

**READING MUNICIPAL  
LIGHT DEPARTMENT**

**BOARD OF COMMISSIONERS**

**REGULAR SESSION**

**THURSDAY, JANUARY 25, 2018**

APPROVAL OF BOARD MINUTES  
SEPTEMBER 14, 2017 &  
NOVEMBER 9, 2017  
ATTACHMENT 1

**READING MUNICIPAL LIGHT DEPARTMENT  
BOARD OF COMMISSIONERS MEETING  
230 Ash Street  
Reading, MA 01867  
September 14, 2017  
7:30 p.m.**

**Start Time of Regular Session: 7:35 p.m.**

**End Time of Regular Session: 9:08 p.m.**

**Commissioners:**

**Philip B. Pacino, Chairman**

**Dave Hennessy, Vice Chairman, Secretary Pro Tem**

**Thomas O'Rourke, Commissioner**

**Dave Talbot, Commissioner**

**John Stempeck, Commissioner-Remote Participant**

**Staff:**

**Hamid Jaffari, Director of E & O**

**Jane Parenteau, Director of Integrated Resources**

**Tracy Schultz, Executive Assistant**

**Citizens Advisory Board:**

**Jason Small, Member**

**Call Meeting to Order**

Chair Pacino announced that the meeting is being videotaped for distribution to television stations in the service territory, and then read the RMLD Board of Commissioners' Code of Conduct.

Due to Mr. Stempeck being out of town and participating remotely, all votes will be roll call.

**Introductions**

Chair Pacino welcomed Citizens' Advisory Board (CAB) Member Jason Small.

**Public Comment**

There was no public comment, no comment from Mr. Small, and no liaisons present.

**Approval of Board Minutes (Attachment 1)**

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that the Board approve the meeting minutes from May 10, 2017, May 11, 2017, and July 20, 2017.

Chair Pacino called for a poll of the vote:

Mr. O'Rourke: Aye; Mr. Talbot: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**Report-RMLD Board Member Attendance at Citizens' Advisory Board Meeting - Chair Pacino**

Chair Pacino announced that he attended the Citizens' Advisory Board meeting on August 17, 2017. At that meeting, the CAB approved and recommended that the Board of Commissioners adopt Item 10 on this evening's agenda, the Electric Vehicle rate. The CAB also appointed two members to the Reading Town Payment Sub-Committee: Chair Hooper and member Cohen. That Committee is scheduled to meet on Wednesday, September 27. Chair Hooper, Mr. Cohen, Mr. Stempeck, Mr. Ensminger, and Chair Pacino will attend.

**Report of the Chair – Chair Pacino**

**Attendance of the Board at the NEPPA Conference, August 20 through 23, 2017**

Chair Pacino stated that the NEPPA conference was an opportunity to network with different people. Chair Pacino attended some of the sessions, and asked if any attendees of the fiber session wanted to speak about

## **Report of the Chair – Chair Pacino**

### **Attendance of the Board at the NEPPA Conference, August 20 through 23, 2017**

what they had heard. Mr. Talbot replied that Chair Pacino must be referring to Jim Ingraham from Chattanooga, and explained that municipal utility is a national pioneer in merging communications and electricity. They have a lot of creative things going on and there has been some talk of inviting a representative up to RMLD, or having representatives from RMLD go to Tennessee.

Mr. O'Rourke noted that 100 percent of the Board attended the NEPPA conference, along with Mr. Jaffari, Ms. Parenteau, and Ms. O'Brien. Mr. O'Rourke added that fiber is a timely issue; visiting and examining benchmark companies would be worthwhile.

### **Engaging Municipal Fiber Leaders – Mr. Hennessy**

Vice Chair Hennessy agreed, stating that he is very excited about having Chattanooga possibly come up and that Ms. O'Brien had also mentioned meeting with the General Manager of Braintree. RMLD should learn from other utilities and determine three or four best practices. Mr. Talbot stated that he has been writing a report with Vice Chair Hennessy on fiber and thinks that it is time to wrap it up and present the document to the Board.

Mr. Jaffari stated that the fiber consultant is finishing his study and it should be ready next week.

Mr. Talbot asked who the Chair of the Strategic Committee is. Chair Pacino replied that it's more of a general facilitated discussion, without a designated Chair. Mr. Talbot asked if RMLD wanted to bring in a representative from Wellesley.

Mr. Jaffari replied that the Braintree General Manager will be at the September 26<sup>th</sup> Strategic Meeting.

### **Community Engagement – Ms. Parenteau**

Ms. Parenteau stated that this past Sunday RMLD had a booth at the Reading Street Fair, where employees spoke to many customers about Solar Choice Phase 2. In August, RMLD sponsored a high school summer art contest. Twelve students submitted artwork and an awards ceremony was held on August 24. The first, second, third, and fourth place winners received gift certificates to Staples. The first-place piece will be on the cover of RMLD's Annual Report. The second-place winner will be on the back of Public Power Open house tee shirts that are being provided for employees during Public Power Week. The public Power Week Open House will occur on Thursday, October 5 from 3-6 P.M. here at the RMLD.

On October 16 RMLD employees will be attending a welcome reception at the Wilmington Public Library from 6 to 8 p.m. for new Wilmington residents.

The information for the elementary school art contest is being delivered to all the third and fourth graders in RMLD's service territory today and tomorrow. Joyce Mulvaney, the Communications Manager, did a fantastic job producing RMLD's own electric safety and public power video.

Yesterday, RMLD held a National Drive Electric Week event at 200 Ballardvale Street. There were two sessions, one for the employees of 200 Ballardvale, one for the public. There were over 130 participants. There was a Chevy Volt available for test driving.

The Annual Report has been started; the Town is finalizing its financials; RMLD is waiting on calculations for the Pension and OPEB.

### **Power Supply Report –June and July 2017- Ms. Parenteau (Attachment 2)**

Ms. Parenteau announced that she would be reporting on the months of June and July. It appears that ISO had its peak demand in June. This has only occurred two times in the last 25 years and is not normal in the New England region. It happened on June 13, hour ending 5 o'clock. This is projected, since the summer period lasts

**Power Supply Report –June and July 2017- Ms. Parenteau (Attachment 2)**

until the end of September. The ISO's peak was considerably lower than it was in 2016. In 2016, the ISO peaked at 25,596 megawatts. This year The ISO peaked at 23,717. The decrease is approximately seven percent.

Ms. Parenteau then reported on RMLD's system peak versus cooling degree days. Cooling degree days are calculated by taking the difference between the temperature mean, which is the average of the high and low of the day, then subtracting that from 65. This indicates how much cooling is necessary. In 2017, June had less cooling degree days than it did in 2016. Sales are dependent on weather. Sales in June 2017 were \$66 million, versus last June, when sales totaled \$63 million. Even though cooling degree days were down, sales were up-a caveat to this is that June billing represents some of May, due to the billing cycle.

Fiscal Year 2017 purchase power expenses showed that fuel costs were down \$900,000. However, capacity costs increased by \$2 million and transmission costs increased by \$700,000. There was a \$1 million increase in the overall power supply. Sales were flat; there is less than a one percent difference between FY 2016 and FY 2017.

**Proposed Rate Approval (Attachment 3)**

RMLD has been running an Electric Vehicle (EV) charging station pilot program at Analog Devices and is presenting this rate in anticipation of installing other charging stations at other locations. The proposed rate looks at recovering fixed costs, at 0.111 cents. The fuel charge and transmission and capacity components will then be added monthly. It currently is a little over 20 cents, which is equivalent to paying \$1.80 a gallon for gasoline.

Mr. Talbot asked if other municipals have different rates for electric vehicles. Ms. Parenteau replied that she can't answer for other municipals. Mr. Talbot then asked what the precedent is for having a specific EV rate. Ms. Parenteau stated that she would have to look into that.

Mr. Talbot stated that he is wondering what the business model is in installing RMLD chargers and what the payback period would be, versus subsidizing businesses to put in chargers. Mr. Talbot added that RMLD could put in outlets instead of a \$40,000 fancy charging station. Mr. Talbot stated that he is wondering what the idea is behind spending money on a charger and then recovering it from 20 cents a kwh.

Ms. Parenteau explained that this is a technology that could help the utility in the future. If electric vehicles do take off this is an opportunity for the RMLD to increase revenue and sales. There aren't plans for RMLD to install a lot of these: it will be determined by supply and demand. We want to have a rate on file. Mr. Talbot said that he would be happy to vote to approve the rate, but wants to look at parking lot business models. Mr. Talbot asked how it works now.

Ms. Parenteau explained that RMLD owns the charging station. EV owners swipe a credit card and ChargePoint recovers the money and sends it to RMLD. There's a 10 percent ChargePoint fee that is incorporated into what the customer pays.

Mr. Talbot clarified that this is to formalize the pilot program and added that electric cars represent the future of lode growth and he wants to get the business model right.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that the RMLD Board of Commissioners approve rate MDPU Number 277, effective November 1, 2017 on the recommendation of the General Manager.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

## **Engineering and Operations Report – June 2017 - Mr. Jaffari (Attachment 4)**

Mr. Jaffari explained that since FY 2017 has ended, he will be giving a full report on the budget and spending. Capital expenditures are comprised of four categories: construction, station upgrades, routine construction, and purchasing. Ninety percent of FY 2017 projects were successfully completed. \$1,630,623 was spent in the month of June, bringing the year-to-date spending to \$8,009,832. The FY 17 budget was approved for \$9.4 million. The remaining balance of \$1.4 million is comprised of \$717,235 for distributed generation. We will come in under budget for that project; it was budgeted for \$2.7 million and will cost \$2.4 million. RMLD needs to pay Milton Cat's last invoice of \$400,000. RMLD is holding it due to noise levels from the generator. Once they correct that we will pay it off. The \$432,000 balance that was allocated for transformers and capacitors, has not been spent, but will be. \$236,484 of that is allocated for the Wilmington Substation. RMLD is still searching for land but has a proposed site. Otherwise, the full \$9 million would have been spent.

There were some challenges along the way. There were surprises during the construction phase of some projects, such as Project 106, the underground facilities upgrades. There was equipment that wasn't expected to fail. There were also motor vehicle accidents that hit transformers that then needed to be replaced. When you get into sub-divisions and the street up you find that you need to do more than what you expected. That's why some projects were over budget.

Mr. Jaffari continued, stating that some projects are ongoing, such as the AMI mesh network expansion and transformer capacitors. GIS is 99 percent complete. Next week RMLD employees will be training with Milsoft, using a full engineering model based on up-to-date GIS. This will allow for more accurate estimation of projects. The LED streetlight upgrade is on target. This is the final phase, with 2,450 installs remaining. By installing 65 a week, the project will be done by June 2018. The Analog Devices upgrade and RMLD HVAC upgrade are completed. RMLD's SCADA room is currently being upgraded, and the Board can tour the facility in a few weeks when the work is finished. There is a new outage management system and large monitors. RMLD is on the right path as far as technology upgrades and automation. These will improve reliability and cut down outage frequencies and duration.

Chair Pacino stated that he was at the ribbon cutting of the new generator and the tour of the North Reading facility, and when the generator was turned on the sound wasn't too much.

Mr. Jaffari explained that the specifications called for 50 dB at 60 feet; the noise level came out to 55 dB at 60 feet. The contractor is required to meet the bid specs. Tomorrow is the next test.

Chair Pacino added that there is enough room at the site to add a second unit. Mr. Jaffari agreed and stated that Engineering is working with IRD to secure a grant for three and a half megawatts battery storage. The grant results will be published in November.

Mr. Talbot commended Mr. Jaffari and Ms. O'Brien for completing an amazing number of engineering upgrades; it's a lot of work. Mr. Jaffari replied that it is a team effort.

Mr. O'Rourke commented that there's a lot of tracking and reporting involved. That takes a lot of organization.

Mr. Jaffari thanked the Board and then reported on routine maintenance. There was no tree trimming in June, because an aggressive maintenance program and extensive damages from storms earlier in the year used up the allocated budget for that program. The maintenance on Station 3 will be completed next week-there were many design issues. Reactors still need to be installed outside to drop incident energy. This will happen in a few weeks when the contractors return from hurricane outage restoration.

In the last 2 or 3 months, RMLD has taken down 120 double poles in North Reading, Reading and Lynnfield, and Wilmington. There are 3 transfers remaining in Lynnfield, and in Reading there are 59 pull poles. North Reading was over 100, and that has been brought down to 32. Wilmington has 14 more poles. The number goes up and

#### **Engineering and Operations Report – June 2017 - Mr. Jaffari (Attachment 4)**

down as construction occurs. Mr. Jaffari thanked the community and RMLD's customers for being so patient.

Mr. Jaffari then moved on to the SAIDI, SAIFI and CAIDI reliability indices, all of which are well below national and regional averages. These numbers can change with one storm. The trend over the years has been to stabilize. 2014 was a bad year due to maintenance issues. Since maintenance programs have been developed and kept up the outage numbers have been going down.

Mr. O'Rourke asked if this was a measure of the work being done with capital expenditures, which Mr. Jaffari replied to in the affirmative.

Vice Chair Hennessy asked if there was one that Mr. Jaffari looked to as more important than the others.

Mr. Jaffari explained that SAIDI is system outage duration, SAIFI is the average frequency of a customer outage, and SAIFI is the frequency of outages. Mr. Jaffari stated that RMLD is doing well on SAIFI, considering that RMLD is responsible for four towns. Mr. Jaffari explained that he looks at all three indices; they are all important. These are tracked every month on APPA software.

Mr. Hennessy clarified that the report said 13 customers out of every 1,000 experienced an outage.

Mr. Jaffari explained that it is 0.13, which means less than one outage of the customer base. It is less than one percent. The regional average is 0.54 among utilities the same customer size, or less.

Mr. Jaffari explained that RMLD's outages were mainly caused by equipment failure, trees, and wildlife. Equipment and wildlife have gone down; trees go up and down depending on the number of storms.

Chair Pacino asked if RMLD played any role in restoring power to Texas after the hurricane. Mr. Jaffari answered that RMLD received a Mutual Aid call. However, the week before there were five motor vehicle accidents in RMLD's service territory. Not having enough resources, RMLD couldn't send anyone. One employee took vacation and went. The next hurricane, depending on if our system is in good shape, we may send assistance. Mr. Jaffari stated that he is a big fan of mutual aid and his heart goes out to the people who are out of power.

#### **Determination of Uniqueness of Property – Mr. Jaffari**

Mr. Jaffari explained that there is a site at 326 Ballardvale Street that RMLD is considering building a substation on. It is located right next to 115 kV lines. Therefore, a lot of construction won't be needed to bring the energized line into the substation. RMLD had a meeting with the Town of Wilmington, and there is a zoning issue: the building to lot ratio is 36 percent. It needs to be 35 percent, per zoning requirements. There are three options, which are being negotiated with the owners: purchase, lease with option to buy, and lease. RMLD is trying to purchase the property, but is also looking at leasing the property because that would get rid of the zoning requirements and a variance would not be required.

Because of the uniqueness of the project's location, RMLD is asking to skip the RFP, because we do not need to receive proposals from all over. We need substation where 115 kV lines are, and there are not many properties that fulfill that requirement. The one RMLD has already located does. Not filing an RFP will save two months' time. Notice of the exemption will appear in the Central Register, so there will be public notification.

Chair Pacino asked Mr. Jaffari to explain why the Department is doing this.

Mr. Jaffari answered that Substation 5 (Wildwood Station) has reached the end of its useful life. The transformers are old and it's next to wetlands, which makes construction very difficult due to site restrictions. It is being fed from 34.5 kV lines from Station 4. That means that the losses are significant. Being close to the 115 kV lines would

**Determination of Uniqueness of Property – Mr. Jaffari**

cut losses and save money. The property in question would place the substation where the load center is. The property is in the perfect location.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that the RMLD Board of Commissioners approve the determination of the uniqueness of property and waive the publication requirements of M.G.L. Chapter 30B § 16, with respect to the acquisition of land located at 326 Ballardvale Street, Wilmington MA 01887, and identified on the Town of Wilmington Assessor's Map as R2 Lot 23/2.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RMLD Procurement Request Requiring Board Approval – Mr. Jaffari (Attachment 5)**

**RFP 2018-01 115kV Pole Replacement Project**

Mr. Jaffari explained that these are the 115 kV lines that are feeding Station 4. The poles were tested and are marginal. Two poles failed and were replaced last year. There are five more that need to be upgraded. Eighteen construction companies were sent a Request for Bid (RFB) and only two responded. Mass Bay did not meet the requirements following a background check. Harlan Electric did the pole replacement last time. Their \$115,069.59 bid includes \$9,314.34 for matting since the poles are in a wet area. If that doesn't need to be used it would be savings for RMLD.

Chair Pacino stated that the bid is for \$150,000 and the project was budgeted for \$60,000. Chair Pacino asked Mr. Jaffari to explain the difference. Mr. Jaffari explained that the amount is higher due to construction challenges. Upon further investigation, it was determined that more work and more labor is involved because the situation is worse than what we originally thought. This is impacting reliability and this is one of two major lines that feed into Station 4. These are 70-foot-tall poles. We've notified National Grid and Eversource; it's a long process to schedule the outage.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-01 for Pole Replacement Project be awarded to Harlan Electric as the most responsible and eligible bidder, in the amount of \$115,069.59, pursuant to M.G.L. Chapter 30 § 39M on the recommendation of the General Manager.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RFP 2018-03 48 Pole Mounted Transformers**

Mr. Jaffari explained that these transformers are used for system upgrades. 16 companies were sent the RFB. The two lowest, responsible, and responsive bidders were Stuart C. Irby Co. in the amount of \$42,493.00 and Wesco for \$59,229.00, for a total of \$101,722.00. A part of the bid requirement is that the transformers meet DOE energy efficiency standards. This is the reason that the other bidders were disqualified: they weren't even close.

Chair Pacino clarified that the bid is for 48 Pole Mounted Transformers and asked that M.G.L. be added to all bids.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-03 for 48 Pole Mounted Transformers be awarded to Stuart C. Irby Co. in the amount of \$42,493.00 and Wesco for \$59,229.00, for a total of \$101,722.00, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.



**RMLD Procurement Request Requiring Board Approval – Mr. Jaffari (Attachment 5)**

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RFP 2018-04 50 Pad Mounted Transformers**

Mr. Jaffari same thing as previous bid but these mount on pad for underground. There were 16 bidders. The most responsible and responsive was Wesco. The rest of the bidders took exceptions.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-04 for 50 Pad Mounted Transformers be awarded to WESCO in the amount of \$68,959.00, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

Chairman Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RFP 2018-05 Capacitor Banks**

Mr. Jaffari explained that capacitor banks are used to maintain the voltage on the system. The bid was sent to twelve companies and all of them took exceptions. The lowest responsible and responsive bidder was Stuart C. Irby in the amount of \$39,664.00. Per Chapter 164, we don't have to go with lowest bidder. However, this was the lowest bidder. The exception that they took was a minor variance. It was budgeted for \$30,000 but unfortunately it is a bit higher. Before we send out the request for bids we get an estimate of how much the equipment will cost. The actual cost can go up and down - this one went up.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-05 for Capacitor Banks be awarded to Stuart C. Irby in the amount of \$39,664.00, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RFP 2018-06 15kV Pad Mounted Switchgear**

Mr. Jaffari stated that this switchgear that is used for underground distribution of major loads: anywhere from 2,000 kVa to 51,000 kVa. They are a key part to the reliability of the underground system. RMLD has a program to purchase four to five every year until all 25 are replaced. They all have reached the end of their useful life. Trayer Engineering Corporation had no exceptions. This went over the budgeted amount; the price of metal has gone up.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-06 for 15kV Pad Mounted Switchgear with Vacuum Load Interrupters and Vacuum Fault Interrupters be awarded to Trayer Engineering Corporation in the amount of \$175,431, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RMLD Procurement Request Requiring Board Approval – Mr. Jaffari (Attachment 5)**  
**RFP 2018-07 SCADA-Mate CX Switches**

Mr. Jaffari stated that this is the same technology that Chattanooga is using for distribution automation. This is a 10 to 15-year program for replacing the major switches with ones that are smart. They can detect the fault, isolate it, and send a message to SCADA. The dispatchers will send crews right to the outage location, saving on operation expenses. We are in year two. Year one was the pilot program and came in under budget. The bid is being awarded to WESCO in the amount of \$134,084. The budgeted amount was \$140,000.

Mr. Talbot asked how many of the switches will RMLD ultimately be installing. Mr. Jaffari replied: 99 to 100. Mr. Talbot then asked how the switches communicate with RMLD. Mr. Jaffari responded through fiber node. In areas that have no fiber, a radio will be used to send a signal to the nearest fiber.

Mr. Talbot asked how much it would cost to run fiber to the locations who have no fiber.

Mr. Jaffari answered that installing the fiber is a matter of time. As we expand fiber assets-eventually all will be covered. However, expanding the fiber network will cost more than the radios. Currently, those using dark fiber are paying for its installation and then turning it over to us. A situation we can benefit from is the preferred choice.

Mr. Talbot stated that it's going to be worth it to install fiber where there are businesses and homes because over time those strands will be used. Mr. Talbot stated that he is encouraging Mr. Jaffari to put in the fiber to support the switches. you're up there anyway and then you have the fiber and it can be monetized.

Chair Pacino asked what is meant by "unauthorized signature" under Graybar.

Ms. Schultz speculated designated purchasing agent; but wasn't sure.

Mr. O'Rourke asked, with a total of ninety switches needed, is there any leverage to negotiate? Is the price quantity sensitive?

Mr. Jaffari replied that It is. A bid would need to be sent out and money committed to spending on the equipment. The reason we haven't done that is if sales are down, this project could be deferred if it needed to be.

Mr. Talbot stated that when these are installed you save money. Even if you spend an obscene amount of money up front, you would get that money back.

Mr. Jaffari explained that RMLD would have to allocate \$2 million to spend. However, RMLD has to build a new \$5 million substation. That's why the purchasing of this equipment is divided into segments.

Mr. Talbot announced that he was encouraging Mr. Jaffari to wrap it up into one project and include fiber connectivity. Mr. Talbot then asked Mr. Jaffari if he had changed his mind about the voting on this bid tonight.

Mr. Jaffari replied that he had not; it takes sixteen weeks to get the equipment and these are for key locations. He will look into a bulk purchase for the next order. These switches are encapsulated so everything is covered; it minimizes the likelihood of animal contact.

Mr. Talbot commented that Chattanooga saved \$2 to \$3 million during one storm.

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke that proposal 2018-07 for SCADA-Mate CX Switches be awarded to WESCO in the amount of \$134,084, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

**RMLD Procurement Request Requiring Board Approval – Mr. Jaffari (Attachment 5)**

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

**RMLD Procurement Request Requiring Board Approval – Mr. Jaffari (Attachment 5)**

**RFP 2018-10 One (1) Trouble Truck: Year 2018 or Newer with Trade-In**

Mr. Jaffari announced that the last bid is for a trouble truck with trade-in. The lowest bidder was Altech, but they took some exceptions and had missing parts. The second lowest was Minuteman Trucks. It will take 42 weeks to deliver. The value of the trade-in is \$15,000. The price of the truck before trade-in was \$186,465.16.

Mr. Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-10 for One (1) Trouble Truck: Year 2018 or Newer with Trade-In be awarded to Minuteman Trucks in the amount of \$174,125.16, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

Chairman Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

Mr. Small then directed the Board's attention to an error on **2018-04 50 Pad Mounted Transformers**, stating that the \$68,959 bid amount should be much higher. The calculation used in the bid reflect singular values rather than the full quantities. The Unit price was used without accounting for how many pieces of equipment would be purchased. Mr. Jaffari recalculated the bid while the Board moved on to the next agenda items, at Mr. Talbot's suggestion.

**RMLD Board Meetings**

Chair Pacino announced that the next Strategic Meeting will be held on Tuesday, September 26, 2017 at 6:00 p.m., and the Sub-Committee on the Payment to the Town of Reading will meet on September 27 at 6:00 p.m. The next RMLD Board Meeting will be on Thursday, October 26, 2017 at 7:30 p.m. Ms. Schultz said that the Audit results will be presented and she'll coordinate with the Town of Reading Audit Committee.

**CAB Meeting**

Mr. Small stated that the CAB meeting scheduled for Wednesday, September 20, 2017 at 6:30 p.m. has been cancelled. The next meeting will be in October.

**RFP 2018-04 50 Pad Mounted Transformers**

Mr. Jaffari apologized for the bid error, and stated that he has calculated that the total bid amount should be \$205,981. Chair Pacino stated that the Board will make a motion to reconsider Item 13c, and then revote it.

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, to reconsider Item 13c.

Chair Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that proposal 2018-04 for 50 Pad Mounted Transformers be awarded to WESCO in the amount of \$205,981, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

Chairman Pacino called for a poll of the vote:

Mr. Talbot: Aye; Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 5:0:0.**

### **General Discussion**

Mr. Talbot explained that if solar is not installed by March, current subsidies go away. Mr. Talbot stated that he wants to make sure that the towns know about the deadline; he is sending a letter to the Towns and is just letting the Board know.

Mr. O'Rourke asked Ms. Parenteau if it would be more appropriate to have a staff member of RMLD contact the Towns.

Ms. Parenteau answered that several solar vendors have contacted RMLD and RMLD has sent information to our customer base.

Mr. Talbot clarified he is referring to the Towns.

Mr. O'Rourke asked Mr. Parenteau if it would be more appropriate to have the letter come from RMLD.

Ms. Parenteau replied that it's Mr. Talbot's prerogative.

Mr. Talbot stated he was writing the letter more as a Town Meeting member, but wanted to make sure none of his RMLD Board colleagues have any objections. Chair Pacino stated that Mr. Talbot can say that the Board supports his writing of the letter.

### **Executive Session**

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke, that the Board go into Executive Session to consider the purchase of real property and return to Regular Session for the sole purpose of adjournment.

Mr. Stempeck left the meeting.

### **Adjournment**

Vice Chair Hennessy made a motion, seconded by Mr. O'Rourke adjourn the Regular Session.

**Motion Carried 4:0:0.**

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



David Hennessy, Secretary Pro Tem  
RMLD Board of Commissioners

**READING MUNICIPAL LIGHT DEPARTMENT  
BOARD OF COMMISSIONERS MEETING  
230 Ash Street  
Reading, MA 01867  
November 9, 2017**

**Start Time of Regular Session: 7:30 p.m.  
End Time of Regular Session: 9:40 p.m.**

**Commissioners:**

**Phillip B. Pacino, Chair  
Dave Hennessy, Vice Chair, Secretary Pro Tem  
Tom O'Rourke, Commissioner**

**John Stempeck, Commissioner  
Dave Talbot, Commissioner-Absent**

**Staff:**

**Coleen O'Brien, General Manager  
Hamid Jaffari, Director of Engineering and Operations  
William Seldon, Assistant Director of Integrated Resources  
Wendy Markiewicz, Director of Business/Finances**

**Joyce Mulvaney, Communications Manager  
Tracy Schultz, Executive Assistant**

**Citizens Advisory Board:**

**Dennis Kelley, Member**

**Guests:**

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

**RMLD Liaison:**

**Peter Lydecker**

**Public:**

**Mary Ellen O'Neill**

**Call Meeting to Order**

Chair Pacino called the meeting to order and announced that the meeting is being videotaped at the RMLD office at 230 Ash Street, for distribution to the community television stations in Reading, North Reading, Lynnfield, and Wilmington.

**Opening Remarks**

Chair Pacino read the RMLD Board of Commissioners' Code of Conduct and welcomed Mr. Kelley from the Citizens' Advisory Board.

**Public Comment**

Reading resident Mary Ellen O'Neill took the floor, introducing herself as a Reading resident, a current and longtime Town Meeting member, and a former member of the CAB, the RMLD Board, and a former Chairman of the RMLD Board. Ms. O'Neill expressed her concerns regarding RMLD's tree trimming program and the potential damage done to the trees in the process. Ms. O'Neill explained that the cuts are akin to wounds and asked the Board to consider some compensation to the Towns. Ms. O'Neill stated that she understands the importance of service reliability. It would be fair and just for the trees to set aside money to give to the municipalities to plant trees in the communities. The Commissioners had no questions and will take her suggestion under consideration.

**Approval of Board Minutes June 15, 2017 (Attachment 1)**

Chair Pacino explained that the Board minutes were not reviewed in time for this meeting.

**Presentation of Fiscal Year 2017 Audit (Attachment 2)**

**Melanson Heath & P.C. – Frank Biron and Zackary Fentross**

Mr. Biron stated that the results of the audit are a clean opinion. The financial statements are in accordance with generally accepted accounting principles. That's the best opinion you can receive from an independent outside audit. The overall cash balance is in a very strong position: \$15 million. This is about two months' worth of operating cash. Other restricted cash reserves add up to \$29 million. Receivables are current; all the receivables that are on the books are under 60 days old. RMLD has no long-term bonds payable and funds all capital additions through the rate structure and the normal budget process. RMLD has a pension liability of \$12 million because of

## **Presentation of Fiscal Year 2017 Audit (Attachment 2)**

### **Melanson Heath & P.C. – Frank Biron and Zackary Fentross**

participation in the Town's contributory retirement system. The Town's retirement system is about 73 percent funded, which is better than most municipalities in Massachusetts, which are typically funded in the 50 to 60 percent range. The Department has another \$5 and a half million set aside in the pension reserve fund. The new GASB 74 and 75 deal with post-employment benefits. Actuaries determined that the overall liability for the Department for retirees' healthcare benefits is about \$10 million. The Department has about \$3 million set aside in a restricted account. The net liability is about \$7 million. Next year's audit will require that to be reported on the balance sheet. The Department had a profit of \$4.5 million. It's limited by the DPU; RMLD can't exceed a profit of more than 8 percent of capital assets. RMLD was in the 7.5 percent range. It was a very profitable year.

Mr. Fentross stated that RMLD's accounting records are in fantastic shape. 70 percent of communities receive a management letter. RMLD takes internal controls very seriously. Mr. Fentross thanked everyone involved in the audit for being well-prepared and pleasant.

Mr. O'Rourke asked Mr. Fentross to explain what management letter is. Mr. Fentross explained that his firm looks at the internal controls of the Department to ensure assets are properly safeguarded. If it were determined that an improvement could be made, would formerly recommend it in a management letter.

Chair Pacino stated that the Audit Committees of the Town and the Board met before this meeting and received a more detailed presentation from the auditors. Both committees voted to accept the audit and to recommend that the Board of Commissioners accept the audit. The vote was 4:0 for the Town and 2:0 for the RMLD Audit Committee.

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that the Board of Commissioners accept the Audit Report from Melanson Heath, Fiscal Year ended June 30, 2017 as presented.

**Motion Carried: 4:0:0**

### **Report of the Chair**

Chair Pacino reported that the Sub-Committee on the Payment to the Town of Reading met and discussion as to what the Town is trying to achieve ensued. Chair Pacino made a presentation to the members on RMLD's financial structure. The Committee is comprised of two CAB members, Mr. Stempeck, and Dan Ensminger from the Town of Reading. Mr. Stempeck added that it was fruitful exploring mechanisms and ideas of how to meet the needs of the Town. As the Town will be reporting at the upcoming Town Meeting, discussions are ongoing.

### **Report on RMLD Board Member Attendance at RMLD Citizens' Advisory Board Meeting**

Chair Pacino stated that the CAB meeting had two highlights: the IRD presentation that is also being presented tonight, and a presentation on RMLD's financial structure. Mr. Kelley added that the CAB has a full Board again.

### **Community Engagement**

Ms. Mulvaney reported that RMLD participated in public power week and had over 300 people attend its Open House. The elementary student art contest awards will be in January. The historical calendar will be available at the end of November. The holiday light decorating contest will be held this year after Thanksgiving. The RMLD website is going to be updated and will be more mobile friendly. The High School Art Contest will be held during the spring semester. Mr. Stempeck commented on how fantastic the artwork is from the summer contest.

### **Report of the General Manager-October 29, 2017 Storm Response-Ms. O'Brien**

Ms. O'Brien provided an update on the recent storm. The total amount of customers that went out was 2,617. Wilmington 190 Lynnfield 350 North Reading 402 and Reading 1,675. The majority in Reading was due to a feeder outage which lasted two hours. Every single one of the outages was tree related. RMLD issued 72 tweets updating customers with information and restoration times. Ms. O'Brien stated that when large trees come down, RMLD can't get in there right away. Cranes may be needed and a lot of tree work needs to be done. Concord, Littleton, Wakefield and a contract crew provided mutual aid. Overall, RMLD did very well. Everyone was back in power well ahead of other towns. Mr. Jaffari will be demonstrating a new outage management system next week, and RMLD is hoping to implement it in spring.

### **Report of the General Manager-October 29, 2017 Storm Response-Ms. O'Brien**

Vice Chair Hennessy asked how the new system will provide the public with more and better information. Mr. Jaffari explained that the new outage management system is integrated with the AMI system (the mesh network) so when an outage occurs a signal is sent system and we will see which customers are out, the feeder out on the GIS map, and which streets and how many customers are out. It will be a more accurate way to capture when customers are out and when they'll be back on. It will let RMLD know when customers are restored.

Chair Pacino stated that the electrical system was up quickly, well ahead of other towns, and asked Ms. O'Brien to pass along the Board's gratitude to RMLD employees.

### **Integrated Resources Division**

#### **Power Supply Report-August and September 2017-Mr. Seldon (Attachment 3)**

Mr. Seldon began by comparing the day ahead pricing and the real-time pricing of the last three summer peaks. Due to how much higher the latter is, RMLD wants to have as much power purchased ahead of time as possible.

Transmission and capacity went up in 2017. Since this year's costs are the highest per kW month, you would think that 2017's overall costs for the month of September would have been higher than they were in 2016. But, the peak was much higher in 2016, over 20 megawatts higher, therefore costing more.

Energy prices are still on the downswing. Historically, natural gas prices go down during the three summer months. Capacity costs are high this year. The capacity load isn't increasing exponentially, but costs are going up.

Mr. Stempeck clarified that that's due to infrastructure investment that was made by other utilities. Mr. Seldon replied that it's according to what ISO says we need for generation capacity in our zone-they say that we're constrained. This will be the case until they finish all their transmission upgrades and get FirstLight online-generation that should be there right now but isn't.

#### **Power Supply Risk Management Strategy-Mr. Seldon (Attachment 4)**

Mr. Seldon explained that the objectives of the presentation are to show how upgrading current strategy will help mitigate risks, keep the rates stable, improve the way we lock in pricing at optimum times, and help secure costs overall. RMLD has been using a laddering and layering strategy for the last six or seven years annually to go out for pricing and stagger how much power we're buying with most of the purchase being within the first year and then staggering in increments over four years. hopefully gives smooth curve. With this new system, we're not locking in all the power supply. There are contracts already in place and entitlements all of that has been pulled out of the energy needs that we're looking at.

The current system is limiting because it involves a lot of purchasing all at once. It takes up a lot of staff time and involves significant legal costs to negotiate contracts. The new process will help mitigate staff time and legal costs moving forward. There are two different triggers: price and time. If you can't take advantage of the market at a certain price, this gives a certain amount of time to look at prices and lock in something. There are dates to look at and a pricing matrix. This has been done in the past with heat rate index contracts, using the same philosophy.

Mr. Stempeck asked where this system was developed. Mr. Seldon answered that it has been utilized by municipal utilities for a while. Ms. O'Brien stated that NextEra will be helping RMLD and that RMLD is working hard to stabilize rates and this allows more opportunities to capture better pricing.

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that the Board of Commissioners accept the Risk Management Strategy as presented, and authorize the General Manager to enter into purchase power agreements that satisfy the criteria set forth in the Risk Management Strategy. As a matter of protocol, the Department will provide a report on transactions relative to this strategy.

**Motion Carried 4:0:0.**

Chair Pacino noted that the CAB recommended that the Board of Commissioners approve the motion 5:0.

### **Engineering and Operations Report-July, August, and September 2017-Mr. Jaffari (Attachment 5)**

Mr. Jaffari stated that good progress is being made on projects. \$279,450 has been spent on routine construction. The Station upgrade is 99 percent completed. Construction of the Station 3 reactor will start in the spring. The Board will be voting on a bid related to this later in the evening. The GIS project is now 100 percent completed. That will be the base for the outage management system. It will be ready in February or March. RMLD is still installing more meters to expand the mesh network. Year-to-date, \$1.329 million has been spent of the budgeted \$7.685 million. That leaves approximately \$6.4 million to go.

Pole inspections will start on Monday. 650 poles are tested annually. There are 249 porcelain cutouts that still need to be replaced. There were no substation hot spots: infrared scans showed no problems.

Systemwide, RMLD has 74 transfers to do. RMLD is trying to pull ten pole butts a week. However, more upgrades mean more double poles.

Mr. Jaffari then moved on to the outage management reliability indices, SAIDI CAIDI and SAIFI, which are all below national and regional averages. Mr. Stempeck clarified that those numbers are through September. Mr. Jaffari explained that the October storm will increase the numbers, but RMLD will still be below the national and regional averages.

Mr. Kelley stated that the tree trimming average in 2012 and 2017 was 4.58 per month. The last three months, the average has been 11 per month. Mr. Kelley stated that it seems like RMLD is spending money cutting trees back, but tree-caused outages seem to be increasing. Mr. Jaffari explained that the tree trimming program cannot prevent all outages. Even if winds are only 10 mph, if the roots are not strong- trees come down. Even if you have an excellent tree trimming program it depends on the situation. There's also many trees private property trees we can't trim. We can only do main lines.

Mr. Stempeck if you look at total number as opposed to percentages, equipment-caused outages show a substantial reduction.

Mr. Kelley asked what is considered an "unknown" outage cause. Mr. Jaffari replied that during outage troubleshooting, sometimes we get there and it's unexplained. You would expect to see an animal but there isn't one on the scene.

Mr. Kelley asked how restorations are prioritized during a storm. Mr. Jaffari explained that the main feeder takes priority, unless there are dangerous situations, such as downed wires. Those would be dealt with first.

Mr. Kelley asked if the new outage management program will allow RMLD to react faster. Mr. Jaffari answered if the main line is out it will still take time to patrol for the problem. Once the feeder is on then it will be easier. The smart grid switches will automatically isolate the faulted section in a matter of seconds, but right now we're doing it manually.

### **RMLD Procurement Requests Requiring Board Approval (Attachment 6)**

Before moving on to the bid proposals, Chair Pacino stated that he received an e-mail from a bidder on a project, introducing himself. Chair Pacino stated that the Department has a procurement process for reviewing and approving bids and he expects that will be followed. Anyone who wants to reach out to him is wasting their time.

### **IFB 2018-11 Tree Trimming Services**

Mr. Jaffari stated that two companies responded: Mayer Tree Services and The Davey Tree Expert Company. The lowest responsible and responsive bidder was Mayer Tree Services. Davey's checked off that they didn't take any exceptions but they didn't provide a variety of documents that RMLD required.

Mayer Tree Services didn't take any exceptions and RMLD has received exceptional service from them in the past. Mr. Jaffari explained that there is no number in the bid motion because there are many variables. The tree trimming budget for FY18 is \$852,000, but we don't know how many storms there will be. The cost differential between the two bidders was \$8,000. Mayer was a little bit more over a period of three years.



## **RMLD Procurement Requests Requiring Board Approval (Attachment 6)**

### **IFB 2018-11 Tree Trimming Services**

There was debate amongst the Board the motion should include a not to exceed \$850,000 clause. Chair Pacino suggested adding "various rates as specified in bid" and the Board agreed this was satisfactory.

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that bid IFB 2018-11 for: Tree Trimming Services be awarded to: Mayer Tree Service, Inc., at the various rates specified in the bid, pursuant to Massachusetts General Law Chapter 30 Section 39M, as the lowest responsible and eligible bidder on the recommendation of the General Manager. This is a one-year contract beginning January 1, 2018, with an RMLD option for two additional one-year terms.

**Motion Carried 4:0:0.**

### **IFB 2018-12 Current Limiting Reactor Construction and Installation at Station 3**

Mr. Jaffari said that RMLD received sealed construction bids from Mass Bay Electrical Corp., Murphy, Valiant Electric, LLC, and Power Line Contractors. The lowest responsive and responsible bidder was Mass Bay Electrical Corp. The project was budgeted for \$165,000, and the construction is scheduled to start in April.

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that bid IFB 2018-12 for: Current Limiting Reactor Construction and Installation at Station 3 be awarded to: Mass Bay Electrical Corp. for \$153,920, pursuant to Massachusetts General Law Chapter 30 Section 39M, as the lowest responsible and eligible bidder on the recommendation of the General Manager.

**Motion Carried 4:0:0.**

### **General Discussion**

Chair Pacino announced that the Subsequent Town Meeting will be on Monday, November 13. The next Board Meeting will be on December 14. The next CAB meeting will be on Wednesday, November 15. None of the Commissioners could immediately commit to attending so Ms. Schultz agreed to circulate an email.

### **Executive Session**

At 8:52 p.m. Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, that the Board go into Executive Session to consider the purchase of real property and to return to regular session for the sole purpose of adjournment.

Chair Pacino called for a poll of the vote: Mr. O'Rourke: Aye; Chair Pacino: Aye; Vice Chair Hennessy: Aye; Mr. Stempeck: Aye.

**Motion Carried 4:0:0.**

### **Adjournment**

Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, to adjourn the Regular Session.

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

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



David Hennessy, Secretary Pro Tem  
RMLD Board of Commissioners

POWER SUPPLY REPORT  
NOVEMBER 2017  
ATTACHMENT 2



# *RMLD INTEGRATED RESOURCES*

*BOARD OF COMMISSIONERS MEETING*

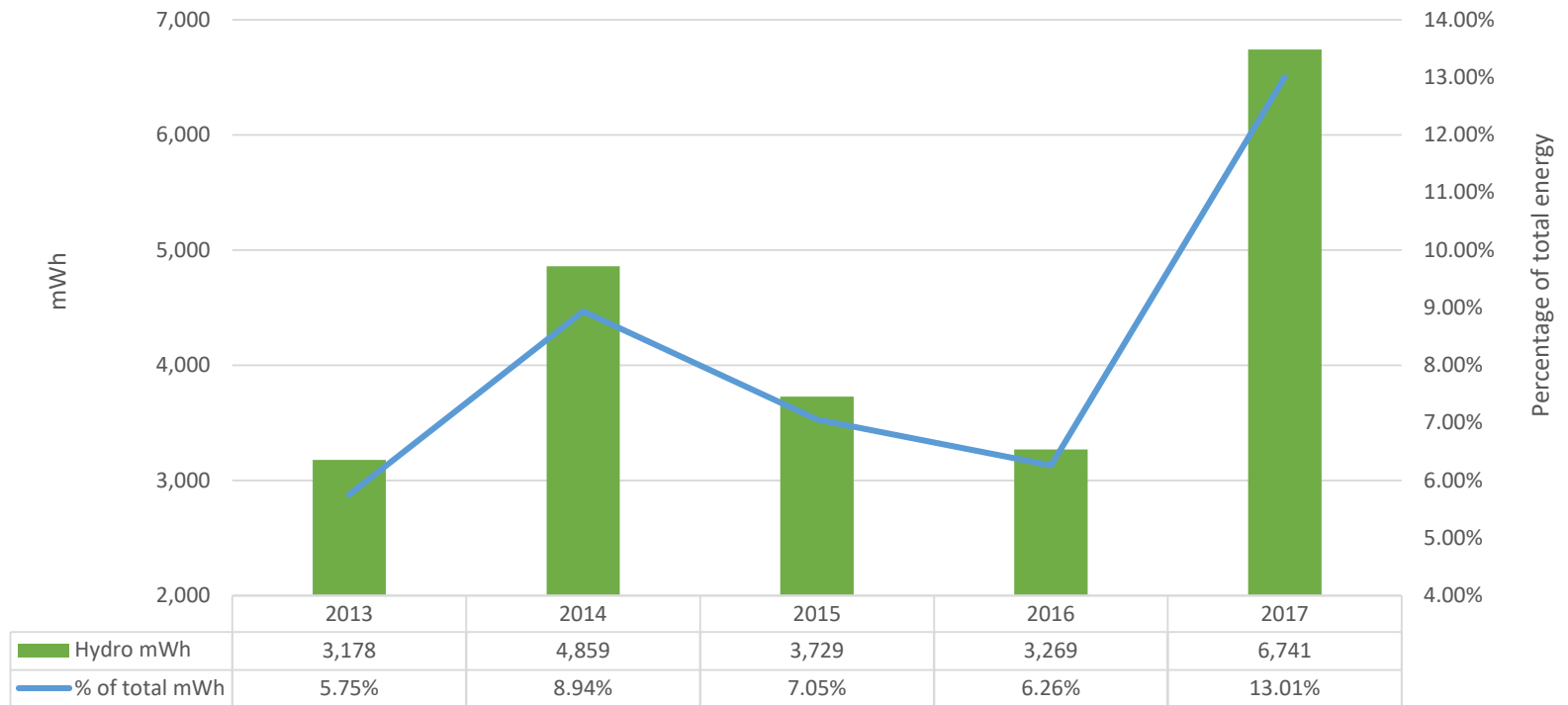
*January 25, 2018*

*Reporting for November, 2017*

*Jane Parenteau, Director of Integrated Resources*



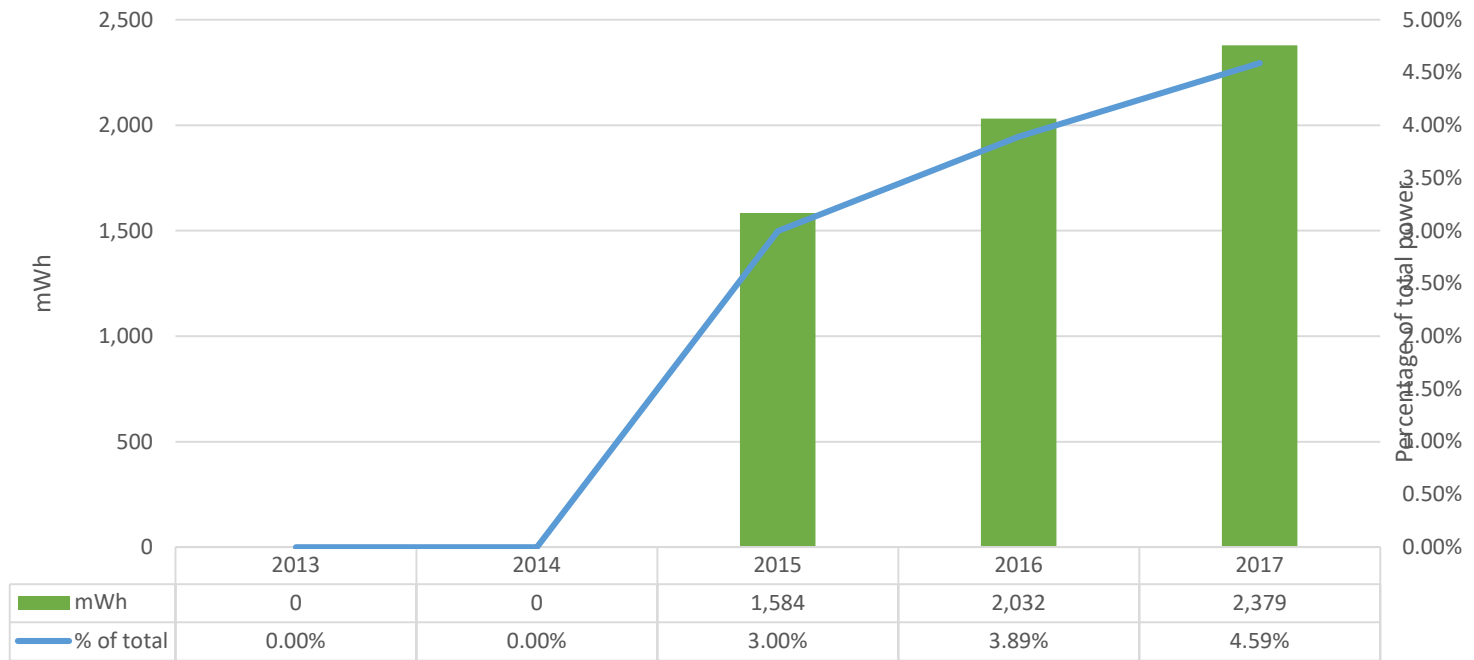
# HYDRO Power November 2013-2017



Hydro mWh    % of total mWh

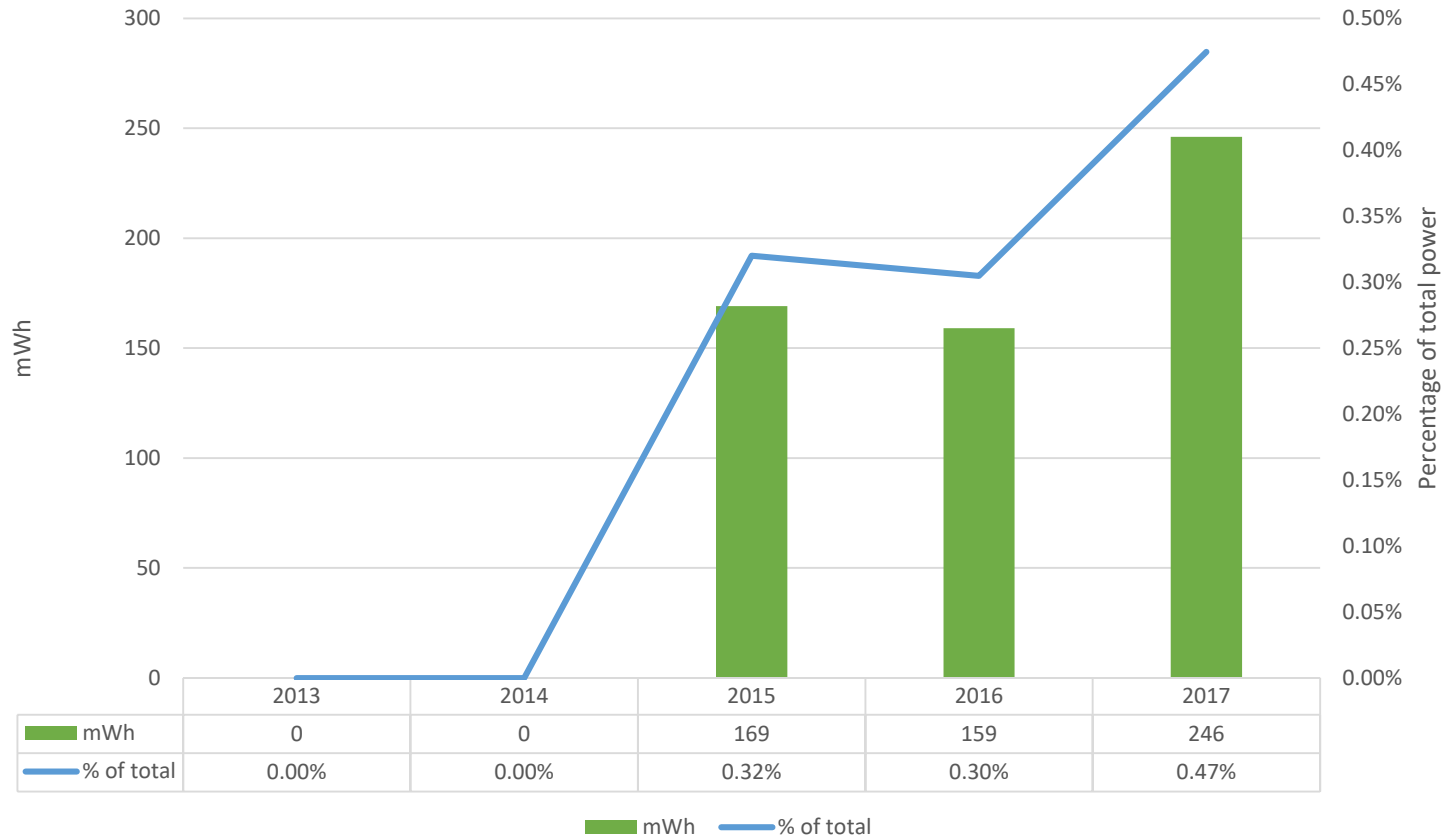
# WIND Power

## November 2013-2017

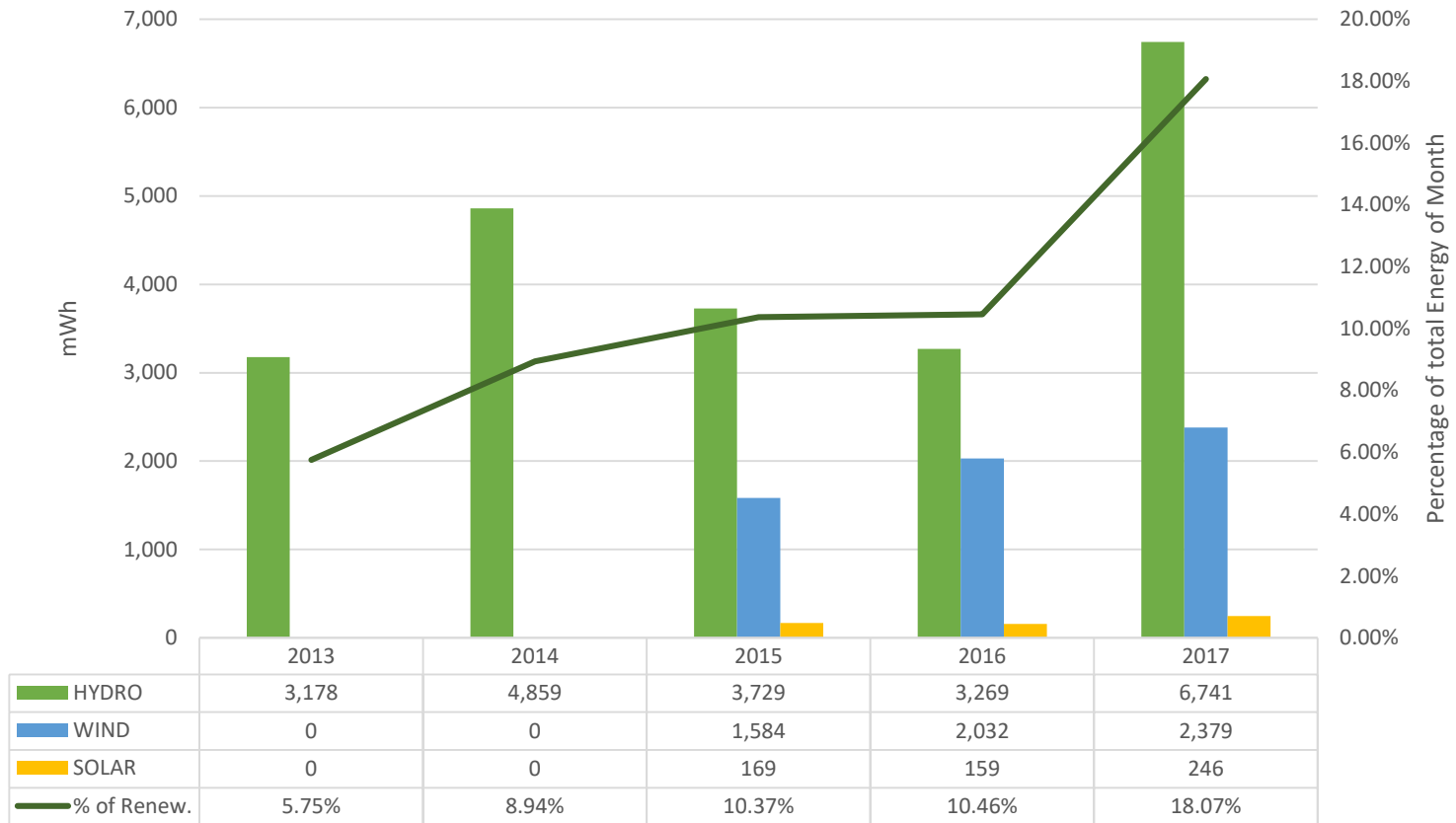


■ mWh
 — % of total

# SOLAR Power November 2013-2017

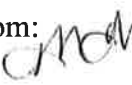



# All Renewables November 2013-2017



■ HYDRO 
 ■ WIND 
 ■ SOLAR 
 — % of Renew.

To: Coleen O'Brien

From:  Maureen McHugh, Jane Parenteau 

Date: January 17, 2017

Subject: Purchase Power Summary – November, 2017

Energy Services Division (ESD) has completed the Purchase Power Summary for the month of November, 2017.

**ENERGY**

The RMLD's total metered load for the month was 51,413,226 kWh, which is a 1.14% decrease from the November, 2016 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	1,825,412	\$6.72	3.52%	\$12,270	0.51%
Seabrook	5,728,285	\$5.92	11.05%	\$33,932	1.40%
Stonybrook Intermediate	0	\$0.00	0.00%	-\$594	-0.02%
Shell Energy	9,592,980	\$59.75	18.51%	\$573,199	23.62%
NYPA	2,631,929	\$4.92	5.08%	\$12,949	0.53%
EDF	1,386,000	\$27.39	2.67%	\$37,963	1.56%
ISO Interchange	6,522,932	\$48.80	12.58%	\$318,347	13.12%
Nema Congestion	-	\$0.00	0.00%	\$107,621	4.43%
Coop Resales	11,687	\$153.90	0.02%	\$1,799	0.07%
BP Energy	8,133,830	\$46.78	15.69%	\$380,500	15.68%
Hydro Projects*	4,109,398	\$71.28	7.93%	\$292,907	12.07%
Braintree Watson Unit	279,915	\$112.09	0.54%	\$31,376	1.29%
Saddleback/Jericho Wind	2,378,671	\$90.68	4.59%	\$215,686	8.89%
One Burlington & Comm. Solar	246,035	\$72.24	0.47%	\$17,773	0.73%
Exelon	8,957,200	\$42.80	17.28%	\$383,345	15.80%
Stonybrook Peaking	32,007	\$242.98	0.06%	\$7,777	0.32%
Monthly Total	51,836,281	\$46.82	100.00%	\$2,426,851	100.00%

\*Pepperell, Woronoco, Indian River, Turner Falls, Collins, Pioneer, Hosiery Mills, Aspinoak Hydro

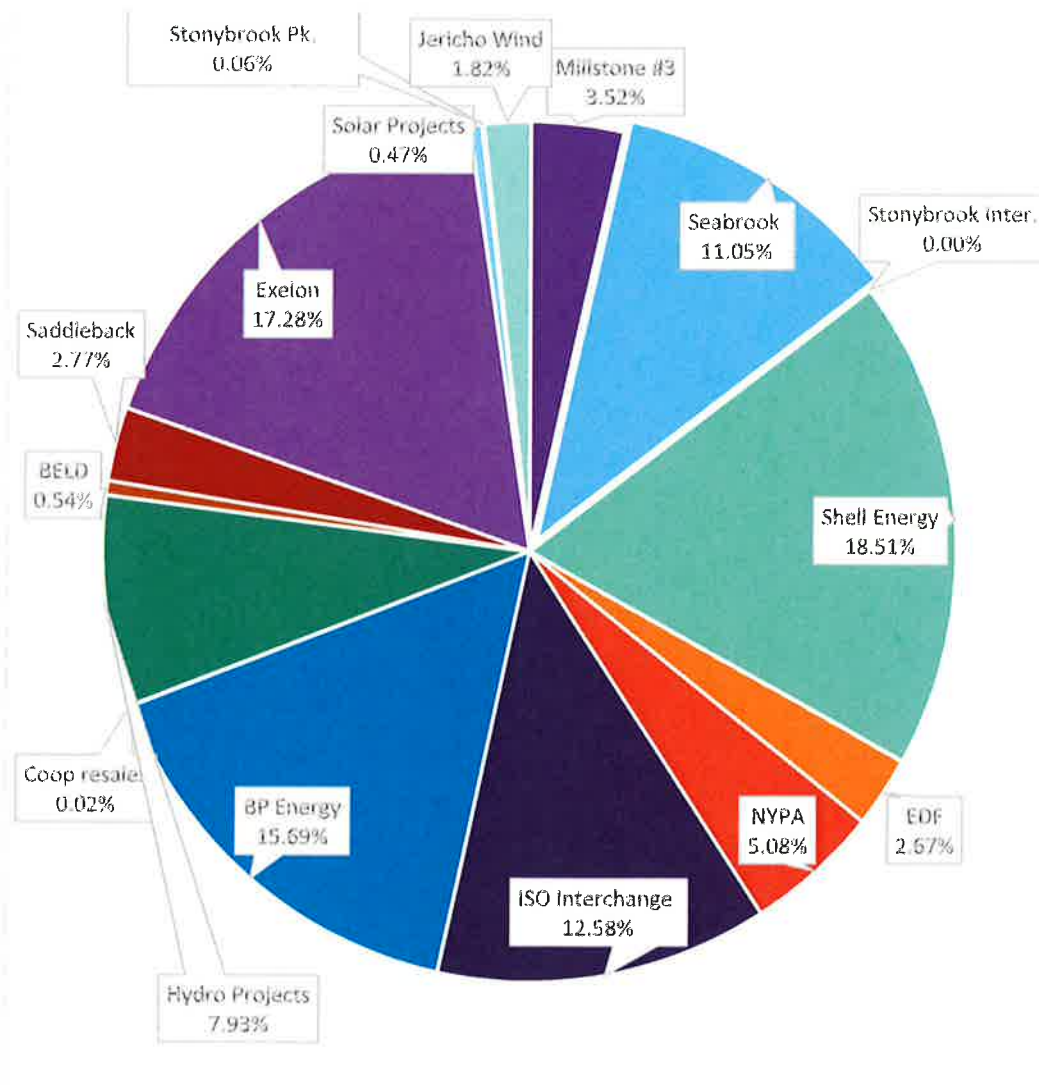


Table 2 breaks down the ISO interchange between the DA LMP Settlement and the RT Net Energy for the month of November, 2017.

Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy
ISO DA LMP * Settlement	14,663,318	\$39.14	28.29%
RT Net Energy ** Settlement	(8,140,470)	\$31.40	-15.70%
ISO Interchange (subtotal)	6,522,848	\$48.80	12.58%

\* Independent System Operator Day-Ahead Locational Marginal Price

**NOVEMBER 2017 ENERGY BY RESOURCE**





## RENEWABLE ENERGY CERTIFICATES (RECs)

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

	Banked RECs	Projected RECs	Total RECs	Est. Dollars
Woronoco	0	5,352	5,352	\$85,632
Pepperell	0	3,616	3,616	\$57,856
Indian River	0	1,798	1,798	\$28,769
Turners Falls	0	1,511	1,511	\$24,176
Saddleback	0	12,171	12,171	\$194,736
Jericho	0	6,487	6,487	\$103,792
<b>Sub total</b>	<b>0</b>	<b>30,935</b>	<b>30,935</b>	<b>494,961</b>
RECs Sold	\$0		0	\$0
<b>Grand Total</b>	<b>0</b>	<b>30,935</b>	<b>30,935</b>	<b>\$494,961</b>

## TRANSMISSION

The RMLD's total transmission costs for the month of November, 2017 were \$1,018,655. This is a decrease of 19.75% from the October transmission cost of \$1,269,309. In November, 2016 the transmission costs were \$865,917.

	Current Month	Last Month	Last Year
Peak Demand (kW)	103,397	99,845	95,704
Energy (kWh)	51,836,281	53,460,403	52,217,414
Energy (\$)	\$2,426,851	\$2,054,057	\$2,545,398
Capacity (\$)	\$2,151,979	\$2,111,981	\$1,630,243
Transmission(\$)	\$1,018,655	\$1,269,309	\$865,917
Total	\$5,597,485	\$5,435,348	\$5,041,558

PROPOSED RATE FOR  
SOLAR CHOICE PROGRAM  
ATTACHMENT 3

## **Solar Choice**

### **Available in:**

Reading, Lynnfield Center, North Reading, and Wilmington

### **Applicable to:**

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 the Solar Choice Program capacity.

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

The Solar Choice Business (SCB) Rate and Solar Choice Business Plus is available to all commercial, industrial and municipal customers of good credit standing, subject to availability of Solar Choice Program capacity.

SCB will be equal to 5 times the amount of Solar Choice.

SCB Plus will be equal to multiples of SCB not to exceed 25% of project capacity, subject to availability.

The initial SC Rate shall be \$5.00/month and the initial SCB Rate shall be \$25.00/month. The SC/SCB Rate will be adjusted every six months based on actual project performance. The SC/SCB Rate will be the net total of SC/SCB Component Charges and Credits calculated prior to each six-month period based on budgeted expenses/savings from the SC/SCB Programs 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/SCB Energy Component Charge:**

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

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

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

**Rate Filed: TBD**

**Effective: On Billings on or After February 1, 2018**

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

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

**SC/SCB Capacity Component Credit:**

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

The SC/SCB Capacity Component Credit will be calculated as follows:

SC/SCB Capacity Component Credit per SC/SCB 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/SCB Project during the Capacity Peak Hour) / (Total number of SC/SCB shares for that SC/SCB Project)

**SC/SCB Transmission Component Credit:**

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

The SC/SCB Transmission Component Credit will be calculated as follows:

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

**SC/SCB Rate:**

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

SC/SCB Rate = (SC/SCB Energy Component Charge, in \$) — (SC/SCB Capacity Component Credit, in \$) — (SC/SCB 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).

**Rate Filed: TBD**

**Effective: On Billings on or After February 1, 2018**

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

**Terms:**

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/SCB 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/SCB Rate.

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

Any customers signing up for the SC/SCB Rate after the initial twelve months are subject to a one-time enrollment fee equal to the total first year payments made by the initial participants. After that enrollment fee has been paid, they will then begin receiving the current monthly SC/SCB 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/SCB 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: TBD**

**Effective: On Billings on or After February 1, 2018**

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

FINANCIAL REPORT  
NOVEMBER 2017  
ATTACHMENT 4



Town of Reading, Massachusetts  
Municipal Light Department  
Statement of Net Assets  
11/30/2017

	<i>2018</i>	<i>2017</i>
<b>ASSETS</b>		
Current:		
Unrestricted Cash	\$16,254,199.60	\$14,482,164.40
Restricted Cash	29,547,224.82	22,954,343.33
Restricted Investments	1,329,906.48	1,345,663.06
Receivables, Net	8,813,442.14	9,592,381.08
Prepaid Expenses	879,009.36	1,126,193.95
Inventory	1,550,451.23	1,639,843.30
<b>Total Current Assets</b>	<b>58,374,233.63</b>	<b>51,140,589.12</b>
Noncurrent:		
Investment in Associated Companies	212,427.92	26,993.75
Capital Assets, Net	76,553,740.05	72,873,194.92
<b>Total Noncurrent Assets</b>	<b>76,766,167.97</b>	<b>72,900,188.67</b>
Deferred Outflows - Pension Plan	4,135,078.00	6,338,218.00
<b>TOTAL ASSETS</b>	<b>139,275,479.60</b>	<b>130,378,995.79</b>
 <b>LIABILITIES</b>		
Current		
Accounts Payable	7,194,120.12	6,047,760.62
Accrued Liabilities	424,050.02	668,419.16
Customer Deposits	1,127,120.57	1,013,683.17
Customer Advances for Construction	1,167,076.49	1,003,670.84
<b>Total Current Liabilities</b>	<b>9,912,367.20</b>	<b>8,733,533.79</b>
Non-current		
Accrued Employee Compensated Absences	3,150,134.05	3,257,809.00
Net OPEB Obligation	138,068.00	0.00
Net Pension Liability	13,076,538.00	8,833,549.00
<b>Total Non-current Liabilities</b>	<b>16,364,740.05</b>	<b>12,091,358.00</b>
Deferred Inflows - Pension Plan	714,888.00	883,172.00
<b>TOTAL LIABILITIES</b>	<b>26,991,995.25</b>	<b>21,708,063.79</b>
 <b>NET POSITION</b>		
Invested in Capital Assets, Net of Related Debt	76,553,740.05	72,873,194.92
Restricted for Depreciation Fund	4,488,607.68	5,398,965.79
Restricted for Pension Trust	5,683,014.26	0.00
Unrestricted	25,558,122.36	30,398,771.29
<b>TOTAL NET POSITION</b>	<b>112,283,484.35</b>	<b>108,670,932.00</b>
<b>Total Liabilities and Net Assets</b>	<b>139,275,479.60</b>	<b>130,378,995.79</b>

Town of Reading, Massachusetts  
Municipal Light Department  
Schedule of Cash and Investments  
11/30/2017

	<u>2018</u>	<u>2017</u>
<b>Unrestricted Cash</b>		
Cash - Operating Fund	\$16,250,699.60	\$14,479,164.40
Cash - Petty Cash	3,500.00	3,000.00
Total Unrestricted Cash	<u>16,254,199.60</u>	<u>14,482,164.40</u>
 <b>Restricted Cash</b>		
Cash - Depreciation Fund	4,488,607.68	5,398,965.79
Cash - Town Payment	1,642,495.85	1,583,611.65
Cash - Deferred Fuel Reserve	6,221,006.78	5,040,513.53
Cash - Rate Stabilization Fund	6,921,241.81	6,843,853.44
Cash - Pension Trust	5,683,014.26	0.00
Cash - Uncollectible Accounts Receivable	200,000.00	200,000.00
Cash - Sick Leave Benefits	1,844,122.03	1,933,143.36
Cash - Hazard Waste Reserve	750,000.00	150,000.00
Cash - Customer Deposits	1,127,120.57	1,013,683.17
Cash - Energy Conservation	669,615.84	790,572.39
Total Restricted Cash	<u>29,547,224.82</u>	<u>22,954,343.33</u>
 <b>Investments</b>		
Sick Leave Buyback	1,329,906.48	1,345,663.06
 Total	 <u><u>47,131,330.90</u></u>	 <u><u>38,782,170.79</u></u>

**TOWN OF READING, MASSACHUSETTS  
MUNICIPAL LIGHT DEPARTMENT  
RECONCILIATION OF CAPITAL FUNDS  
11/30/2017**

**SOURCE OF CAPITAL FUNDS:**

DEPRECIATION FUND BALANCE 7/1/17	2,406,969.15
CONSTRUCTION FUND BALANCE 7/1/17	2,500,000.00
INTEREST ON DEPRECIATION FUND FY 18	24,442.05
DEPRECIATION TRANSFER FY 18	1,794,162.10
WEST STREET - MASS DOT	<u>0.00</u>
 TOTAL SOURCE OF CAPITAL FUNDS	 6,725,573.30

**USE OF CAPITAL FUNDS:**

ADDITIONS TO PLANT THRU NOVEMBER	
 TOTAL USE OF CAPITAL FUNDS	 2,236,965.62
 GENERAL LEDGER CAPITAL FUNDS BALANCE 11/30/17	 <u><u>4,488,607.68</u></u>

Town of Reading, Massachusetts  
Municipal Light Department  
Business Type Proprietary Fund  
Statement of Revenues, Expenses and Changes in Fund Net Assets  
11/30/2017

	Month Current Year	Month Last Year	Year to Date Current Year	Year to Date Last Year	Percent Change
<b>Operating Revenues</b>					
Base Revenue	\$1,918,118.07	\$1,881,294.06	\$11,383,816.88	\$11,552,607.77	(1.5%)
Fuel Revenue	1,937,722.48	2,423,759.46	12,331,819.39	14,556,479.72	(15.3%)
Purchased Power Capacity	2,872,240.96	2,407,844.25	16,767,905.83	15,377,310.66	9.0%
Forfeited Discounts	69,862.58	65,493.09	363,448.02	390,456.56	(6.9%)
Energy Conservation Revenue	47,942.98	47,830.19	287,974.06	299,791.44	(3.9%)
NYPA Credit	(85,528.30)	(68,604.25)	(402,074.50)	(443,344.76)	(9.3%)
<b>Total Operating Revenues</b>	<b>6,760,358.77</b>	<b>6,757,616.80</b>	<b>40,732,889.68</b>	<b>41,733,301.39</b>	<b>(2.4%)</b>
<b>Expenses</b>					
<b>Power Expenses:</b>					
547 Purchased Power Fuel Expense	2,429,457.03	2,545,398.43	11,729,365.93	14,189,496.10	(17.3%)
560 Purchased Power Capacity	2,162,079.85	1,634,731.43	10,592,986.89	8,470,768.06	25.1%
565 Purchased Power Transmission	1,018,655.35	865,916.73	6,599,463.98	6,227,690.59	6.0%
<b>Total Purchased Power</b>	<b>5,610,192.23</b>	<b>5,046,046.59</b>	<b>28,921,816.80</b>	<b>28,887,954.75</b>	<b>0.1%</b>
<b>Operations and Maintenance Expenses:</b>					
580 Supervision and Engineering Labor & Expense	65,532.80	41,392.29	224,726.75	202,859.74	10.8%
581 Station Supervisor Labor & Expense	13,503.73	15,293.80	61,764.41	60,321.94	2.4%
581 Line General Operational Expense	58,323.39	61,820.80	272,941.48	254,676.27	7.2%
582 Control Room Labor & Expense	41,817.93	48,117.33	166,022.41	209,980.06	(20.9%)
585 Street Lighting Operation & Maintenance	7,008.58	10,418.67	7,057.62	123,606.61	(94.3%)
586 Meter General Labor & Expense	23,051.32	23,409.52	102,589.95	87,398.74	17.4%
588 Materials Management	48,235.19	34,407.15	201,750.44	163,806.61	23.2%
590 Maintenance of Structures and Equipment	56,126.92	59,463.20	182,257.52	213,428.76	(14.6%)
593 Maintenance of Lines - Overhead	129,549.60	213,586.58	652,708.15	765,119.12	(14.7%)
594 Maintenance of Lines - Underground	11,056.13	13,536.23	49,151.83	129,772.26	(62.1%)
595 Maintenance of Line Transformers	14,648.80	0.00	15,127.55	17,923.39	(15.6%)
<b>Total Operations and Maintenance Expenses</b>	<b>468,854.39</b>	<b>521,445.57</b>	<b>1,936,098.11</b>	<b>2,228,893.50</b>	<b>(13.1%)</b>
<b>General &amp; Administration Expenses:</b>					
902 Meter Reading	1,355.58	1,201.27	11,838.97	11,178.17	5.9%
903 Customer Collections	131,061.05	136,058.07	664,943.87	709,476.50	(6.3%)
904 Uncollectible Accounts	12,500.00	12,500.00	62,500.00	62,500.00	0.0%
916 Energy Audit	52,445.95	64,057.21	194,809.48	209,321.40	(6.9%)
916 Energy Conservation	62,612.94	66,571.16	221,301.37	226,637.29	(2.4%)
920 Administrative and General Salaries	93,396.44	87,911.57	440,325.02	405,719.33	8.5%
921 Office Supplies and Expense	29,515.16	28,849.77	122,745.03	106,394.17	15.4%
923 Outside Services	96,954.25	83,949.18	273,408.75	196,820.19	38.9%
924 Property Insurance	28,148.99	27,632.72	140,744.95	138,635.60	1.5%
925 Injuries and Damages	2,984.86	6,071.09	24,320.37	23,199.77	4.8%
926 Employee Pensions and Benefits	267,690.00	239,841.95	1,300,816.50	1,246,717.32	4.3%
930 Miscellaneous General Expense	19,816.16	15,972.63	60,496.06	57,468.14	5.3%
931 Rent Expense	13,917.58	13,883.02	82,633.41	69,140.89	19.5%
933 Transportation Expense	47,227.18	0.00	114,601.70	0.00	100.0%
933 Transportation Expense Capital Clearing	(31,015.64)	0.00	(150,851.70)	0.00	100.0%
935 Maintenance of General Plant	66,620.66	17,570.30	163,962.95	104,613.37	56.7%
935 Maintenance of Building & Garage	50,113.71	33,434.47	189,870.05	214,344.87	(11.4%)
<b>Total General &amp; Administration Expenses</b>	<b>945,344.87</b>	<b>835,504.41</b>	<b>3,918,466.78</b>	<b>3,782,167.01</b>	<b>3.6%</b>
<b>Other Operating Expenses:</b>					
403 Depreciation	358,832.42	341,775.67	1,794,162.10	1,708,878.35	5.0%
408 Voluntary Payments to Towns	126,851.67	118,000.00	634,258.35	590,000.00	7.5%
<b>Total Other Expenses</b>	<b>485,684.09</b>	<b>459,775.67</b>	<b>2,428,420.45</b>	<b>2,298,878.35</b>	<b>5.6%</b>
<b>Operating Income</b>	<b>(749,716.81)</b>	<b>(105,155.44)</b>	<b>3,528,087.54</b>	<b>4,535,407.78</b>	<b>(22.2%)</b>
<b>Non Operating Revenues (Expenses):</b>					
419 Interest Income	20,767.75	13,363.91	92,058.41	57,987.14	58.8%
419 Other	15,870.90	122,600.00	305,679.60	257,611.80	18.7%
426 Return on Investment to Reading	(201,647.50)	(198,722.33)	(1,008,237.50)	(993,611.65)	1.5%
431 Interest Expense	(430.82)	(186.71)	(2,163.14)	(965.31)	124.1%
<b>Total Non Operating Revenues (Expenses)</b>	<b>(165,439.67)</b>	<b>(62,945.13)</b>	<b>(612,662.63)</b>	<b>(678,978.02)</b>	<b>(9.8%)</b>
<b>Change in Net Assets</b>	<b>(915,156.48)</b>	<b>(168,100.57)</b>	<b>2,915,424.91</b>	<b>3,856,429.76</b>	<b>(24.4%)</b>
<b>Net Assets at Beginning of Year</b>	<b>109,368,059.44</b>	<b>104,814,487.24</b>	<b>109,368,059.44</b>	<b>104,814,487.24</b>	<b>4.3%</b>
<b>Ending Net Assets</b>	<b>\$108,452,902.96</b>	<b>\$104,646,386.67</b>	<b>\$112,283,484.35</b>	<b>\$108,670,917.00</b>	<b>3.3%</b>

Town of Reading, Massachusetts  
Municipal Light Department  
Business Type Proprietary Fund  
Actual Year to Date as Compared to Budgeted FY18 Profit Loss Statement  
11/30/2017

	Actual Year to Date	Budget Full Year	Remaining Budget	Remaining Budget %
<b>Operating Revenues</b>				
Base Revenue	\$11,383,816.88	\$26,337,621.00	\$14,953,804.12	56.8%
Fuel Revenue	12,331,819.39	32,491,810.00	20,159,990.61	62.0%
Purchased Power Capacity	16,767,905.83	38,088,978.00	21,321,072.17	56.0%
Forfeited Discounts	363,448.02	800,000.00	436,551.98	54.6%
Energy Conservation Revenue	287,974.06	675,000.00	387,025.94	57.3%
NYPA Credit	(402,074.50)	(1,200,000.00)	(797,925.50)	66.5%
Total Operating Revenues	40,732,889.68	97,193,409.00	56,460,519.32	58.1%
<b>Expenses</b>				
<b>Power Expenses:</b>				
547 Purchased Power Fuel Expense	11,729,365.93	31,291,810.00	19,562,444.07	62.5%
555 Purchased Power Capacity	10,592,986.89	24,476,161.00	13,883,174.11	56.7%
565 Purchased Power Transmission	6,599,463.98	13,612,817.00	7,013,353.02	51.5%
Total Purchased Power	28,921,816.80	69,380,788.00	40,458,971.20	58.3%
<b>Operations and Maintenance Expenses:</b>				
580 Supervision and Engineering Labor &	224,726.75	764,615.00	539,888.25	70.6%
581 Station Supervisor Labor & Expense	61,764.41	130,662.00	68,897.59	52.7%
581 Line General Operational Expense	272,941.48	596,007.00	323,065.52	54.2%
582 Control Room Labor & Expense	166,022.41	466,783.00	300,760.59	64.4%
585 Street Lighting Operation & Maintenance	7,057.62	156,893.00	149,835.38	95.5%
586 Meter General Labor & Expense	102,589.95	212,909.00	110,319.05	51.8%
588 Materials Management Labor & Expense	201,750.44	458,328.00	256,577.56	56.0%
590 Maintenance of Structures and Equipment	182,257.52	494,936.00	312,678.48	63.2%
593 Maintenance of Lines - Overhead	652,708.15	1,980,611.00	1,327,902.85	67.0%
594 Maintenance of Lines - Underground	49,151.83	197,002.00	147,850.17	75.1%
595 Maintenance of Line Transformers	15,127.55	300,000.00	284,872.45	95.0%
Total Operations and Maintenance Expenses	1,936,098.11	5,758,746.00	3,822,647.89	66.4%
<b>General &amp; Administration Expenses:</b>				
902 Meter Reading	11,838.97	37,461.00	25,622.03	68.4%
903 Customer Collection	664,943.87	1,869,393.00	1,204,449.13	64.4%
904 Uncollectible Accounts	62,500.00	150,000.00	87,500.00	58.3%
916 Energy Audit	194,809.48	509,232.00	314,422.52	61.7%
916 Energy Conservation	221,301.37	952,565.00	731,263.63	76.8%
920 Administrative and General Salaries	440,325.02	1,017,151.00	576,825.98	56.7%
921 Office Supplies and Expense	122,745.03	350,000.00	227,254.97	64.9%
923 Outside Services	273,408.75	759,191.00	485,782.25	64.0%
924 Property Insurance	140,744.95	427,200.00	286,455.05	67.1%
925 Injuries and Damages	24,320.37	52,613.00	28,292.63	53.8%
926 Employee Pensions and Benefits	1,300,816.50	3,000,437.00	1,699,620.50	56.6%
930 Miscellaneous General Expense	60,496.06	179,215.00	118,718.94	66.2%
931 Rent Expense	82,633.41	212,000.00	129,366.59	61.0%
933 Transportation Expense	114,601.70	381,116.00	266,514.30	69.9%
933 Transportation Expense Capital Clearing	(150,851.70)	(301,596.00)	(150,744.30)	50.0%
935 Maintenance of General Plant	163,962.95	281,880.00	117,917.05	41.8%
935 Maintenance of Building & Garage	189,870.05	666,457.00	476,586.95	71.5%
Total General & Administration Expenses	3,918,466.78	10,544,315.00	6,625,848.22	62.8%

Town of Reading, Massachusetts  
Municipal Light Department  
Business Type Proprietary Fund  
Actual Year to Date as Compared to Budgeted FY18 Profit Loss Statement  
11/30/2017

Other Operating Expenses:

403 Depreciation	1,794,162.10	4,362,000.00	2,567,837.90	58.9%
408 Voluntary Payments to Towns	634,258.35	1,500,000.00	865,741.65	57.7%
Total Other Expenses	<u>2,428,420.45</u>	<u>5,862,000.00</u>	<u>3,433,579.55</u>	<u>58.6%</u>

Operating Income 3,528,087.54      5,647,560.00      2,119,472.46

Non Operating Revenues (Expenses):

419 Interest Income	92,058.41	150,000.00	57,941.59	38.6%
419 Other Income	305,679.60	890,000.00	584,320.40	65.7%
426 Return on Investment to Reading/Loss on Disposal	(1,008,237.50)	(2,570,438.00)	(1,562,200.50)	60.8%
431 Interest Expense	(2,163.14)	(2,500.00)	(336.86)	13.5%
Total Non Operating Revenues (Expenses)	<u>(612,662.63)</u>	<u>(1,532,938.00)</u>	<u>(920,275.37)</u>	<u>60.0%</u>

Net Income \$2,915,424.91      \$4,114,622.00      \$1,199,197.09

**READING MUNICIPAL LIGHT DEPARTMENT**  
**FISCAL YEAR 2018 OPERATING BUDGET**  
**ACTUAL JULY 2017-NOVEMBER 2017 AND REMAINING FIXED AND SEMI-VARIABLE COSTS**

<b>FIXED COSTS:</b>	<b>FY18 OPERATING BUDGET</b>	<b>July 2017-Nov 2017 ACTUAL 5 mos.</b>	<b>REMAINING FY18 BALANCE</b>	<b>% of Total Budget \$ 94,118,787</b>
Purchased Power - Fuel	\$ 31,291,810	\$ 22,314,349	\$ 8,977,461	33.25%
Purchased Power - Capacity	\$ 24,476,161	\$ 6,599,464	\$ 17,876,697	26.01%
Purchased Power - Transmission	\$ 13,612,817	\$ 8,004	\$ 13,604,813	14.46%
Depreciation Expense	\$ 4,362,000	\$ 1,794,162	\$ 2,567,838	4.63%
Misc Deduction - ROI Reading	\$ 2,420,438	\$ 1,008,238	\$ 1,412,201	2.57%
Town Payments	\$ 1,500,000	\$ 634,258	\$ 865,742	1.59%
Misc Deduction - Disposal Losses	\$ 150,000	\$ -	\$ 150,000	0.16%
<b>SUB-TOTAL</b>	<b>\$ 77,813,226</b>	<b>\$ 32,358,475</b>	<b>\$ 45,454,751</b>	<b>82.68%</b>
<b>SEMI VARIABLE COSTS:</b>				
Labor	\$ 6,376,181	\$ 2,435,486	\$ 3,940,695	6.77%
Employee Benefits/Pension	\$ 3,000,437	\$ 1,300,817	\$ 1,699,621	3.19%
Other Operating and Maint Expenses	\$ 1,953,597	\$ 715,272	\$ 1,238,325	2.08%
Conservation Expenses	\$ 952,565	\$ 221,301	\$ 731,264	1.01%
Overtime	\$ 763,517	\$ 307,751	\$ 455,766	0.81%
Tree Trimming	\$ 886,340	\$ 186,169	\$ 700,171	0.94%
Professional Services	\$ 471,900	\$ 254,251	\$ 217,649	0.50%
Property Insurance	\$ 427,200	\$ 140,745	\$ 286,455	0.45%
Office Supplies	\$ 350,000	\$ 122,745	\$ 227,255	0.37%
Transformer (hazardous material)	\$ 300,000	\$ 12,060	\$ 287,940	0.32%
Training/Tuition	\$ 289,691	\$ 19,158	\$ 270,533	0.31%
Vehicle	\$ 391,116	\$ 114,602	\$ 276,514	0.42%
Vehicle Capital Clearing	\$ (301,596)	\$ (150,852)	\$ (150,744)	-0.32%
Rent Expense	\$ 212,000	\$ 82,633	\$ 129,367	0.23%
Bad Debt Expense	\$ 150,000	\$ 62,500	\$ 87,500	0.16%
Injuries & Damages	\$ 52,613	\$ 24,320	\$ 28,293	0.06%
RMLB/CAB	\$ 30,000	\$ 7,769	\$ 22,231	0.03%
<b>SUB-TOTAL</b>	<b>\$ 16,305,561</b>	<b>\$ 5,856,728</b>	<b>\$ 10,448,833</b>	<b>17.32%</b>
<b>TOTALS</b>	<b>\$ 94,118,787</b>	<b>\$ 38,215,203</b>	<b>\$ 55,903,584</b>	<b>100.00%</b>

ENGINEERING & OPERATIONS REPORT  
NOVEMBER 2017  
ATTACHMENT 5





# Engineering & Operations Report

RMLD Board of Commissioners Meeting  
January 25, 2018

November 2017 Reporting Period

Hamid Jaffari, Director of Engineering & Operations

# Engineering & Operations

## Capital Improvement Projects

Project #	DESCRIPTION	% COMPLETE	NOV	YTD ACTUAL	BUDGETED	REMAINING BALANCE
100	Distributed Gas Generation Pilot (Demand Management)	100%	45,559	186,561	-	(186,561)
102	Pad mount Switchgear Upgrade at Industrial Parks	8%	8,568	234,668	196,285	(38,383)
103	Grid Modernization and Optimization	On-going	45,834	97,310	227,183	129,873
105	New Wilmington Substation	6%		18,986	650,000	631,014
106	Underground Facilities Upgrades (URDs, Manholes, etc.)	On-going	40,905	109,498	344,725	235,227
107	13.8kV Upgrade (Step-down Areas, etc.)	On-going	17,969	19,627	70,851	51,224
108	115 kV Transmission Line Upgrade	50%	1,192	10,499	95,098	84,599
109	35 kV Underground Cable Upgrade Station 4, 5 and RR ROW	0%		0	206,817	206,817
110	4W9 Getaway Replacement - Station 4	100%		131,611	-	(131,611)
111	Substation Equipment Upgrade	On-going		-	50,218	50,218
112	AMI Mesh Network Expansion	On-going		-	120,311	120,311
116	Transformers & Capacitors	On-going	5,643	5,643	560,500	554,857
117	Meter Purchases	On-going	2,208	3,867	60,000	56,133
125	GIS	100%	24,151	96,802	218,726	121,924
126	Communication Equipment (Fiber Optic)	On-going		-	214,629	214,629
130	Remote Terminal Unit (RTU) Replacement - Station 3	100%	24,600	27,164	-	(27,164)
131	LED Street Lights Upgrade - All Towns	84%	45,513	324,180	1,169,332	845,152
133	Station 3: Relay Upgrades and SCADA Integration	100%		19,873	76,103	56,230
137	Pole Line Upgrade - Woburn Street (West to Concord), W	10%		1,200	200,284	199,084
138	Station 3 Reactors	20%	145,440	157,992	561,347	403,355
175	Pole Replacement Program	On-going		58,868	209,000	150,132
458	Secondary and Main Replacement Program	On-going	15,074	46,000	222,285	176,285
various	New Service Installations (Residential/Commercial/Industrial)	On-going	21,018	51,605	155,936	104,331

# Engineering & Operations

## Routine Capital Construction

Description	NOV	YTD
Pole Setting/Transfers	\$13,596	\$68,858
Overhead/Underground	\$18,867	\$134,041
Projects Assigned as Required	-	\$78,446
Pole Damage/Knockdowns - Some Reimbursable <ul style="list-style-type: none"> <li>Work was done to repair or replace five (5) poles.</li> </ul>	\$20,344	\$56,682
Station Group	-	\$9,991
Hazmat/Oil Spills	-	-
Porcelain Cutout Replacement Program	-	-
Lighting (Street Light Connections)	\$11,144	\$16,843
Storm Trouble	\$62,622	\$67,116
Underground Subdivisions (new construction) <ul style="list-style-type: none"> <li>Nichols Street Extension, North Reading</li> <li>318 Haverhill Street, North Reading</li> </ul>	\$3,688	\$63,508
Animal Guard Installation	-	\$415
Miscellaneous Capital Costs	\$4,687	\$50,913
<b>TOTAL</b>	<b><u>\$134,948</u></b>	<b><u>\$546,813</u></b>

## Facilities, IRD and IT Capital Projects/Purchases

	NOV	ACTUAL YTD	FY18 BUDGET	REMAINING BALANCE
Facilities	1,570	61,859	657,000	595,141
Integrated Resources Division (IRD)	6,184	14,808	35,000	20,192
Information Technology (IT)		11,529	340,000	328,471

## TOTAL CAPITAL SPENDING YTD (All Divisions)

NOV	YTD	FY18 BUDGET	REMAINING BALANCE
\$584,377	\$2,236,964	\$7,685,521	\$5,448,557

# Routine Maintenance

- **Transformer Replacement** (through October 2017)

Pad mount 27.46%                      Overhead 18.65%

- **Pole Inspection** (as of 1/12/2018)

250 poles have been replaced                      149 of 250 transfers have been completed

- **Quarterly Inspection of Feeders** (as of 1/12/2018)

*Inspected Circuits (Jul-Sep):* 3W5, 3W7, 3W8, 3W13, 3W14, 3W18

*Inspected Circuits (Oct-Dec):*

*Inspected Circuits (Jan-Mar):* 3W7, 3W8, 3W14, 3W18, 5W4, 5W5, 5W8, 5W9

- **Manhole Inspection** (through November 2017)

961 of 1,237 manholes have been inspected.

- **Porcelain Cutout Replacement** (through November 2017)

91% complete                      249 remaining to be replaced



# Routine Maintenance

(continued)

## ► Tree Trimming

Nov: 86 spans

YTD: 574 spans through October

## ► Substation Maintenance

Infrared Scanning – through November complete – no hot spots found

## ► Underground Subdivisions Upgrade

*Recent Completed:* Crestwood Estates (NR), Aspen Road (NR), Long Hill Lane (NR)

*In Progress:* Shasta Drive (NR), Westover Drive (LF ), Greenbriar Drive (NR),  
Great Neck Drive (W), Gandalf Estates (W), Deerfield Place (NR)

# Double Poles

➤ Ownership: 16,000 (approximately)

50% RMLD

50% Verizon

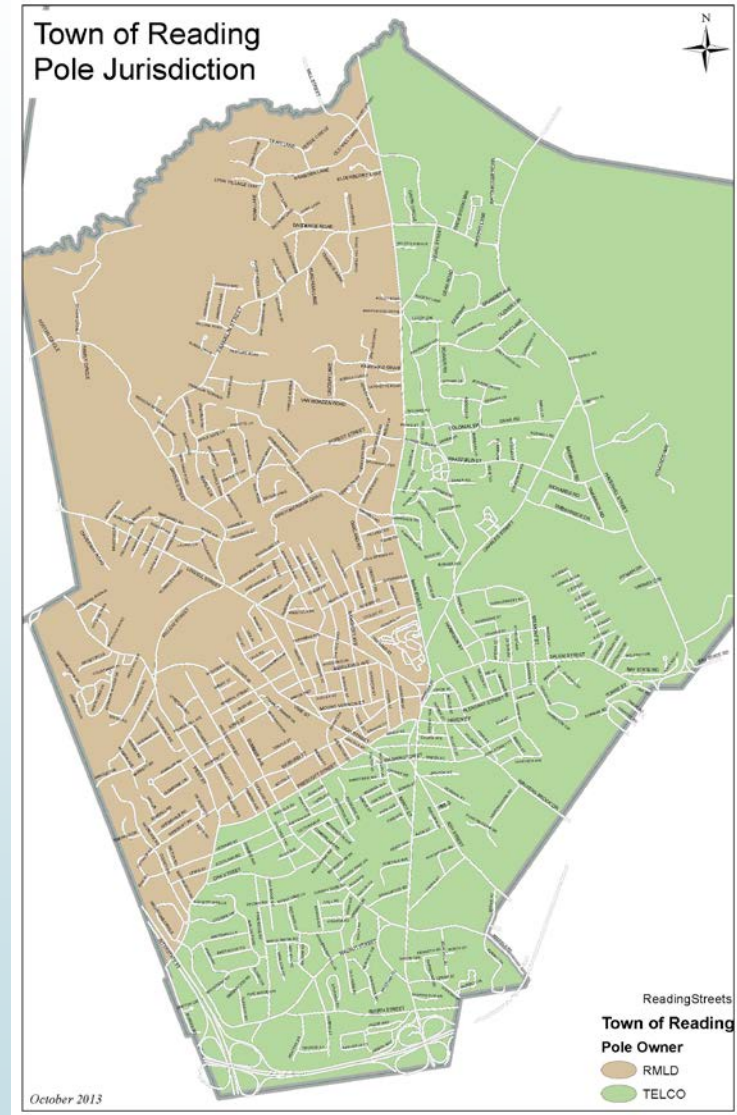
➤ Custodial:

Reading – split (see map) →

North Reading – RMLD

Lynnfield – Verizon

Wilmington - Verizon



# NJUNS

"Next to Go" as of January 16, 2018

LYNNFIELD	Count of Ticket Number
NTG Member and JobType	
CMCTNR	5
Comcast Massachusetts TRANSFER	5
LFLDFD	3
Lynnfield Fire Department TRANSFER	3
RMLD	5
Reading Municipal Light Department TRANSFER	5
VZNESEA	3
Verizon Massachusetts TRANSFER	3
(blank)	
<b>Grand Total</b>	<b>16</b>

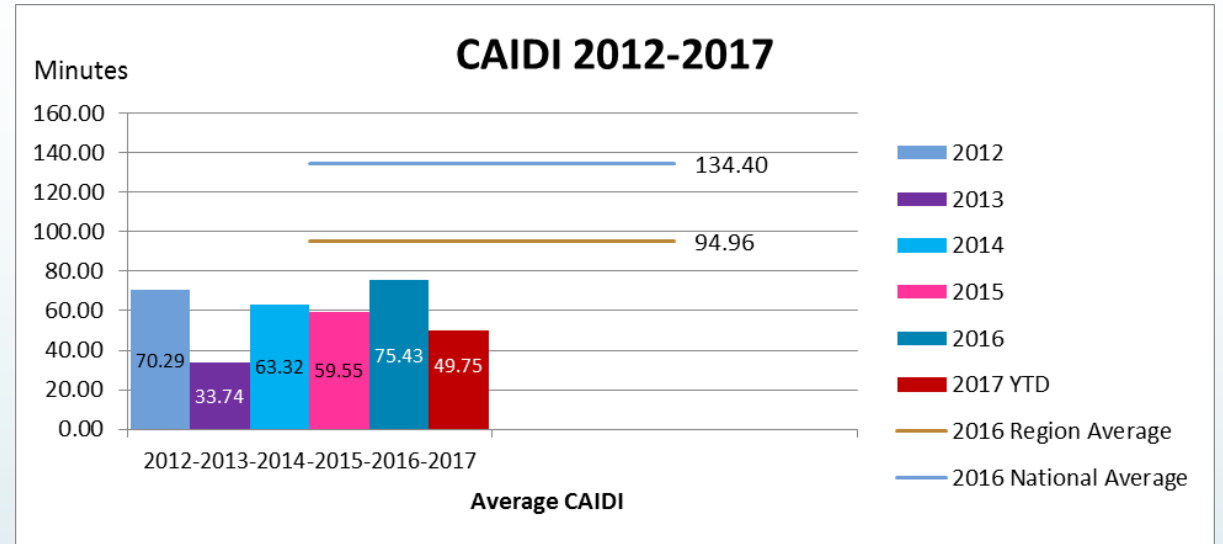
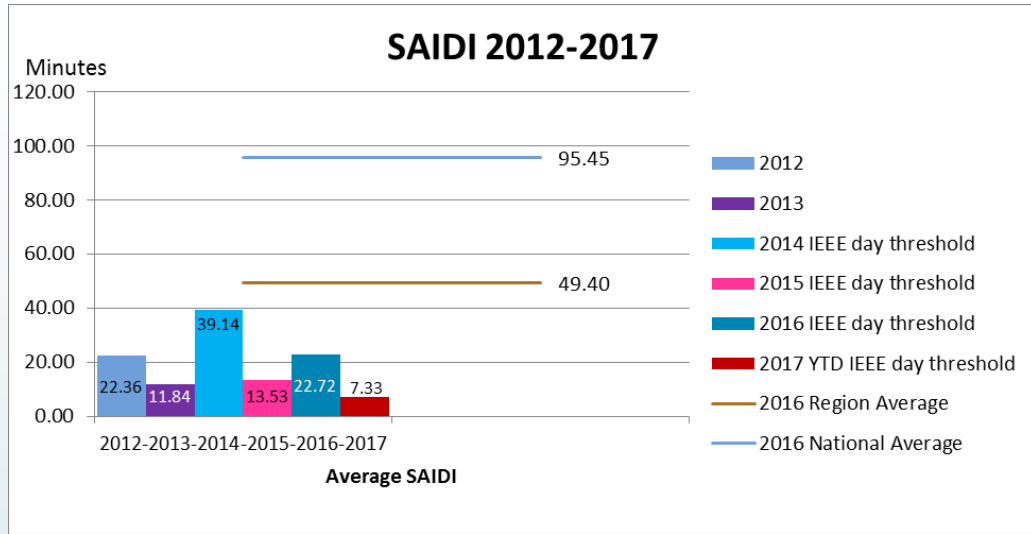
READING	Count of Ticket Number
NTG Member and JobType	
CMCTNR	12
Comcast Massachusetts TRANSFER	12
NP3PMA	6
Non-participating 3rd Party Attacher - Massachusetts TRANSFER	6
RDNGFD	8
Reading Fire Department TRANSFER	8
RMLD	78
Reading Municipal Light Department TRANSFER	21
PULL POLE	57
VZNESEA	34
Verizon Massachusetts TRANSFER	33
PULL POLE	1
(blank)	
<b>Grand Total</b>	<b>138</b>

NORTH READING	Count of Ticket
NTG Member and JobType	
CMCTNR	5
Comcast Massachusetts TRANSFER	5
NRDGFDD	37
North Reading Fire Department TRANSFER	37
RMLD	33
Reading Municipal Light Department TRANSFER	13
PULL POLE	20
VZNEEDR	23
Verizon Massachusetts TRANSFER	20
PULL POLE	3
(blank)	
<b>Grand Total</b>	<b>98</b>

WILMINGTON	Count of Ticket Number
NTG Member and Job Type	
RMLD	35
Reading Municipal Light Department TRANSFER	31
PULL POLE	4
VZNEEDR	57
Verizon Massachusetts TRANSFER	53
PULL POLE	4
WLMFIB	10
Town of Wilmington TRANSFER	10
WMGNFD	76
Wilmington Fire Department TRANSFER	76
(blank)	
<b>Grand Total</b>	<b>178</b>



# RMLD Reliability Indices

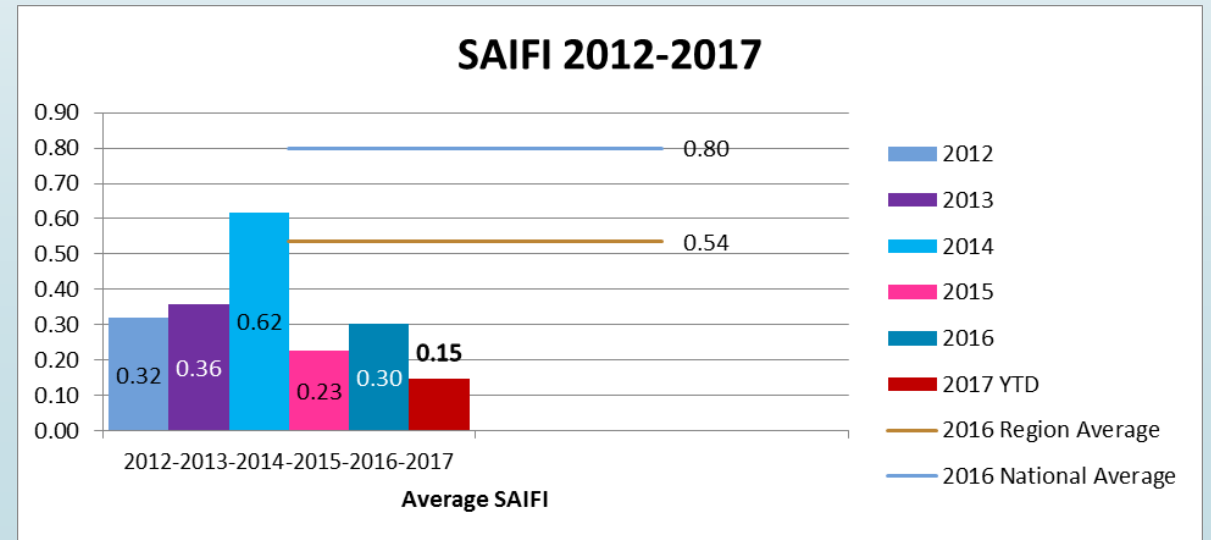


$$SAIDI \text{ (Minutes)} = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

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

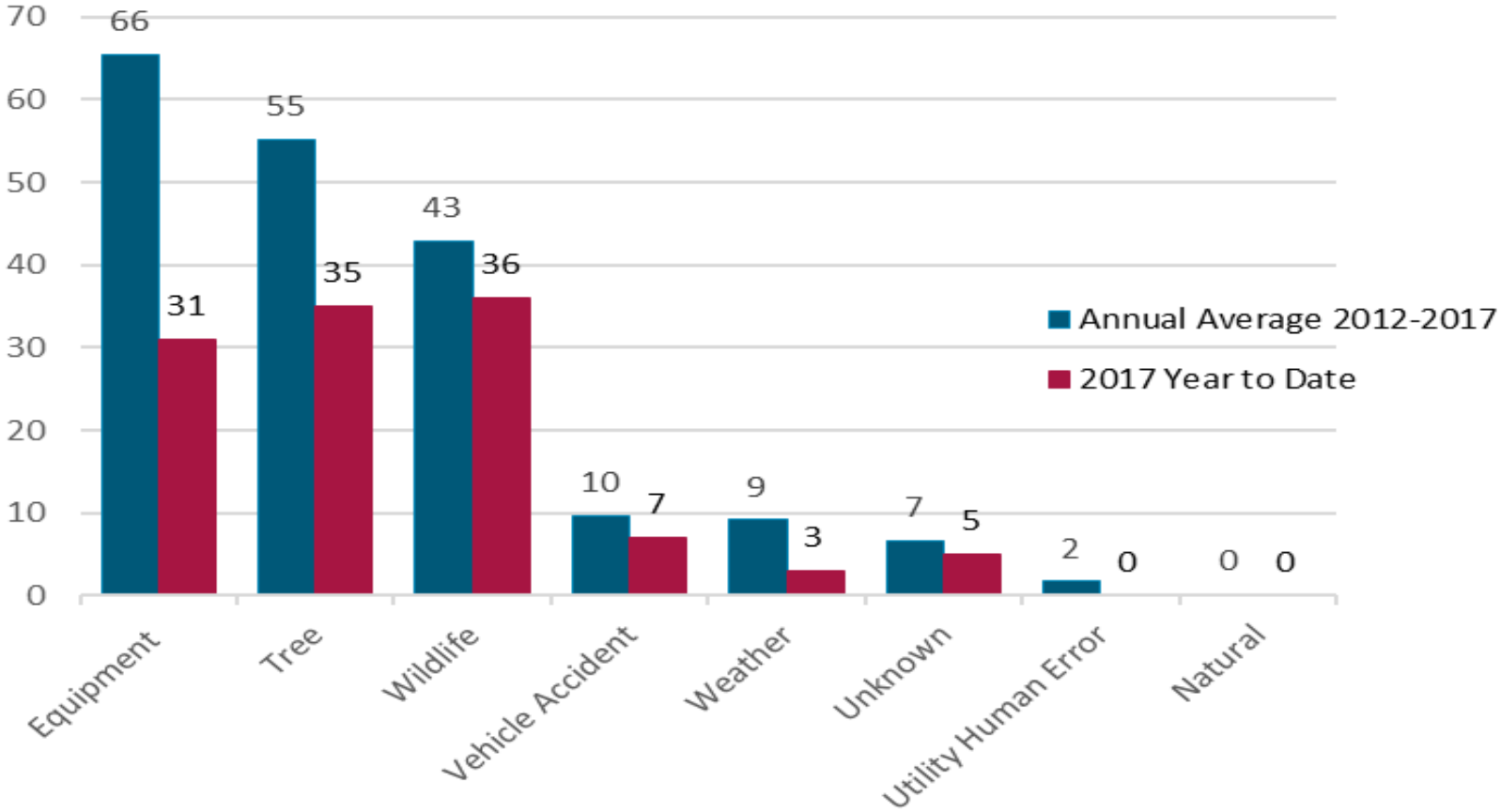
**Note:** The major event (ME) threshold allows a utility to remove outages that exceed the IEEE 2.5 beta threshold for events. These events could be severe weather, which can lead to unusually long outages in comparison to your distribution system's typical outage.

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



**Note:** Regional and national averages have been updated for 2016.

### Causes of Outages - 2017 YTD November



# Questions ?



RMLD PROCUREMENT REQUEST  
REQUIRING BOARD APPROVAL  
ATTACHMENT 6



January 19, 2018

Town of Reading Municipal Light Board

Subject: IFP 2018-26 35kV Underground Cable

Pursuant to M.G.L c. 164 § 56D, on December 6, 2017, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle requesting sealed proposals for 35kV Underground Cable.

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

- |                           |                                |                           |
|---------------------------|--------------------------------|---------------------------|
| A.A. MacPherson Co., Inc. | Arthur J. Hurley Company, Inc. | Boggs, Inc.               |
| Cable USA                 | Champion Wire and Cable        | E.L. Flowers & Associates |
| Eupen Cable USA           | First Line Associates          | General Cable             |
| HasGo Power Equipment     | Marmon Utility, LLC            | Orient Cable              |
| Pirelli Cable Corporation | Power & Tel                    | Power Sales Group, Inc.   |
| Shamrock Power Sales      | Stuart C. Irby Company         | The Okonite Company       |
| USA Power Cable           | WESCO Distribution             | Yale Electric East LLC    |
| Yusen Associates          |                                |                           |

Sealed proposals were received from five companies: Stuart C. Irby Company, Yale Electric East LLC, Arthur J. Hurley Company, Inc., WESCO Distribution and The Okonite Company.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., January 3, 2018, 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 2018-26 for 35kV Underground Cable be awarded to: **WESCO Distribution for \$60,300.00**, pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

The FY18 Capital Budget amount for these items is \$76,500.

Brian Smith

Hamid Jaffari

Coleen O'Brien

**35kV Underground Cable  
Proposal 2018-26**

<b>Proposer</b>	<u>Manufacturer</u>	<u>Delivery Date</u>	<u>Unit Cost</u>	<u>Qty in feet</u>	<u>Total Net Cost</u>	<u>Certified Check or Bond</u>	<u>All forms filled out</u>	<u>Authorized signature</u>	<u>Exceptions to stated proposal requirements</u>	<u>Exceptions are acceptable</u>	<u>Meet Specification requirement</u>	<u>Specification Data Sheets</u>
<b>WESCO Distribution</b> Item 1 35kV Underground Cable	Superior Essex Cable	8-10 weeks	\$10.05	6,000	\$60,300.00	yes	yes	yes	yes	yes	yes	yes
<b>Yale Electric East LLC</b> Item 1 35kV Underground Cable	Kerite	10-12 weeks	\$12.69	6,000	\$76,140.00	yes	yes	yes	no	n/a	yes	yes
<b>Arthur J. Hurley Company, Inc.</b> Item 1 35kV Underground Cable	The Okonite Company	16 weeks	\$12.87	6,000	\$77,220.00	yes	yes	yes	yes	yes	yes	yes
<b>The Okonite Company</b> Item 1 35kV Underground Cable	The Okonite Company	12 weeks	\$13.29	6,000	\$79,740.00	yes	yes	yes	yes	yes	yes	no
<b>Stuart C. Irby Company - Not Responsive</b> Item 1 35kV Underground Cable	Prysmian Group	8-10 weeks	\$9.58	10,000	\$95,800.00	yes	yes	yes	yes	no	no	no

**Note:** Proposal is for a quantity not requested.

BOARD MATERIAL AVAILABLE  
BUT NOT DISCUSSED

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

January-18

	RESIDENTIAL 750 kWh's	RESIDENTIAL-TOU 1500 kWh's 75/25 Split	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
<b>READING MUNICIPAL LIGHT DEPT.</b>							
TOTAL BILL	\$123.71	\$216.28	\$151.11	\$1,085.47	\$207.89	\$5,070.45	\$834,382.58
PER KWH CHARGE	\$0.16495	\$0.14419	\$0.15111	\$0.14869	\$0.19249	\$0.14487	\$0.12128
<b>NATIONAL GRID</b>							
TOTAL BILL	\$176.21	\$407.40	\$220.64	\$1,684.69	\$257.76	\$6,411.12	\$1,169,516.60
PER KWH CHARGE	\$0.23494	\$0.27160	\$0.22064	\$0.23078	\$0.23867	\$0.18317	\$0.17000
% DIFFERENCE	42.43%	88.37%	46.01%	55.20%	23.99%	26.44%	40.17%
<b>EVERSOURCE(NSTAR)</b>							
TOTAL BILL	\$179.24	\$291.96	\$236.84	\$1,588.38	\$259.97	\$7,553.17	\$1,383,766.70
PER KWH CHARGE	\$0.23898	\$0.19464	\$0.23684	\$0.21759	\$0.24071	\$0.21580	\$0.20114
% DIFFERENCE	44.88%	34.99%	56.73%	46.33%	25.05%	48.96%	65.84%
<b>PEABODY MUNICIPAL LIGHT PLANT</b>							
TOTAL BILL	\$79.70	\$153.20	\$104.20	\$885.59	\$141.20	\$4,389.33	\$575,406.92
PER KWH CHARGE	\$0.10627	\$0.10213	\$0.10420	\$0.12131	\$0.13074	\$0.12541	\$0.08364
% DIFFERENCE	-35.57%	-29.17%	-31.04%	-18.41%	-32.08%	-13.43%	-31.04%
<b>MIDDLETON MUNICIPAL LIGHT DEPT.</b>							
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	-20.19%	-6.76%	-12.15%	-11.60%	-18.98%	-6.06%	-3.26%
<b>WAKEFIELD MUNICIPAL LIGHT DEPT.</b>							
TOTAL BILL	\$128.61	\$239.67	\$161.88	\$1,221.04	\$194.38	\$5,735.58	\$973,158.30
PER KWH CHARGE	\$0.17148	\$0.15978	\$0.16188	\$0.16727	\$0.17999	\$0.16387	\$0.14146
% DIFFERENCE	3.96%	10.82%	7.13%	12.49%	-6.49%	13.12%	16.63%



**From:** [Tracy Schultz](#)  
**To:** [RMLD Board Members Group](#)  
**Subject:** AP Warrants and Payroll  
**Date:** Thursday, January 18, 2018 7:53:00 AM

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Good morning,

There were no Commissioner questions on the 12.1.17, 12.8.17, 12.15.17, 12.22.17, 1.5.18, and 1.12.18 AP. (There was no AP on 12.29.17 due to the holiday). There were no Commissioner questions on the 12.11.17, 12.26.17, and 1.8.18 Payroll. This e-mail will be included in the 1-25-18 Board Book.

Tracy Schultz  
Executive Assistant  
**Reading Municipal Light Department**  
230 Ash Street. Reading. MA. 01867  
Tel: 781.942.6489