 Reporting Period

Hamid Jaffari, Director of Engineering & Operations



## Capital Improvement Projects

Construction Projects:		% Complete Status	August	YTD
106	Underground Facilities Upgrades (URDs, Manholes, etc.) - All Towns <ul style="list-style-type: none"> <li>• Lucaya Estates, Wilmington</li> <li>• Patrice Lane, Lynnfield</li> <li>• Perkins Lane, Lynnfield</li> <li>• Judith Lane, North Reading</li> </ul>	On-going	\$62,036	\$106,810
107	13.8kV Upgrade (Stepdown Areas, etc.) <ul style="list-style-type: none"> <li>• Main Street, Reading</li> <li>• Federal Street, Reading</li> </ul>	On-going	\$3,848	\$3,848
108	Relay Replacement – Station 4 (GAW)	75%	\$3,588	\$3,802
120	Station 4: Relay/SCADA Integration for Bus A&B	Pending	\$5,880	\$5,880
	Service Installations – Residential and Commercial: This item includes new or upgraded overhead and underground services.	On-going	\$9,530	\$18,975
100	Distributed Gas Generation Pilot	20%	\$40,268	\$40,268
112	AMI Mesh Network Expansion	5%	\$98,008	\$98,008
131	LED Street Light Conversion	48%	\$54,385	\$94,196



## Routine Construction

	AUGUST	YTD
Pole Setting/Transfers	\$20,089	\$35,302
Overhead/Underground	\$69,922	\$152,555
Projects Assigned as Required <ul style="list-style-type: none"> <li>• Artis Senior Living Center, Reading</li> <li>• AT&amp;T, Wilmington</li> <li>• Wilmington Recreation Facility</li> </ul>	\$14,081	\$17,450
Pole Damage/Knockdowns - Some Reimbursable <ul style="list-style-type: none"> <li>• Work was done to repair or replace four poles.</li> </ul>	\$7,250	\$13,919
Station Group	\$643	\$643
Hazmat/Oil Spills <ul style="list-style-type: none"> <li>• Main Street, Lynnfield</li> <li>• Clorinda Road, Wilmington</li> </ul>	\$462	\$828
Porcelain Cutout Replacement Program	\$0	\$0
Lighting (Street Light Connections)	\$4,504	\$4,504
Storm Trouble	\$2,787	\$7,127
Underground Subdivisions (new construction) <ul style="list-style-type: none"> <li>• Johnson Woods - Phase 2, Reading</li> <li>• North Wilmington Estates, Wilmington</li> </ul>	\$7,854	\$12,552
Animal Guard Installation	\$385	\$595
Miscellaneous Capital Costs	\$63,872	\$79,352
<b>TOTAL:</b>	<b>\$191,849</b>	<b>\$324,827</b>



# Routine Maintenance

## ➤ Transformer Replacement (through August 2016)

Pad mount    21.24%    Overhead    14.46%

## ➤ Pole Inspection (as of 10/9/2016)

187 poles have been replaced    110 of 187 transfers have been completed

## ➤ Visual Inspection of OH Lines (as of 10/13/2016)

Inspected circuits 5W8, 5W9, 5W5, 4W10, 5W4, 4W28, 4W5, 4W6, 3W18, 4W13, 4W12, 3W15, 4W24, 4W28, 5W4, 3W6, 3W7, 3W14, 3W5, 4W7, 4W9, 4W4, 4W23, 5W6

## ➤ Manhole Inspection (through August 2016)

614 manholes have been inspected.

## ➤ Porcelain Cutout Replacements (through August 2016)

91% complete    256 remaining to be replaced

## ➤ Tree Trimming

August: 110 spans trimmed

YTD: 176 spans trimmed

## ➤ Substation Maintenance

Infrared Scanning – August complete - no hot spots found

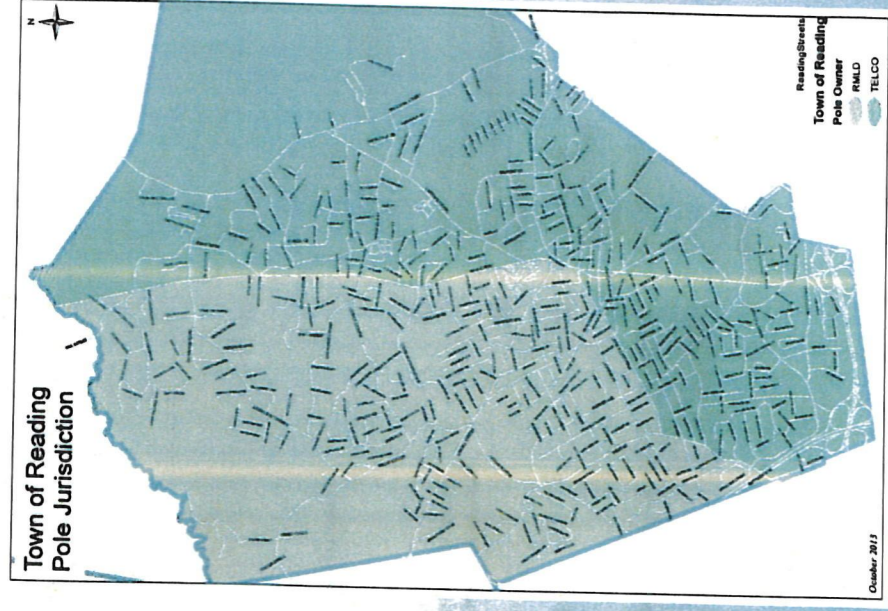


# Double Poles

- Ownership: 16,000 (approximately)
  - 50% RMLD
  - 50% Verizon

- Custodial:

Reading – split (see map)  
North Reading – RMLD  
Lynnfield – Verizon  
Wilmington - Verizon





# NJUNS

"Next to Go" as of October 11, 2016

## LYNNFIELD

NTG Member and Job Type	Count of Ticket Number
LFLDFD	2

Lynnfield Fire Department  
TRANSFER

RMLD	5
Reading Municipal Light Department TRANSFER	5

VZNESA	13
Verizon TRANSFER	7
PULL POLE	6
(blank)	
Grand Total	20

## NORTH READING

NTG Member and Job Type	Count of Ticket Number
NGMA	1
National Grid TRANSFER	1

NRDGF	41
North Reading Fire Department TRANSFER	41

RMLD	62
Reading Municipal Light Department TRANSFER	16
SET POLE	1
PULL POLE	45

VZNEDR	100
Verizon TRANSFER	90
PULL POLE	10
(blank)	
Grand Total	204

## READING

NTG Member and Job Type	Count of Ticket Number
CMCTNR	12
Comcast TRANSFER	12

NP3PMA	10
Non-participating 3rd Party Attacher - Massachusetts TRANSFER	10

RDNGFD	4
Reading Fire Department TRANSFER	4

RMLD	94
Reading Municipal Light Department TRANSFER	55
PULL POLE	39

VZNESA	116
Verizon TRANSFER	92
PULL POLE	24
(blank)	
Grand Total	236

## WILMINGTON

NTG Member and Job Type	Count of Ticket Number
NGMA	2
National Grid TRANSFER	2

NP3PMA	10
Non-participating 3rd Party Attacher - Massachusetts TRANSFER	10

RMLD	47
Reading Municipal Light Department TRANSFER	42
PULL POLE	4
INSTL GUY	1

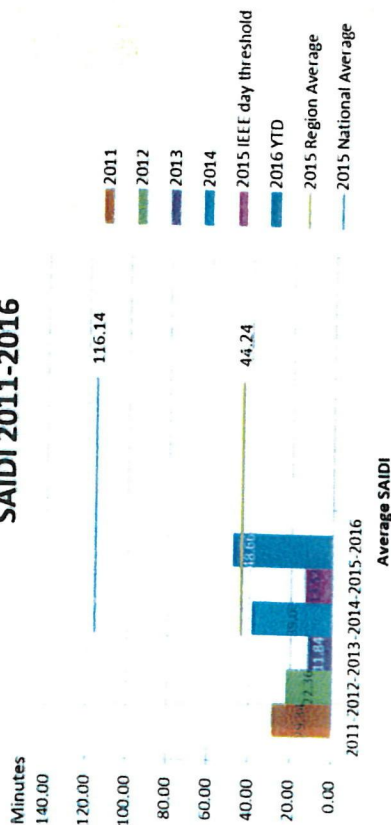
VZBMA	1
Verizon Business TRANSFER	1
VZNEDR	75
Verizon TRANSFER	56
PULL POLE	19

WMGNFD	71
Wilmington Fire Department TRANSFER	71
(blank)	
Grand Total	206

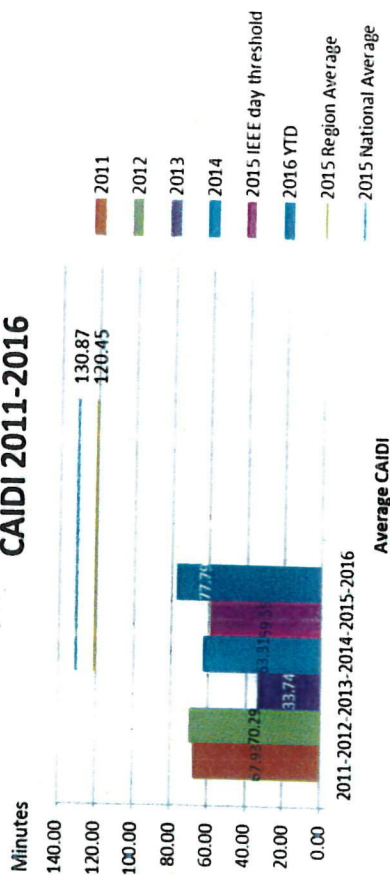


# RMLD Reliability Indices

SAIDI 2011-2016



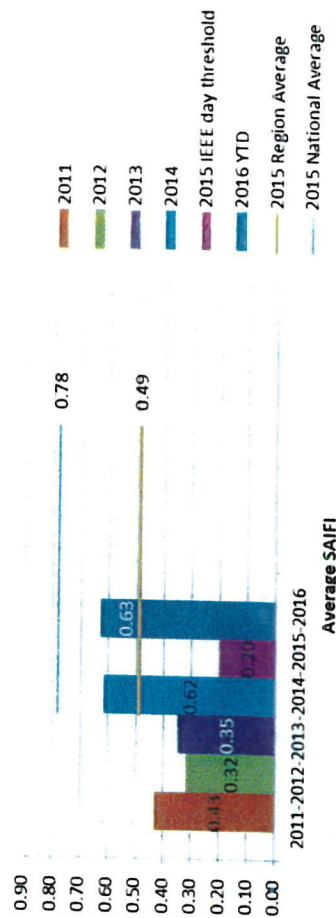
CAIDI 2011-2016



$$SAIDI(\text{Minutes}) = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

$$CAIDI(\text{Minutes}) = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customer Interruptions}}$$

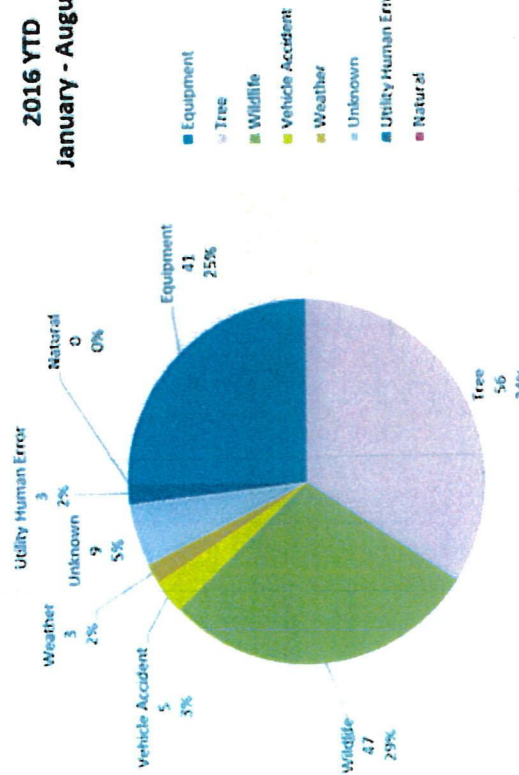
SAIFI 2011-2016



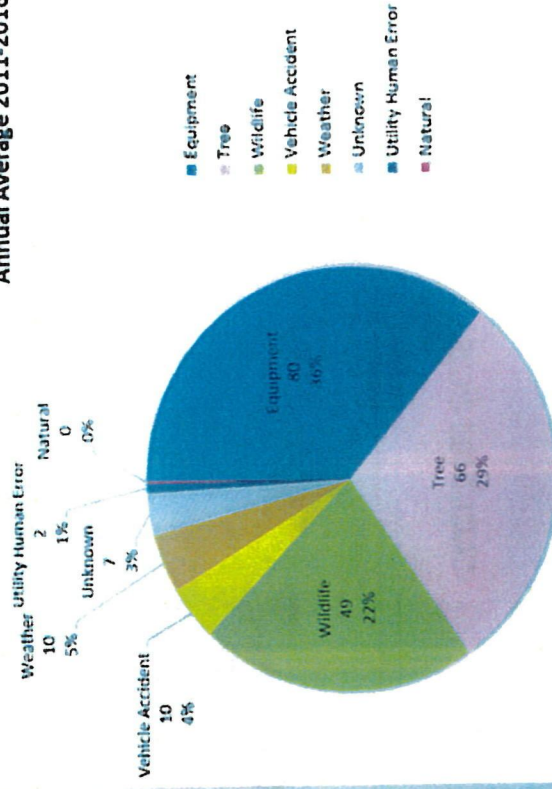
$$SAIFI = \frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

# Outages Causes

2016 YTD  
January - August



Annual Average 2011-2016





# Questions ?





230 Ash Street  
P.O. Box 150  
Reading, MA 01867-0250Tel: (781) 944-1340  
Fax: (781) 942-2409  
Web: www.rmlld.com

October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-15 Capacitor Bank

Pursuant to M.G.L c. 164 § 56D, on September 21, 2016, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for Capacitor Bank.

An invitation for proposals was sent to the following seventeen companies:

E.L. Flowers & Associates	Eaton Cooper Power System Business	ECNE Members
Genergy	Graybar	Hasgo Power Sales
HD Industrial Services	J.F. Gray & Associates	MetroWest
Omicron Electronics Corp. USA	Power Sales Group	Power Tech dba UPSC
Robinson Sales	Shamrock Power	Siemens Industry, Inc.
Weidmann Electrical Technology, Inc.	WESCO	

A sealed proposal was received from one company: WESCO.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., October 6, 2016, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-15 for Capacitor Bank be awarded to **WESCO for \$54,480.00** pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

The FY17 Capital Budget amount for this item is \$30,000.

Handwritten signature of Peter Price in black ink.

Peter Price

Handwritten signature of Hamid Jaffari in blue ink.

Hamid Jaffari

Handwritten signature of Coleen O'Brien in blue ink.

Coleen O'Brien



**Capacitor Bank  
IFP 2017-15**

Bidder	Unit Price	Qty	Total Price	Delivery Date	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature
WESCO Capacitor Bank	\$13,620.00	4	\$54,480.00	10-14 weeks	yes	yes	yes	yes	yes
					Exception: Exceptions were reviewed by staff and found to be acceptable.				



230 Ash Street  
P.O. Box 150  
Reading, MA 01867-0250

Tel: (781) 944-1340  
Fax: (781) 942-2409  
Web: www.rmlld.com

October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-20 750 MCM Cable

Pursuant to M.G.L c. 164 § 56D, on September 21, 2016, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for 750 MCM Cable.

An invitation for proposals was sent to the following twenty companies:

A.A. MacPherson Co., Inc.	Arthur Hurley Company	Champion Wire and Cable
E.L. Flowers	Eupen Cable	First Line Associates
General Cable	Graybar Electric Company	Hasgo Power
Marmon Utility	The Okonite Company	Pirelli Cables & Systems
Power & Tel. Enterprise	Power Sales Group	Shamrock Power Sales Inc
Stuart Irby	USA Power Cable	WESCO
Yale Electrical Supply	Yusen Associates	

Sealed proposals were received from three companies: Arthur Hurley Company, The Okonite Company and WESCO.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., October 6, 2016, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-20 for: 750 MCM Cable be awarded to: **Arthur Hurley Company** for **\$104,513.10** pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

The FY17 Capital Budget amount for this item is \$170,000.

Peter Price

Hamid Jaffari

Coleen O'Brien

**750 MCM Cable  
Bid 2017-20**

Bidder	Manufacturer	Total Price	Delivery Date	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature	Specification data sheets
Arthur J. Hurley Company, Inc. 8,790' 750 MCM cable	Okonite	\$ 104,513.10	8 weeks ARO	yes	yes	yes	yes	yes	yes
		<u>Exception:</u>		Offering 12 x .200 x .025 Copper Flat Straps					
		<u>Note:</u>		This exception is acceptable.					

The Okonite Comapny - *non-responsive*  
WESCO - *non-responsive*

Took exception to firm pricing - included an excalation/de-escalation clause.  
Took exception to firm pricing - Noted: Pricing will be subject to metals adjustment at time of shipment.





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October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-22 Single Phase Step Voltage Regulator

Pursuant to M.G.L c. 164 § 56D, on September 21, 2016, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for Single Phase Step Voltage Regulator.

An invitation for proposals was sent to the following seventeen companies:

Eaton Cooper Power System Business	EDI	Graybar Electric
Hasgo Power	IF Gray	Jordan Transformer
Omicron	Pacific Crest Transformers	Power Sales Group
Power Tech-UPSC	Robinson Sales	Shamrock Power Sales Inc.
Stuart Irby	Transformer Exchange	Ward Transformer Sales
WESCO	Yale Electric Supply	

Sealed proposals were received from two companies: Graybar Electric and Power Sales Group.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., October 6, 2016, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-22 for Single Phase Step Voltage Regulator be awarded to: **Graybar Electric for \$146,090.00** pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

This was unbudgeted equipment, but was required for a voltage adjustment in Lynnfield and will be paid for from routine construction.

Peter Price

Hamid Jaffari

Coleen O'Brien

**150 kVa Voltage Regulator  
Bid 2017-22**

Bidder	Manufacturer	Unit Price	Quantity	Total Price	Delivery Date	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature	Specification data sheets
Graybar Electric 150 kVa Voltage Regulator	Eaton Cooper	\$ 10,435.00	14	\$ 146,090.00	20 weeks	yes	yes	yes	yes	yes	yes
<u>Exception:</u> List of exceptions attached to proposal. <u>Note:</u> Exceptions were reviewed by staff and found to be acceptable.											
Power Sales Group 150 kVa Voltage Regulator	Howard Industries	\$ 10,517.00	14	\$ 147,238.00	6-8 weeks	yes	yes	yes	yes	yes	yes
<u>Exception:</u> List of exceptions attached to proposal.											



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October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-24 Single Phase Submersible Transformer

Pursuant to M.G.L c. 164 § 56D, on September 21, 2016, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for Single Phase Submersible Transformer.

An invitation for proposals was sent to the following eighteen companies:

Eaton Cooper Power System Business	EDI	First Line Associates
Graybar Electric	Hasgo Power	IF Gray
Jordan Transformer	Pacific Crest Transformers	Power Sales Group (Howard Industries)
Power Tech-UPSC	RSI - Robinson Sales Inc.	Shamrock Power Sales Inc.
Stuart Irby	Transformer Exchange	Ward Transformer Sales
Weidmann Electrical Technology, Inc.	WESCO	Yale Electric Supply

Sealed proposals were received from three companies: Central Moloney, WESCO and Howard Industries c/o Power Sales Group.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., October 6, 2016, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-24 for Single Phase Submersible Transformer be awarded to: **Central Moloney, Inc. for \$19,794.00** pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

The FY17 Capital Budget amount for this item is \$20,000.

Peter Price

Hamid Jaffari

Coleen O'Brien

**Single Phase Submersible Transformer**  
**Bid 2017-24**

Bidder	Manufacturer	Unit Price	Quantity	Total Price	Delivery Date	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature	Specification data sheets
Central Moloney, Inc. Single Phase 100 kVa Stainless Steel Submersible Transformer	Central Moloney	\$ 3,299.00	6	\$ 19,794.00	14 weeks	yes	yes	yes	no	yes	yes
WESCO Single Phase 100 kVa Stainless Steel Submersible Transformer	Power Partners	\$ 4,218.00	6	\$ 25,308.00	12-16 weeks	yes	yes	yes	no	yes	yes
Power Sales Group - non-responsive											
Failed to provide specification data sheets											



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October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-25 Control Devices for Substation 3

Pursuant to M.G.L. c. 164 § 56D, on September 21, 2016, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for Control Devices for Substation 3.

An invitation for proposals was sent to the following twenty companies:

A.A. MacPherson Co.	Circuit Breaker Sales NE	E.L. Flowers & Associates
Eaton Cooper Power System Business	ElectriComm, Inc.	First Line Associates
Genergy	Graybar Electric	Hasgo Power Sales
HD Industrial Svcs.	J.F. Gray & Associates	MetroWest
Omicron Electronics Corp. USA	Power Sales Group	Power Tech dba UPSC
Robinson Sales	Shamrock Power	Siemens Industry, Inc.
Weidmann Electrical Technology, Inc.	WESCO	

Sealed proposals were received from two companies: Graybar Electric and WESCO.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., October 6, 2016, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-25 for: Control Devices for Substation 3 be awarded to: **WESCO for \$62,866.00 and Graybar Electric for \$64,401.28, for a total of \$127,267.28**, pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

The FY17 Capital Budget amount for these items is \$100,000.

A handwritten signature in blue ink, appearing to read "Nick D'Alleva".

Nick D'Alleva

A handwritten signature in blue ink, appearing to read "Hamid Jaffari".

Hamid Jaffari

A handwritten signature in blue ink, appearing to read "Coleen O'Brien".

Coleen O'Brien

Control Devices for Station 3  
 Bid 2017-25

Bidder	Manufacturer	Delivery Date	Unit Price	Qty	Total Net Price	Awarding Prices	Meet Specification requirement	Specification Data Sheets	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature
<b>WESCO</b>													
Item 1	Schweitzer	4-6 weeks	\$3,814.00	2	\$7,628.00	\$7,628.00	yes	yes	yes	yes	yes	no	yes
Item 2	Schweitzer	4-6 weeks	\$3,182.00	12	\$38,184.00								
Item 3	Schweitzer	4-6 weeks	\$1,146.00	6	\$6,876.00								
Item 4	Schweitzer	4-6 weeks	\$2,300.00	2	\$4,600.00								
Item 5	ABB	2 weeks	\$147.00	16	\$2,352.00	\$2,352.00							
Item 6	ABB	2 weeks	\$147.00	2	\$294.00	\$294.00							
Item 7	ABB	3 weeks	\$144.00	8	\$1,152.00	\$1,152.00							
Item 8	Electro Switch	3-4 weeks	\$124.00	12	\$1,488.00	\$1,488.00							
Item 9	Electro Switch	4-6 weeks	\$734.00	24	\$17,616.00	\$17,616.00							
Item 10	Electro Switch	8-9 weeks	\$1,258.00	17	\$21,386.00	\$21,386.00							
Item 11	Artisan	2-4 weeks	\$50.00	1	\$50.00								
Item 12													
Item 13	Electro Switch	2-4 weeks	\$506.00	2	\$1,012.00	\$1,012.00							
Item 14	Struthers Dunn	2-4 weeks	\$266.00	1	\$266.00	\$266.00							
Item 15	Fairchild Semiconductor	2-4 weeks	\$4.00	12	\$48.00	\$48.00							
Item 16	Electro Switch	8-9 weeks	\$802.00	12	\$9,624.00	\$9,624.00							
Item 17	Schweitzer	4-6 weeks	\$5,527.00	2	\$11,054.00								
Item 18	Schweitzer	4-6 weeks	\$127.00	10	\$1,270.00								
Item 19	Schweitzer	4-6 weeks	\$127.00	10	\$1,270.00								
Item 20	Schweitzer	4-6 weeks	\$67.00	8	\$536.00								
Item 21	Schweitzer	4-6 weeks	\$67.00	2	\$134.00								
Item 22	GE	4 weeks	\$55.00	12	\$660.00								
Item 23	GE	4 weeks	\$55.00	4	\$220.00								
					<u>\$127,720.00</u>	<u>\$62,866.00</u>							

<b>Graybar Electric</b>													
Item 1	SEL	8 weeks	\$3,854.00	2	\$7,708.00		yes	yes	yes	yes	yes	no	yes
Item 2	SEL	8 weeks	\$3,179.00	12	\$38,148.00	\$38,148.00							
Item 3	SEL	8 weeks	\$1,139.00	6	\$6,834.00	\$6,834.00							
Item 4	SEL	8 weeks	\$2,297.00	2	\$4,594.00	\$4,594.00							
Item 5				16									
Item 6				2									
Item 7				8									
Item 8	Electro Switch	4 weeks	\$127.49	12	\$1,529.88								
Item 9	Electro Switch	4 weeks	\$738.89	24	\$17,733.36								
Item 10	Electro Switch	4 weeks	\$1,263.62	17	\$21,481.54								
Item 11	Artisan	4 weeks	\$31.92	1	\$31.92	\$31.92							
Item 12													
Item 13	Electro Switch	4 weeks	\$537.59	2	\$1,075.18								
Item 14				1									
Item 15				12									
Item 16	Electro Switch	4 weeks	\$805.86	12	\$9,670.32								
Item 17	SEL	8 weeks	\$5,519.00	2	\$11,038.00	\$11,038.00							
Item 18	SEL	8 weeks	\$126.00	10	\$1,260.00	\$1,260.00							
Item 19	SEL	8 weeks	\$126.00	10	\$1,260.00	\$1,260.00							
Item 20	SEL	8 weeks	\$66.98	8	\$535.84	\$535.84							
Item 21	SEL	8 weeks	\$66.98	2	\$133.96	\$133.96							
Item 22	GE	2 weeks	\$43.63	12	\$523.56	\$523.56							
Item 23	GE	4 weeks	\$10.50	4	\$42.00	\$42.00							
					<u>\$123,599.56</u>	<u>\$64,401.28</u>							

Exceptions: Electro Switch items are non cancelable/non-returnable because they are made to order.

Engineers Note: RMLD will not be purchasing Electro Switch items from Graybar.



October 14, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-28 Material Handler with Trade-In

Pursuant to M.G.L. c. 164 § 56D, on September 28, 2016 an invitation for proposal was placed as a legal notice in the Middlesex East Section of the Daily Chronicle and on the ECNE (Energy Council of the Northeast) website requesting sealed proposals for one Material Handler with Trade-In (2006 - 50' Material Handler).

An invitation for proposal was sent to the following twenty-five companies:

Altec Industries Inc.	Baker Equipment	Boston Freightliner, Inc.
Coastal International Truck, LLC	CUES	DC Bates
Dejana Truck Equipment	ECNE Members	Fredrickson Bros., Inc.
G & S Industrial, Inc.	James A. Kiley Company	Liberty Chevrolet
Liberty International	Mid-State International Trucks, Inc.	Minuteman Trucks
Moore GMC Truck Inc.	Morse Manufacturing Inc.	NESCO
Nutmeg International Trucks, Inc.	Patriot International Trucks of Boston, LLC	Place Motor, Inc.
Raymond Bucket Guys	Stoneham Ford	Sunrise Equipment Company
Taylor & Lloyd, Inc.		

Sealed proposals were received from three companies: Altec Industries Inc., Boston Freightliner Inc., and James A. Kiley Company.

The sealed proposals were publicly opened and read aloud at 11:00 a.m. on October 6, 2016 in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The proposals were reviewed, analyzed and evaluated by staff and recommended to the General Manager.

Move that proposal 2017-28 for one: Material Handler with Trade-In be awarded to: **James A. Kiley Company for \$221,715.00** pursuant to M.G.L. c. 164 § 56D on the recommendation of the General Manager.

The FY2017 Capital Budget amount for this item is \$250,000.00.

  
Paul McGonagle

  
Hamid Jaffari

  
Coleen O'Brien



Material Handler with Trade-In  
M.G.L. Chapter 164 § 56D  
Proposal 2017-28

<u>Bidder</u>	<u>Material Handler Cost Before Trade</u>	<u>Trade-In Value</u>	<u>Material Handler Purchase Price Less Trade</u>	<u>*Warranty 22.1</u>	<u>*Warranty 22.2</u>	<u>*Warranty 22.3</u>	<u>Material Handler Price Less Trade - including Warranties</u>	<u>Delivery Date ARO</u>	<u>Responsive Bidder</u>	<u>Exceptions</u>
Altec Industries Inc.	\$214,979.00	\$8,000.00	\$206,979.00	\$2,250.00	\$600.00	\$6,010.00	\$215,839.00	30-34 weeks	Yes	Yes <sup>1</sup>
Boston Freightliner, Inc.	\$228,904.00	\$13,250.00	\$215,654.00	\$1,918.00	\$388.00	\$1,525.00	\$219,485.00	30-32 weeks	Yes	No
James A. Kiley Company	\$227,665.00	\$8,250.00	\$219,415.00	\$1,000.00	\$300.00	\$1,000.00	\$221,715.00	26-30 weeks	Yes	No

<sup>1</sup> Exceptions (14): Too many modifications to the vehicle RMLD was requesting.

\*Warranties - Warranty 22.1: 5 Year extended warranty for engine and electronics 100,000.  
Warranty 22.2: 5 Year extended warranty for front and rear axles.  
Warranty 22.3: 5 Year manufacturer extended warranty excluding engine and transmission.

Trade-In consists of one 2006 - 50' Material Handler

**Jeanne Foti**

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**From:** Tracy Schultz  
**Sent:** Thursday, October 13, 2016 8:11 AM  
**To:** RMLD Board Members Group  
**Cc:** Jeanne Foti  
**Subject:** Account Payable and Payroll Questions

Good morning,

The following timeframes had no Account Payable and Payroll questions.

**Account Payable Warrant – No Questions**  
September 30 and October 7

**Payroll – No Questions**  
October 3

This e-mail will be printed for the Board Packet for the RMLD Board meeting on October 20, 2016.

Thanks!

**Tracy Schultz**  
Executive Assistant  
Reading Municipal Light Department  
230 Ash Street  
Reading, MA 01867  
Tel: (781) 942-6489  
Ext: 489

TOWN OF READING MUNICIPAL LIGHT DEPARTMENT  
RATE COMPARISONS READING & SURROUNDING TOWNS

October-16

	RESIDENTIAL 750 kWh's	RESIDENTIAL-TOU 75/25 Split 1500 kWh's	RES. HOT WATER 1000 kWh's	COMMERCIAL 7,300 kWh's 25,000 kW Demand	SMALL COMMERCIAL 1,080 kWh's 10,000 kW Demand	SCHOOL RATE 35000 kWh's 130.5 kW Demand	INDUSTRIAL - TOU 109,500 kWh's 250,000 kW Demand 80/20 Split
READING MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$112.82	\$194.16	\$137.46	\$1,005.04	\$198.88	\$4,669.00	\$749,233.90
PER KWH CHARGE	\$0.15042	\$0.12944	\$0.13746	\$0.13768	\$0.18415	\$0.13340	\$0.10891
NATIONAL GRID							
TOTAL BILL	\$132.40	\$266.91	\$176.52	\$1,263.41	\$182.01	\$4,919.07	\$1,375,423.23
PER KWH CHARGE	\$0.17653	\$0.17794	\$0.17652	\$0.17307	\$0.16853	\$0.14054	\$0.19993
% DIFFERENCE	17.35%	37.47%	28.42%	25.71%	-8.48%	5.36%	83.58%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$148.80	\$263.35	\$196.25	\$1,477.61	\$202.60	\$7,655.11	\$1,113,175.35
PER KWH CHARGE	\$0.19839	\$0.17657	\$0.19625	\$0.20241	\$0.18759	\$0.21872	\$0.16181
% DIFFERENCE	31.89%	35.64%	42.77%	47.02%	1.87%	63.96%	48.58%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$92.81	\$179.22	\$121.61	\$988.74	\$156.46	\$4,883.88	\$672,615.67
PER KWH CHARGE	\$0.12374	\$0.11948	\$0.12161	\$0.13544	\$0.14487	\$0.13954	\$0.09777
% DIFFERENCE	-17.74%	-7.69%	-11.53%	-1.62%	-21.33%	4.60%	-10.23%
MIDDLETON MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$98.74	\$201.66	\$132.75	\$959.51	\$168.44	\$4,762.93	\$807,171.40
PER KWH CHARGE	\$0.13165	\$0.13444	\$0.13275	\$0.13144	\$0.15596	\$0.13608	\$0.11733
% DIFFERENCE	-12.48%	3.86%	-3.43%	-4.53%	-15.31%	2.01%	7.73%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$122.99	\$228.42	\$154.38	\$1,166.29	\$186.28	\$5,473.08	\$921,561.30
PER KWH CHARGE	\$0.16398	\$0.15228	\$0.15438	\$0.15977	\$0.17249	\$0.15637	\$0.13396
% DIFFERENCE	9.01%	17.65%	12.31%	16.04%	-6.33%	17.22%	23.00%