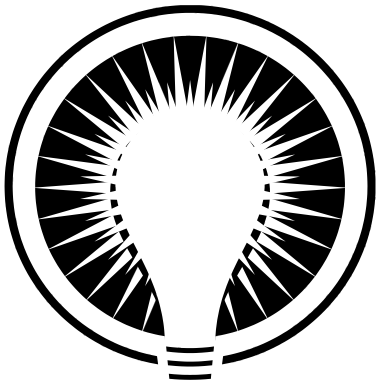


READING MUNICIPAL LIGHT DEPARTMENT

BOARD OF COMMISSIONERS

REGULAR SESSION

DECEMBER 14, 2017

APPROVAL OF BOARD MINUTES JUNE 15, 2017 & SEPTEMBER 14, 2017

ATTACHMENT 1

READING MUNICIPAL LIGHT DEPARTMENT
BOARD OF COMMISSIONERS MEETING
230 Ash Street
Reading, MA 01867
June 15, 2017
7:30 p.m.

Start Time of Regular Session: 7:33 p.m.
End Time of Regular Session: 9:06 p.m.

Commissioners:
Philip B. Pacino, Chairman
Dave Hennessy, Vice Chairman
Thomas O'Rourke, Commissioner
Dave Talbot, Commissioner
John Stempeck, Commissioner-Absent

Staff:
Coleen O'Brien, General Manager
Hamid Jaffari, Director of E & O
Jane Parenteau, Director of Integrated Resources
Wendy Markiewicz, Director of Business Finance
Tracy Schultz, Executive Assistant

Citizens Advisory Board:
Dennis Kelley, Secretary

Guest:
Mayhew Seavey, PLM Engineering

Public:
Tony D'Arezzo, Resident, 130 John Street, Reading, MA

Call Meeting to Order
Chairman 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. Chairman Pacino expressed his concern that he received a complaint from the North Reading Selectmen that North Reading Cable Access and Media (NORCAM), North Reading's public access station, hasn't been receiving DVDs of the meetings.

Ms. Parenteau explained that RMLD makes copies of the meeting DVDs and she will make sure that they are being delivered.

Opening Remarks
Chairman Pacino read the RMLD Board of Commissioners' Code of Conduct and welcomed Mr. Kelley from the Citizens Advisory Board. Mr. Kelley commented that the recent solar tour was interesting. Chairman Pacino announced that Mr. Stempeck is away and would not be in attendance this evening.

Public Comment
There were no Board Liaisons present and there was no public comment.

Report RMLD Board Member Attendance at Citizens' Advisory Board Meeting May 24, 2017
Chairman Pacino stated that the CAB meeting's primary focus was the rate adjustments that the Commission will examine this evening. The CAB voted to recommend that the Commission approve the new rates.

Report of the Chair
Chairman Pacino stated that he wanted to comment publicly that he saw a sign on Ash Street that read "Hate has no home here" and that he totally endorses and agrees with that statement.

The Wilmington solar ribbon cutting ceremony was held last Thursday and that project is now up and running. The Commission had a strategic session with discussion and many assignments for the group to come back with.

Chairman Pacino asked Mr. Kelly whether the CAB has determined who will be its members on the Committee on Payment to the Town of Reading stands. Mr. Kelley replied that he will check with Mr. Hooper.

General Manager's Report - Ms. O'Brien
Ms. O'Brien announced that RMLD Customer Service will be closed on Monday, July 3rd and Tuesday, July 4th.

RMLD held a ribbon cutting ceremony at the community solar project at 326 Ballardvale on Thursday. It was a great event. There is another ribbon cutting coming up for the peak generator, but that date remains to be determined. In terms of community engagement, an informational table on Shred the Peak will be set up at the Reading Lions Club Friends and Family Day on June 17th, and at the Wilmington farmers' market on June 25th. Info sessions will be held at local senior centers on various days in June. Ms. O'Brien will be meeting with the North Reading Board of Selectmen on Monday, June 19th.

Mr. O'Rourke asked that event dates now be included in the Commission packets.

Quarterly Updates: Organizational & Reliability Reports – Ms. O'Brien and Mr. Jaffari (Attachment 1)
Ms. O'Brien explained that she would be talking about the Organizational highlights. A report will be issued in the first quarter of next year on the progress of the Strategic Plan. The Six-year plan was updated as part of the budget, and is ongoing every year. The electric system master plan has essentially been completed by Mr. Jaffari and his group. There will be a final report and presentation in September to show where we are with grid modernization and the entire technological road map. The workforce development plan is wrapping up-that means career development plans and rewritten job descriptions for all employees. We're in the final stages and it has been quite an undertaking. A part of that is succession planning. As we've been redoing the job descriptions we've been anticipating employees who may be retiring in 5-years and making sure that skill sets have been broadened, so other employees in those groups have opportunities to move ahead.

RMLD now has a new review process that was just finalized. All managers are sitting down with their employees and giving out goals. The process starts July 1, fiscal year 2018. Organizational culture and employee satisfaction will be assessed; we will get a lot of input once the review process begins. A year from now, everyone will be reviewed in the management union. The labor union doesn't have a formal review process. There is an increase in efforts to fill vacant positions. Engineering will now be composed of five system engineer positions. All five engineers will be cross trained and capable of running the system.

Mr. O'Rourke suggested an employee survey. Ms. O'Brien stated that RMLD has a survey that is part of what Leidos said to do; now that the reorganization is nearing completion, feedback can be solicited.

Ms. O'Brien continued: cross-divisional management training is occurring, as is leadership training. Project management training will be held onsite at RMLD. Policies are ongoing. A risk management plan, as far as power supply, is an ongoing process. Changes in financial business processes are moving along. Assigning a compliance manager has not been done yet-figuring out the best way to address that. Asset management plan putting in SpryPoint-an automated quasi-work order stock timesheet system, that will serve as an interim while work order systems are reviewed. There has never been a true work order system here. There's now a pilot program in place for the interim program. The current work place is being enhanced; once the office is painted and reorganized, Ms. O'Brien proposed a tour for the Commissioners in September.

Vice Chairman Hennessy asked if the leadership development for the management team has already started.

Ms. O'Brien replied that there are a couple of levels of leadership. For middle management, project management, supervisory skills, and conflict resolution have been put onto everyone's career development plans. Middle management knows what they must take. Leadership in unions will also be required to take courses. Training plans for direct reporting managers are being developed.

Mr. Kelley asked, without a work order system, how have you been tracking labor and cost?

Ms. O'Brien replied, by using a paper stock sheet system. We will implement a full Work Order system. It is being evaluated.

Quarterly Updates: Organizational & Reliability Reports – Ms. O'Brien and Mr. Jaffari (Attachment 1
Mr. Kelley asked how were you doing inventory management then?

Ms. O'Brien answered that everything was being done manually. The stock sheet has now become automated, and it has also become integrated. It's on tablets and is being piloted with the troublemen and the Control Room. Once that pilot is done it will be rolled out to everyone else and we'll get rid of the paper stock sheets.

Mr. Jaffari stated that RMLD is making good progress on the Booth reliability recommendations. Mr. Jaffari stated that he is glad to announce that the bus work at Station 5 is completed. That substation is old and is nearing the end of its useful life so we're looking for land in the Wilmington area to build a new substation. However, that will take 3 to 5 years to be completed. In the interim, RMLD has made upgrades and rejuvenated the switchgear and reinsulated the bus in the existing station. While doing so, asbestos was discovered, which has prolonged the project. The switchgear's life has been extended for another 5 to 10 years.

GIS data collection is completed and the contractor's work is being checked. This is anticipated to be completed by September 1 and then the data will be put into the engineering model so analysis can be down with more accuracy. SCADA work is underway. This week, consultants are upgrading SCADA and programming substation 3 and substation 4 to send telemetry data and connect to Eversource and National Grid so RMLD can join the overall 115 kv network.

All critical substation items that were identified by UPG, the contractor that was brought in to test substations, have been addressed and completed.

Mr. Kelley asked if a recent Wilmington outage was due upgrades to Substation 5.

Ms. O'Brien replied it was not. The drawing setting didn't match the relay setting. It wasn't a new setting. It wasn't part of an upgrade. It was a mistake on how it had been labeled originally. Recent directed testing was performed to catch it.

Proposed Rate Adjustments (Attachment 3)

RATE	TARIFF No.
Residential Schedule A	MDPU #269
Residential Time-of-Use Schedule A2	MDPU #270
Commercial Schedule C	MDPU #271
Industrial Time-of-Use Schedule I	MDPU #272
School Schedule SCH	MDPU #273
Residential Schedule RW	MDPU #274
Backup and Standby Rate	MDPU #275
Purchase Power, Capacity, and Transmission Charge	MDPU #276

RATE	TARIFF No.
Electric Vehicle (EV) Charging Rate	MDPU #277

Mr. Seavey from Powerline Models (PLM) introduced himself, and explained that he is here to make final recommendations for fiscal year 18 rates.

Mr. Seavey stated that the objectives that RMLD set out to accomplish with the rate design included adjusting subsidies between and within classes of customers, ensuring that rates for large and high-load customers continue to attract and retain such customers, and ensuring that the rates reflect cost of providing service. RMLD wants to provide price signals to encourage customers to reduce demand during peak periods. Additionally, RMLD wants to protect distribution revenues from erosion due to customer-owned generation such as solar and battery storage. The phase-in for some of these changes will occur over time to give customers time to adjust.

Proposed Rate Adjustments (Attachment 3)
Instead of across-the-board increases, the new rates are meant to adjust for subsidies and move towards more uniform rates of return. The residential rate of return should increase up to zero over the next 5-year period; right now, it's significantly negative. The commercial rate of return should be reduced from high double digits down to low double digits. The industrial rate of return will remain where it is; it's low and appropriate for customers of that size.

If the increase was flat across the board to cover expenses and produce the targeted 8 percent rate of return, residential customers would have had a 5.5 percent increase; commercial would have had a 5.7 percent increase. Instead, the first year of the 5-year phase-in is a residential increase of 6.6 percent. Commercial customers will have a 3.5 percent increase this year. There will be similar changes each year. However, each year the rates will be revisited. The rate percentage changes over 5 years are based on projections that we have today regarding increases in RMLD's operating and maintenance costs and increases in capacity, transmission, and purchase energy costs.

Mr. Seavey explained the changes to commercial and industrial rates. While industrial and commercial customers will see an increase, the next few years should show a decrease as capacity costs change. Rates will be more uniform and fair, but still quite competitive and attractive, particularly for the commercial and large customers. Another recommendation that aims to get price signals correct is to phase in a purchase power capacity transmission (PPCT) demand charge. In the past, all those costs have been recovered through an energy charge. That tends to result in a subsidization of poor load factor customers by high load factor customers. By charging the correct price signal for demand, we remedy that situation and provide rate relief to customers who use their demand a lot. Only one customer in the first year is going to see an increase of more than ten percent. With the decreases in the following years no demand customers will see an increase, even with the phase ins of the demand. This is as painless a way of doing a significant shift of revenue, from energy to demand charges, as you can accomplish.

The renewable generation rate has a subsidization, but it is relatively small. It is $15 or $20 thousand a year for the existing 80 customers. It is more reasonable to cap the total amount of the subsidy rather than putting a cap on the amount of solar that can be installed. The cap is significant: $100,000, but only represents a cost to customers of 11 cents a month. It will not penalize customers who have already made an investment in facilities.

Immediately recommending back up and stand by rate to protect against customers installing larger amounts of generation, particularly non-renewable generation like back up and stand by generators or co-generation systems.

Ms. O'Brien clarified that the charge is to protect RMLD and its customers and that she wants customers to understand what that means. It's to protect everyone because we still pay distribution charges, we still have to keep the system up and running. RMLD is not trying to penalize people for putting in solar. We must recover our production charges and we still have to maintain the electric system.

Mr. Seavey stated that everyone who uses the distribution system supports it appropriately. When a customer installs generation behind their meter they're continuing to use the distribution system just as much. The idea is to continue to recover revenues to maintain, own, if you don't, rates will rise for everyone. That, or you don't earn enough money to cover your expenses and you don't maintain the system.

Mr. Talbot asked if a customer would still be able to disconnect from RMLD. Ms. O'Brien answered yes, although it's risky and it's their responsibility. Mr. Talbot asked for the amount of the standby rate, and clarified that this is just a recommendation at this point. Mr. Seavey corrected him and explained that the rate is being filed. The charge is the present distribution rate times the amount of capacity the customer wants you to back up. They'll still avoid purchase power, capacity, and fuel charges.

Proposed Rate Adjustments (Attachment 3)

Mr. Talbot asked who would this rate effect right now? Mr. Seavey answered: nobody, but it should be on the books. Mr. Talbot then asked how many municipals have a back-up and stand by rate now? Mr. Seavey replied, about half.

Ms. O'Brien explained that there is a strategy behind this rate; when she arrived at RMLD the first thing she did was unbundle the rates, because she knew this was coming. if large customers are producing all this power, we still must pay for the distribution system.

Mr. Seavey stated that the residential time of use rate, proposed changes will not work with RMLD's billing system. Presently the time of use is in the distribution rate and there is no time varying component in the distribution charge. It should be in the purchase, capacity, and transmission charge where you have the on and off peak component. This should be addressed at some point in future. For now, equal factors were added to on and off peak across the board.

Mr. Talbot asked if that meant those customers won't have as high an increase. Mr. Seavey explained there is still a high increase because the current rate is too low.

Mr. Seavey continued, stating In 2014 an electric vehicle rate was piloted for the three charging stations at Analog. Took a look at how that has been working and how the cost has changed. There is not enough usage data to be conclusive as to whether the existing rate is adequate. He is proposing a rate that is roughly equivalent to the pilot rate but that the use of the charging stations is monitored.

There was discussion as to where the best location to place a charging station in Reading would be. Ms. O'Brien explained that there will be two at RMLD; one is from the grant and we're getting an electric vehicle. Ms. O'Brien explained RMLD is trying to encourage its employees to purchase electric vehicles. Mr. Talbot expressed his reservations that any resident would want to charge their vehicle at RMLD.

Ms. O'Brien mentioned that RMLD could get into the business of installing electric vehicle charging stations at people's homes. Braintree has an electric vehicle leasing program. They're really engaging the community to bring in electric vehicles and putting in charging stations. But, we're not going to build them and see if customers come. They need to come and we'll build them.

Mr. Talbot asked what will happen when people are charging during peak times. Ms. Parenteau explained that the charging stations can be programmed to either shut off or reduce the amount of electricity being used.

Chairman Pacino stated that he has a procedural question. Why did the Electric Vehicle rate not go before the CAB before being presented to the Board?

Ms. Parenteau explained that it was an oversight. Rates are scheduled to be effective on July 1, contingent on being approved at the June 21st CAB meeting.

Mr. O'Rourke asked Mr. Kelley if he had any guidance from a CAB member's perspective. Mr. Kelley replied that this was his first time seeing the rate; Mr. Talbot has been helpful in giving insight. However, he needs more detail to understand make an educated decision and thinks the rest of group will have questions.

Mr. Talbot asked if the Commission can defer this rate tonight. There are no electrical vehicle stations up yet.

Mr. O'Rourke asked if pulling this piece out of the proposed rates will impact operations. Ms. Parenteau answered no.

Mr. Talbot stated, as a time of use customer, he pays 6 or 7 cents to charge his car overnight at his house. He

Proposed Rate Adjustments (Attachment 3)
would never use the electric vehicle rate at his job and pay 11 cents. Mr. Talbot asked how ChargePoint works.

A discussion about how ChargePoint operates and makes its revenue ensued, with Ms. Parenteau explaining that they get ten percent of sale for processing the credit card payment.

Mr. Talbot added, and we get to use their name and be on their app.

Mr. O'Rourke made a motion, seconded by Vice Chairman Hennessy, that the RMLD Board of Commissioners approve the rates MDPU numbers #269, 270, 271, 272, 273, 274, 275, and 276, effective July 1, 2017 on the recommendation of the General Manager.
Motion Carried: 4:0:0.

Chairman Pacino stated that the Commission agreed to hold off on voting on the electric vehicle rate motion, and will defer that to a future meeting.

Mr. Kelley asked if Mr. Talbot could make it to the next CAB Meeting; he cannot. Chairman Pacino will attend.

Power Supply Report – March and April 2017- Ms. Parenteau (Attachment 2)
Ms. Parenteau stated that she will be reporting on the April and May Purchase Power, starting with kWh sales in the first quarter of 2016 versus 2017. In 2017, 216 million kWh were sold, compared to 210 million kWh in 2016. Sales were up about 2.88 percent in 2017. However, when you look at the full fiscal year, it's considerably flat. It's 0.6 percent higher in 2017 than 2016, and that includes May and June estimated.

The total revenue received in the first quarter from Purchase Power, Capacity, and Transmission (PPCT) totaled about $500,000 less in 2017 than 2016. There are two contributing factors related to this-in 2016 sales were down about 2.6 percent, so we had to recover more dollars over less kWh. In 2017 we're up about 1 percent. Additionally, in 2016 our revenue in the beginning of the year was less than our expenses. Over the year, we try to recover the full Purchase Power and Capacity costs. It was necessary to increase PPCT in the 3rd quarter because of that situation. In 2017, revenues were exceeding expenses so that allowed us to decrease PPCT in the third quarter. Overall, capacity and transmission expenses from 2016 to 2017 increased 5.6 percent or $1.7 million dollars.

Now that our portfolio contains quite a bit of hydro projects, thought it would be interesting to look at precipitation and how that relates to the hydro projects. January and April of 2017 had considerably higher precipitation than in 2016; overall, for the quarter, the average was 3.5 inches compared to 2.6 inches. In 2017, productions were up in January and April for the hydros that we have purchase power agreements with.

Natural gas is the commodity that really dictates the spot market. However, the more hydro that we have, the less we have to buy on the spot market. These projects have been very beneficial to us within our portfolio.

Financial Report - April 2017 - Ms. Markiewicz (Attachment 4)
Ms. Markiewicz said that she would be reporting on the April 2017 financials, beginning with accounts receivable. RMLD is 82 percent current, 15 percent overdue by 30-90 days, and only 3 percent over 90 days is outstanding.

In FY 16, 89 percent was current, 9 percent was overdue by 30-90 days, and 2 percent was over 90 days. We've improved greatly since FY 15, where we had 75 percent current, 20 percent overdue by 30-90 days, and 5 percent over 90 days past due. Moratorium ended in April with two big collection pushes, which we should see the effects of in May or June.

Vice Chairman Hennessy asked if the percentages were for all customers. Ms. Markiewicz replied in the affirmative; this is for commercial, residential, and industrial.

Financial Report - April 2017 - Ms. Markiewicz (Attachment 4)
Vice Chairman Hennessy asked whether it was residential or commercial customers who typically owe more. Ms. Parenteau explained that RMLD can shut off commercials for non-payment. Residential customers have a moratorium protecting them from shut off from November to April, so it's usually residential who owe more.

Ms. Markiewicz continued, stating that the base revenue as compared to our operating expenses in fiscal year 2017 year-to-date $21,660,000 in base revenue, compared to fiscal year 2016 of $19,702,000, which is about a 10 percent increase. The 2017 budget was $21,250,000, so we're slightly above budget; about 1.6 percent. The base revenue compared to our operating expenses is on target, with a 10 percent increase as well. Fiscal year 2017 year-to-date is right on target: $17,538,00; FY 2016 was $15,915,000. When you compare that to the budget, we're about 1.4 percent less than anticipated at $17,837,000. Overall, we're right on target budget-wise.

Purchase Power, Transmission, and Capacity revenue is $28.2 million, as compared to the expense of $26.8 million. Fuel revenue was $27.7 million, with a fuel expense of 27.4. The $1.7 million excess in revenue will bring our true net income to $4 million, as compared to last year's 3.6 million. The overall budget is looking at an 18 percent increase. It's important to remember that there are lots of adjustments on the books at year end. Auditors were in-house yesterday doing preliminary testing. They were supposed to be here again today, but didn't feel that it was necessary.

Engineering and Operations Report – March and April 2017 - Mr. Jaffari (Attachment 5)
Mr. Jaffari stated he would be reporting on March and April 2017. Routine construction year to date spending is $1,606,613. For fiscal year 2017 $9.5 million has been budgeted for capital projects. To date, $5.8 million of the budgeted amount has been spent and a balance of $3.7 million remains. We're going to catch up in June; there's a large payment being made on the DG project and that will bring expenditures to $9.5 million.

Routine maintenance is on target. Good progress is being made, especially on pole inspections, transformer replacements, and substation maintenance. There were no hot spots either month. Double poles are a work in progress.

The reliability indices, SAIDI CAIDI and SAIFI, are measures that show the health and wellbeing of the system. Our reliability is good. RMLD is well below the national and regional averages for outages. Bench markers are set by APPA. We're doing very well. The main outage causes from 2012 to 2017 were equipment, trees, and wildlife. 2017 year-to-date, April had a couple of storms that brought trees down. Unfortunately, there's nothing that can be done about pine trees that come down and cause extensive damage to the lines. Equipment outages are shrinking. We're heading in the right direction.

General Discussion
The next RMLD Board of Commissioners Meeting will be on Thursday, July 20, 2017. The next CAB meeting is Wednesday, June 21, 2017. Chairman Pacino will attend.

Chairman Pacino stated that since he is signing the AP Warrants for this month he is also Secretary. He expressed his concern that a lot of minutes need to be approved. Ms. Schultz agreed, and stated they were on the agenda for the next meeting.

Executive Session
At 9:06 pm, Mr. O'Rourke made a motion, seconded by Vice Chairman Hennessy that the Commission go into Executive Session to conduct business in relation to other entities making, selling or distributing electric power, to consider the purchase of real property, and to discuss strategy with respect to collective bargaining and return to Regular Session for the sole purpose of adjournment.
Chairman Pacino called for a Poll of the Vote:
Vice Chairman Hennessy: Aye; Chairman Pacino: Aye; Mr. O'Rourke: Aye; Mr. Talbot: Aye.
Motion Carried: 4:0:0

Adjournment
Mr. O'Rourke made a motion, seconded by Vice Chair Hennessy, to adjourn the Regular Session.
Chairman Pacino called for a Poll of the Vote:
Vice Chairman Hennessy: Aye; Chairman Pacino: Aye; Mr. O'Rourke: Aye; Mr. Talbot: Aye.

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

Philip B. Pacino, Secretary Pro Tem
RMLD Board of Commissioners

QUARTERLY UPDATES: RELIABILITY & ORGANIZATIONAL REPORTS
ATTACHMENT 2

BOOTH AND ASSOCIATES - 2015 RELIABILITY STUDY - RECOMMENDATIONS

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		✓	completed	
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 installed. Additional meters in stock. Working on communicating issue with (1) deployed meter.
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 CIS with GIS platform	2015-16	in-house	✓		in progress	GIS Data collection is in-progress
16	BOOTH	Create Milsoft Windmil® model	2015-16	in-house	✓		in progress	Being done in conjunction with GIS collection.
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 reconductored. 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, 4W14, 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-aways 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	FY: 2015 /2016/2017/2018 inspections completed. Pole replacement in-progress.
22	BOOTH	Continued implementation of Grid Modernization Plan (GMP)	2015-24					
		• Outage Management (OMS)		$100,000	✓		in progress	OMS installed waiting for GIS overhaul and AMI integration
		• Transformer Loading Management (TLM)		$100,000	✓		in progress	
		• Demand Response (DR)		$100,000	✓		in progress	
		• Demand Side Management (DSM)		$100,000	✓		in progress	
		• Distributed Generation Program		$11,000,000	✓		in progress	
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
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	✓			

CONSULTANT RECOMMENDATION			YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
					ACCEPTED	ALTERNATE SOLUTION		
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	✓		completed	
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, 5W9 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-aways 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	✓		complete	Completed as part of relay upgrade project at Station 3 and Station 4.
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-aways 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-aways 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-aways 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.
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	✓		completed	Design Complete. Construction 100% completed in early March 2017.
46	UPG	Station 3 Transformers: #3. Adjust timing delay on the winding temperature trip.			✓		in progress	Work to be complete during reactor installation outage.
47	UPG	Station 3 Transformers: #4. Add a low oil trip to transformers so they trip before any winding damage can occur.			✓		in progress	Work to be complete during reactor installation outage.
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.			✓		completed	
49	UPG	Station 3 Transformers: #6. Repair LTC control displays for #TA and #TB			✓		completed	LTC controls repaired and installed.

		CONSULTANT RECOMMENDATION	YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
					ACCEPTED	ALTERNATE SOLUTION		
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	Unit replaced.
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.			✓		completed	
54	UPG	Station 3 15 kV Breakers: #4. Control handle trip should be separated from relay and should trip breaker directly.			✓		completed	
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.			✓		completed	
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.					completed	
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.			✓		completed	
69	UPG	Station 5 15kV Breakers: #2. Remove breaker 5W9, inspect for corrosions, and correct misalignment of the Breaker contact Rosette and cell stab during maintenance cycle.			✓		completed	
70	UPG	Station 5 15kV Breakers: #3. Take bus out of service and check alignment and correct if possible.			✓		completed	
71	UPG	Station 5 15kV Breakers: #4. Take bus tie breaker out of service and check alignment and correct if possible.			✓		completed	

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.

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
Recommendation Not Accepted
RMLD Proposed Timeline
Recommendation Completed

	DIVISION	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	
1		**ESTABLISH PLANNING CULTURE**													
1.1	GM	Update 2008 Strategic Plan (New Strategic Plan)													
1.2	GM	Establish planning culture													On-going
1.3	I	Update Integrated Resources plan													Strategic plan - On-going
1.4	GM	Update six-year plan													Annually
1.5	EO	Develop electric system master plan													Long-term Planning, GIS, and Technology Roadmap - Completed
2		**DEVELOP AN EFFECTIVE SUSTAINABLE WORKFORCE**													
2.1		Develop workforce development plan													IT & TS
2.2		Develop succession plans													
2.3	HR	Update job descriptions													
2.4		Implement consistent performance review process													Completed
2.5		Hire additional HR personnel													On hold
2.6		Increase efforts to fill vacant positions													On-going; evaluating
3		**IMPROVE ORGANIZATIONAL EFFECTIVENESS**													
3.1		Reorganize to better align functions													On-going
3.2	GM	Create new Finance and Administration division													Completed
3.3	GM	Align Customer Services under the Integrated Resources Division													Completed
3.4	EO	Reorganize & Expand Engineering group (Develop System Engineering Group)													Tied to IBEW negotiations. Posted two systems engineer positions; CBA
3.5		Formalize business process and performance measurement													Assessing IT roadmap and staffing - near completion. Reorganizing and hiring.
3.6		Develop and implement internal and external communication plans													Review roadmap.
3.7		Assess organizational culture and employee satisfaction													Seeking consultant.
4		**DEVELOP LEADERSHIP CAPABILITIES**													
4.1	GM	Assess leadership													Completed
4.2		Provide management and leadership training.													On-going - CDPs
4.3		Provide cross-divisional management training.													On-going - CDPs

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
Recommendation Not Accepted

RMLD Proposed Timeline
Recommendation Completed

	DIVISION	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	
5		**ESTABLISH PROJECT MANAGEMENT CULTURE**													
5.1		Develop project management policies and procedures													Completed
5.2		Establish project management training plan													HR to organize with Director of E&O; CDP
5.3		Add project management experience and certifications to job descriptions													On-going - job description revisions; CBA
5.4		Establish project management performance expectations													CBA
6		**ENSURE COMPETITIVELY PRICED SERVICES**													
6.1	IR	Continue regular cost of service and rate design review													Performing COS 2017
6.2	IR	Increase customer and engagement and education of alternate rates													TOU, DSM, Education, Solar Choice - Completed
7		**IMPROVE FINANCIAL PLANNING AND RISK MANAGEMENT**													
7.1	B	Review and update reserve policies													All policies - steady progress
7.2		Establish a risk management committee and enterprise risk management plan.													Integrated Resources -Nextera
7.3	B	Develop a succession plan for the Manager of Accounting and Business													Completed
7.4	B	Formalize financial and accounting business processes													In progress.
8		**STRENGTHEN SAFETY CULTURE**													
8.1	GM	Review Board Safety Policy													All policies. Developed Safety Program.
8.2		Develop injury and illness prevention program													Review of existing manual and OSHA requirements. Safety Program.
9		**DIVERSIFY RESOURCES**													
9.1	IR	Develop distributed generation penetration study													Complete ? DSM and max/feeder?
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.													Seek consultant.
11		**IMPROVE CUSTOMER SERVICE**													
11.1	IR	Conduct customer satisfaction surveys.													Communication Plan

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
Recommendation Not Accepted

RMLD Proposed Timeline
Recommendation Completed

	DIVISION	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	
11.2	IR	Conduct post transaction surveys.													Communication Plan
11.3	IR	Develop and implement customer engagement plan.													Service Requirements Handbook completed. Issued new Terms and Conditions. Constant Contact - 17,000 email addresses
12		**PLAN FOR FUTURE TECHNOLOGIES**													
12.1	I	Complete operating technology roadmap													
13		**FOCUS ON ASSET MANAGEMENT**													
13.1		Develop and implement an asset management plan													Asset Management System - GIS/Cogsdale; WO system.
13.2		Develop and implement asset management business processes													Sprypoint
13.3		Implement asset management system													WO system
13.4	IR	Develop customer service manual (Service Requirement Handbook)													Completed
14		**LEVERAGE GEOGRAPHIC INFORMATION SYSTEMS**													
14.1	EO	Conduct robust GPS-based inventory of assets and infrastructure													GIS complete
14.2		Adopt and implement industry standard common information model													Completed
14.3	EO	Develop and implement business processes for GIS management													
14.4	EO	Provide GIS training for Engineering and Operations (All Other Divisions)													On-going - all divisions
15		**FORMALIZE AND ENHANCE WORK MANAGEMENT**													
15.1		Develop work management business processes													Integrated with asset management plan. SpryPoint then WO system
15.2		Implement modern work management system													Completed
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													Control Room, Engineering

POWER SUPPLY REPORT
OCTOBER 2017
ATTACHMENT 3

INTEGRATED RESOURCES RMLD

BOARD OF COMMISSIONERS MEETING

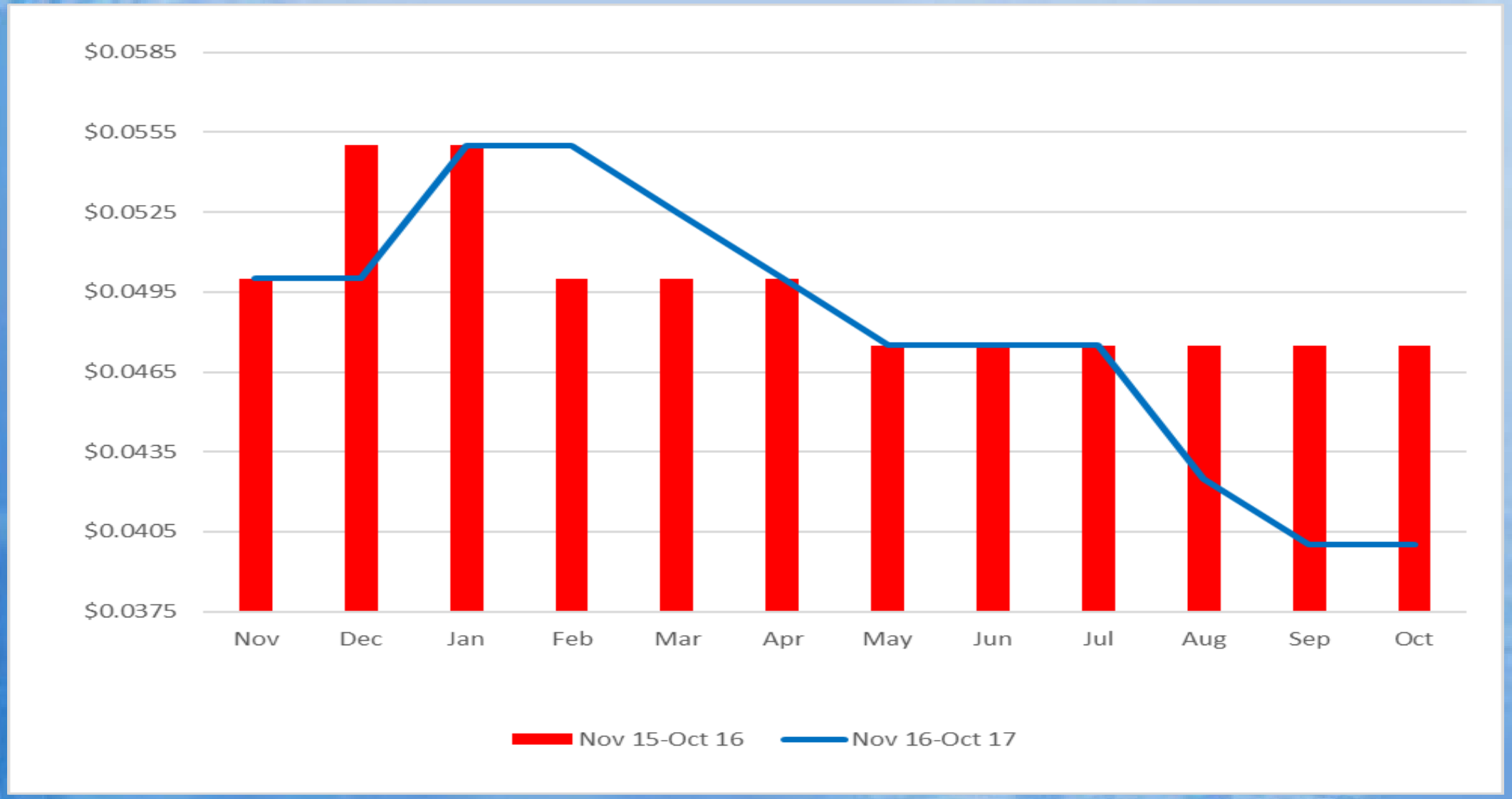
December 14, 2017

Reporting for October, 2017

Jane Parenteau, Director of Integrated Resources

Fuel Charge Adjustment (FCA) to Ultimate Consumers

November 2015 - October 2016
vs.
November 2016 - October 2017



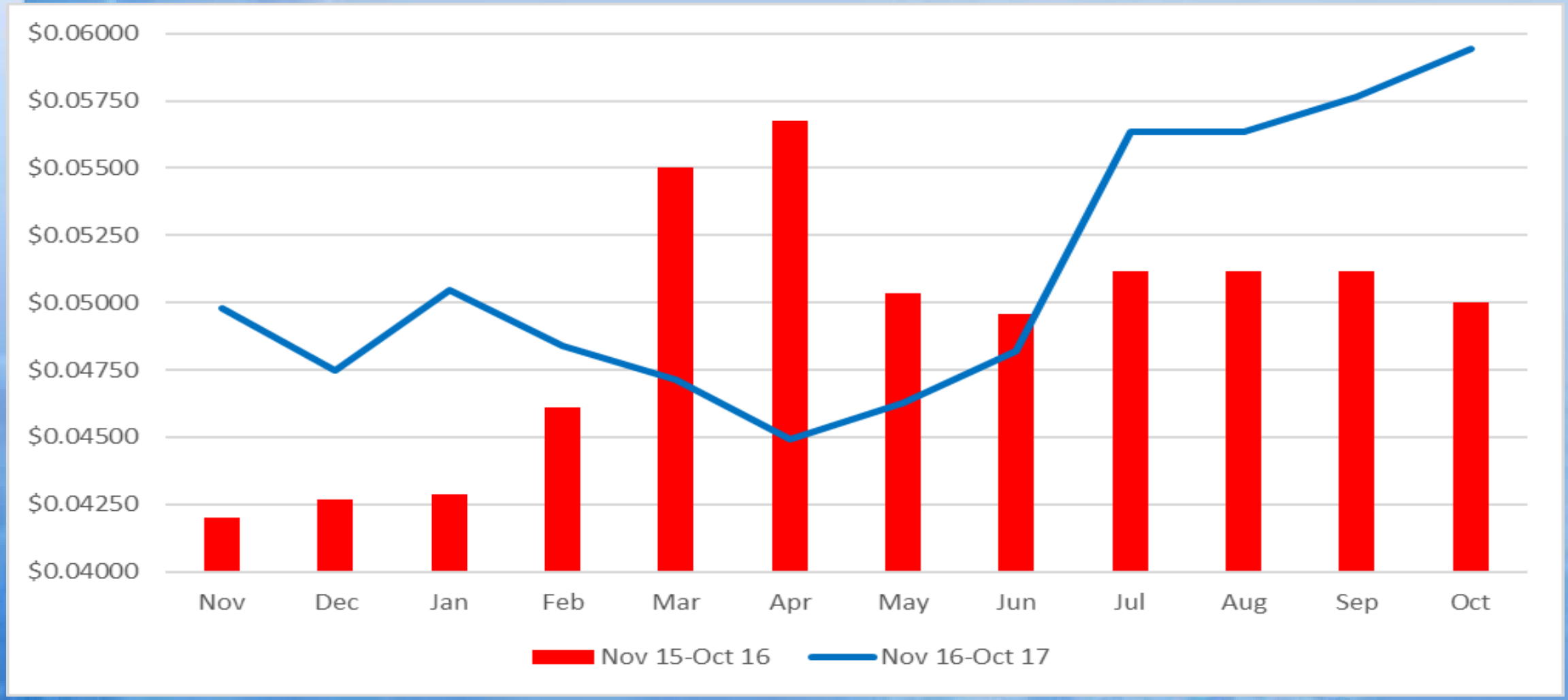
Monthly Purchase Power, Capacity & Transmission Charge (PPCT)

All Customer Classes with the Exception of Industrial Time of Use

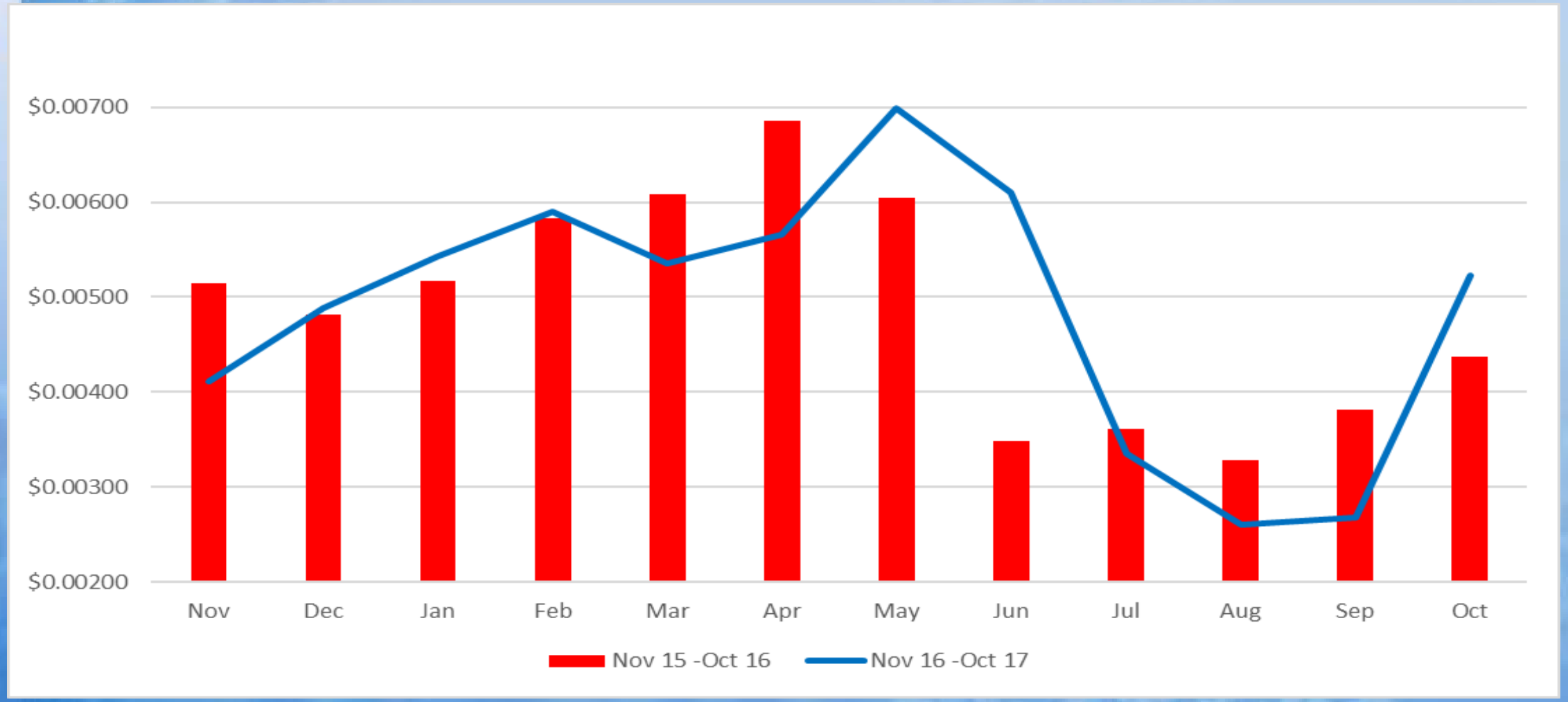
November 2015-October 2016

vs.

November 2016-October 2017



Monthly New York Power Authority Credit (NYPA)
Residential Consumers
November 2015-October 2016
vs.
November 2016-October 2017



To: Coleen O'Brien

From: Maureen McHugh, Jane Parenteau

Date: November 30, 2017

Subject: Purchase Power Summary – October, 2017

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

ENERGY

The RMLD's total metered load for the month was 52,485,616 kWh, which is a .15% increase from the October, 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	1,373,270	$6.72	2.57%	$9,231	0.45%
Seabrook	5,902,973	$5.90	11.04%	$34,833	1.70%
Stonybrook Intermediate	2,358,319	$36.78	4.41%	$86,746	4.22%
Shell Energy	8,055,400	$60.65	15.07%	$488,578	23.79%
NYPA	2,523,259	$4.92	4.72%	$12,414	0.60%
EDF	5,707,200	$23.49	10.68%	$134,050	6.53%
ISO Interchange	4,560,136	$32.26	8.53%	$147,116	7.16%
Community Solar Power	126,267	-$180.99	0.24%	-$22,853	-1.11%
Coop Resales	3,207	$169.40	0.01%	$543	0.03%
BP Energy	9,901,400	$46.78	18.52%	$463,187	22.55%
Hydro Projects*	1,527,559	$72.13	2.86%	$110,185	5.36%
Braintree Watson Unit	348,310	$62.57	0.65%	$21,793	1.06%
Saddleback/Jericho Wind	2,645,358	$97.82	4.95%	$258,762	12.60%
One Burlington Solar	240,297	$71.00	0.45%	$17,061	0.83%
Exelon	8,029,600	$31.68	15.02%	$254,371	12.38%
Stonybrook Peaking	157,848	$241.00	0.30%	$38,041	1.85%
Monthly Total	53,460,403	$38.42	100.00%	$2,054,057	100.00%

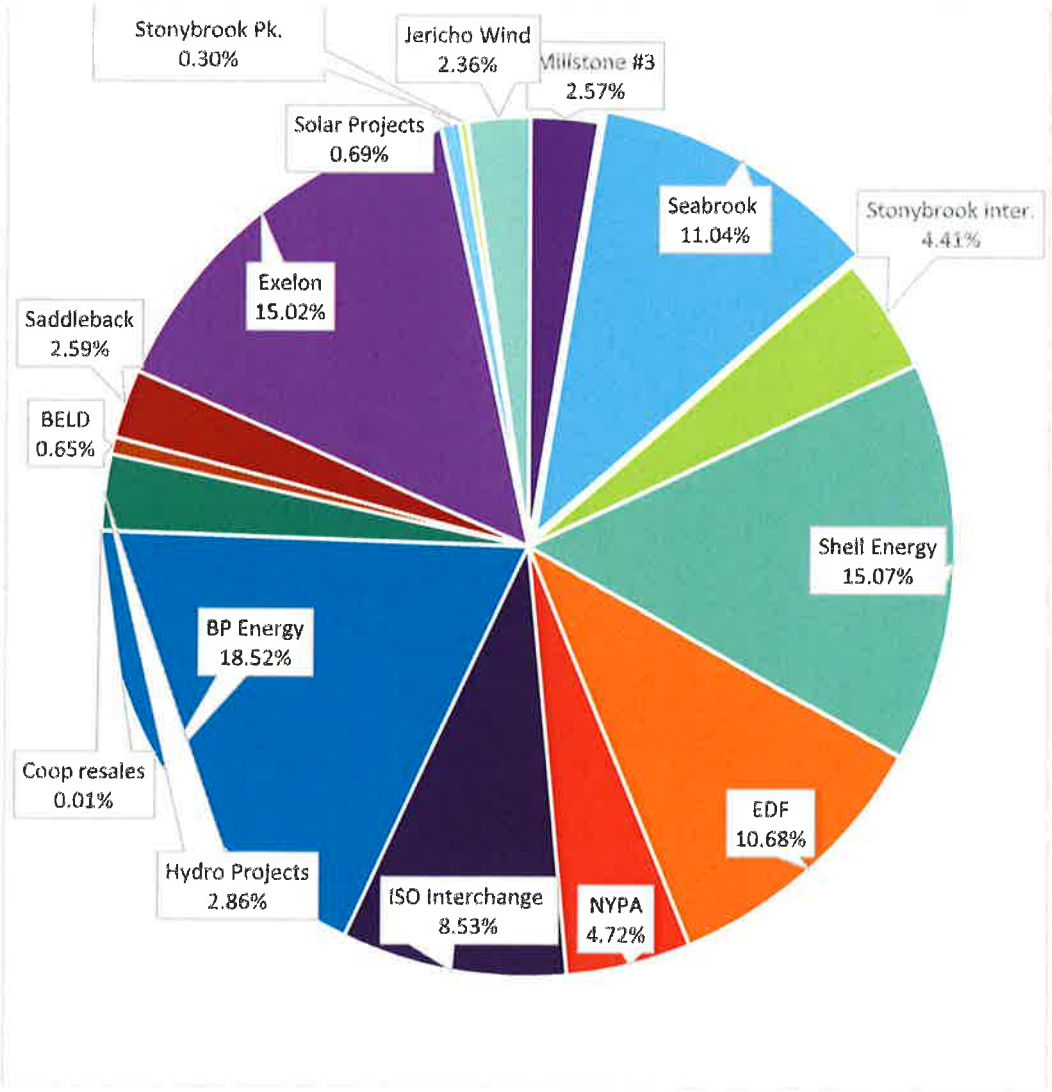
Table 2 breaks down the ISO interchange between the DA LMP Settlement and the RT Net Energy for the month of October, 2017.

Table 2

Resource	Amount of Energy (kWh)	Cost of Energy ($/Mwh)	% of Total Energy
ISO DA LMP * Settlement	11,597,384	$34.40	21.69%
RT Net Energy ** Settlement	(7,037,248)	$35.68	-13.16%
ISO Interchange (subtotal)	4,560,136	$32.26	8.53%

* Independent System Operator Day-Ahead Locational Marginal Price

OCTOBER 2017 ENERGY BY RESOURCE



CAPACITY

The RMLD hit a demand of 99,845 kW, which occurred on October 9, at 7 pm. The RMLD's monthly UCAP requirement for October, 2017 was 222,570 kWs.

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

Table 3

Source	Amount (kWs)	Cost ($/kW-month)	Total Cost $	% of Total Cost
Millstone #3	4,950	3.23	$15,983	0.76%
Seabrook	7,909	22.89	$181,045	8.57%
Stonybrook Peaking	24,980	2.37	$59,236	2.80%
Stonybrook CC	42,925	3.32	$142,434	6.74%
NYPA	0	0.00	-$12,123	-0.57%
Hydro Quebec	0	0	$2,727	0.13%
Braintree Watson Unit	0	0.00	$33,811	1.60%
ISO-NE Supply Auction	141,806	11.91	$1,688,869	79.97%
Total	222,570	$9.49	$2,111,981	100.00%

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	$9,231	$15,983	$25,214	0.61%	1,373,270	0.0184
Seabrook	$34,833	$181,045	$215,878	5.18%	5,902,973	0.0366
Stonybrook Intermediate	$86,746	$142,434	$229,180	5.50%	2,358,319	0.0972
Hydro Quebec	$0	$2,727	$2,727	0.07%	-	0.0000
Shell Energy	$488,578	$0	$488,578	11.73%	8,055,400	0.0607
NextEra/EDF	$134,050	$0	$134,050	3.22%	5,707,200	0.0235
* NYPA	$12,414	-$12,123	$291	0.01%	2,523,259	0.0001
ISO Interchange	$147,116	$1,661,191	$1,808,307	43.41%	4,560,136	0.3965
Nema Congestion	-$32,007	$27,677	-$4,330	-0.10%	126,267	-0.0343
BP Energy	$463,187	$0	$463,187	11.12%	9,901,400	0.0468
* Hydro Projects	$110,185	$0	$110,185	2.64%	1,527,559	0.0721
Braintree Watson Unit	$21,793	$33,811	$55,604	1.33%	348,310	0.1596
* Saddleback/Jericho	$258,762	$0	$258,762	6.21%	2,645,358	0.0978
* Burlington & Community Solar	$26,215	$0	$26,215	0.63%	240,297	0.1091
Coop Resales	$543	$0	$543	0.01%	3,207	0.1694
Exelon Energy	$254,371	$0	$254,371	6.11%	8,029,600	0.0317
Stonybrook Peaking	$38,041	$59,236	$97,277	2.34%	157,848	0.6163
Monthly Total	$2,054,057	$2,111,981	$4,166,039	100.00%	53,460,403	0.0779

RENEWABLE ENERGY CERTIFICATES (RECs)

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

Table 5
RECs Summary
Period - January 2017 - October 2017

	Banked RECs	Projected RECs	Total RECs	Est. Dollars
Woronoco	0	5,235	5,235	$83,760
Pepperell	0	3,107	3,107	$49,712
Indian River	0	1,582	1,582	$25,313
Turners Falls	0	1,327	1,327	$21,232
Saddleback	0	10,733	10,733	$171,728
Jericho	0	5,546	5,546	$88,736
Sub total	**0**	**27,530**	**27,530**	**440,481**
RECs Sold	$0		0	$0
Grand Total	**0**	**27,530**	**27,530**	**$440,481**

TRANSMISSION

The RMLD's total transmission costs for the month of October, 2017 were $1,269,309. This is a decrease of 6.07% from the September transmission cost of $1,351,323. In October, 2016 the transmission costs were $1,236,067.

Table 6

	Current Month	Last Month	Last Year
Peak Demand (kW)	99,845	127,181	91,673
Energy (kWh)	53,460,403	56,437,192	52,590,960
Energy ($)	$2,054,057	$1,982,794	$2,463,471
Capacity ($)	$2,111,981	$2,166,683	$1,745,945
Transmission($)	$1,269,309	$1,351,323	$1,236,067
Total	$5,435,348	$5,500,800	$5,445,482

FINANCIAL REPORT
OCTOBER 2017
ATTACHMENT 4

Town of Reading, Massachusetts
Municipal Light Department
Statement of Net Assets
10/31/2017

	2018	2017
ASSETS		
Current:		
Unrestricted Cash	$15,450,445.92	$19,124,725.20
Restricted Cash	29,837,347.72	22,965,595.26
Restricted Investments	1,329,906.48	1,345,663.06
Receivables, Net	9,598,343.86	8,848,561.47
Prepaid Expenses	1,107,814.84	1,029,781.86
Inventory	1,631,846.08	1,524,683.56
Total Current Assets	58,955,704.90	54,839,010.41
Noncurrent:		
Investment in Associated Companies	212,427.92	26,993.75
Capital Assets, Net	76,328,195.92	72,612,857.67
Total Noncurrent Assets	76,540,623.84	72,639,851.42
Deferred Outflows - Pension Plan	4,135,078.00	6,338,218.00
TOTAL ASSETS	139,631,406.74	133,817,079.83
LIABILITIES		
Current		
Accounts Payable	6,631,787.82	9,503,208.92
Accrued Liabilities	300,659.15	549,038.11
Customer Deposits	1,121,506.40	947,599.39
Customer Advances for Construction	1,163,116.49	1,003,670.84
Total Current Liabilities	9,217,069.86	12,003,517.26
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
Total Non-current Liabilities	16,364,740.05	12,091,358.00
Deferred Inflows - Pension Plan	714,888.00	883,172.00
TOTAL LIABILITIES	26,296,697.91	24,978,047.26
NET POSITION		
Invested in Capital Assets, Net of Related Debt	76,328,195.92	72,612,857.67
Restricted for Depreciation Fund	4,709,199.30	5,594,293.48
Restricted for Pension Trust	5,683,014.26	0.00
Unrestricted	26,614,299.35	30,631,881.42
TOTAL NET POSITION	113,334,708.83	108,839,032.57
Total Liabilities and Net Assets	139,631,406.74	133,817,079.83

Town of Reading, Massachusetts
Municipal Light Department
Schedule of Cash and Investments
10/31/2017

	2018	2017
Unrestricted Cash		
Cash - Operating Fund	$15,446,945.92	$19,121,725.20
Cash - Petty Cash	3,500.00	3,000.00
Total Unrestricted Cash	15,450,445.92	19,124,725.20
Restricted Cash		
Cash - Depreciation Fund	4,697,508.68	5,594,293.48
Cash - Construction Fund	11,690.62	0.00
Cash - Town Payment	1,313,996.68	1,266,889.32
Cash - Deferred Fuel Reserve	6,624,606.82	5,230,756.75
Cash - Rate Stabilization Fund	6,913,479.67	6,839,594.80
Cash - Pension Trust	5,683,014.26	0.00
Cash - Uncollectible Accounts Receivable	200,000.00	200,000.00
Cash - Sick Leave Benefits	1,837,258.79	1,927,148.16
Cash - Hazard Waste Reserve	750,000.00	150,000.00
Cash - Customer Deposits	1,121,506.40	947,599.39
Cash - Energy Conservation	684,285.80	809,313.36
Total Restricted Cash	29,837,347.72	22,965,595.26
Investments		
Sick Leave Buyback	1,329,906.48	1,345,663.06
Total	46,617,700.12	43,435,983.52

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT
RECONCILIATION OF CAPITAL FUNDS
10/31/2017

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	19,489.54
DEPRECIATION TRANSFER FY 18	1,435,329.68
WEST STREET - MASS DOT	0.00
TOTAL SOURCE OF CAPITAL FUNDS	6,361,788.37
USE OF CAPITAL FUNDS:	
LESS PAID ADDITIONS TO PLANT THRU OCTOBER	
TOTAL USE OF CAPITAL FUNDS	1,652,589.07
	4,709,199.30

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
10/31/2017

	Month Current Year	Month Last Year	Year to Date Current Year	Year to Date Last Year	Percent Change
Operating Revenues					
Base Revenue	$2,146,563.62	$2,038,430.72	$9,465,698.81	$9,671,313.71	(2.1%)
Fuel Revenue	2,246,579.45	2,564,278.01	10,394,096.91	12,132,735.26	(14.3%)
Purchased Power Capacity	3,339,879.62	2,686,792.84	13,895,664.87	12,969,466.41	7.1%
Forfeited Discounts	67,356.08	79,437.27	293,585.44	324,963.47	(9.7%)
Energy Conservation Revenue	55,497.98	53,110.99	240,031.08	251,961.25	(4.7%)
NYPA Credit	(101,661.07)	(80,934.45)	(316,546.20)	(374,740.51)	(15.5%)
Total Operating Revenues	7,754,215.68	7,341,115.38	33,972,530.91	34,975,699.59	(2.9%)
Expenses					
Power Expenes:					
547 Purchased Power Fuel Expense	2,056,956.88	2,463,471.01	9,299,908.90	11,644,097.67	(20.1%)
560 Purchased Power Capacity	2,116,047.79	1,734,350.07	8,430,907.04	6,836,036.63	23.3%
565 Purchased Power Transmission	1,269,308.87	1,236,066.74	5,580,808.63	5,361,773.86	4.1%
Total Purchased Power	5,442,313.54	5,433,887.82	23,311,624.57	23,841,908.16	(2.2%)
Operations and Maintenance Expenses:					
580 Supervision and Engineering Labor & Expense	46,106.12	36,281.10	159,193.95	161,467.45	(1.4%)
581 Station Supervisor Labor & Expense	11,688.81	11,288.03	48,260.68	45,028.14	7.2%
581 Line General Operational Expense	54,618.14	50,121.24	214,753.09	192,855.47	11.4%
582 Control Room Labor & Expense	27,663.96	37,403.57	124,204.48	161,862.73	(23.3%)
585 Street Lighting Operation & Maintenance	49.04	(68,365.92)	49.04	113,187.94	(100.0%)
586 Meter General Labor & Expense	20,768.92	16,944.70	79,538.63	63,989.22	24.3%
588 Materials Management	37,762.94	36,468.81	153,904.25	129,399.46	18.9%
590 Maintenance of Structures and Equipment	34,262.73	29,679.78	126,155.29	153,965.56	(18.1%)
593 Maintenance of Lines - Overhead	204,044.76	217,767.13	527,152.55	551,532.54	(4.4%)
594 Maintenance of Lines - Underground	9,909.73	11,335.19	38,116.70	116,236.03	(67.2%)
595 Maintenance of Line Transformers	478.75	8,314.49	478.75	17,923.39	(97.3%)
Total Operations and Maintenance Expenses	447,353.90	387,238.12	1,471,807.41	1,707,447.93	(13.8%)
General & Administration Expenses:					
902 Meter Reading	1,223.05	1,674.55	10,483.39	9,976.90	5.1%
903 Customer Collections	129,560.21	119,979.33	536,304.02	573,418.43	(6.5%)
904 Uncollectible Accounts	12,500.00	12,500.00	50,000.00	50,000.00	0.0%
916 Energy Audit	40,588.83	37,255.03	145,753.53	145,264.19	0.3%
916 Energy Conservation	53,409.89	44,674.00	158,688.43	160,066.13	(0.9%)
920 Administrative and General Salaries	85,082.19	72,232.08	346,928.58	317,807.76	9.2%
921 Office Supplies and Expense	29,968.63	9,428.28	93,229.87	77,544.40	20.2%
923 Outside Services	58,431.89	54,639.21	169,387.30	112,871.01	50.1%
924 Property Insurance	28,148.99	27,632.72	112,595.96	111,002.88	1.4%
925 Injuries and Damages	8,150.32	4,071.09	21,335.51	17,128.68	24.6%
926 Employee Pensions and Benefits	361,551.27	255,836.08	1,033,126.50	1,006,875.37	2.6%
930 Miscellaneous General Expense	13,780.31	18,198.90	41,411.90	41,495.51	(0.2%)
931 Rent Expense	13,914.18	13,956.12	68,715.83	55,257.87	24.4%
933 Transportation Expense	13,378.79	0.00	69,374.52	0.00	100.0%
933 Transportation Expense Capital Clearing	(31,411.00)	0.00	(123,875.75)	0.00	(100.0%)
935 Maintenance of General Plant	38,726.51	17,366.82	97,342.29	87,043.07	11.8%
935 Maintenance of Building & Garage	46,808.05	52,002.00	139,756.34	180,910.40	(22.7%)
Total General & Administration Expenses	903,812.11	741,446.21	2,970,558.22	2,946,662.60	0.8%
Other Operating Expenses:					
403 Depreciation	358,832.42	341,775.67	1,435,329.68	1,367,102.68	5.0%
408 Voluntary Payments to Towns	126,851.67	118,000.00	507,406.68	472,000.00	7.5%
Total Other Expenses	485,684.09	459,775.67	1,942,736.36	1,839,102.68	5.6%
Operating Income	475,052.04	318,767.56	4,275,804.35	4,640,578.22	(7.9%)

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
10/31/2017

Non Operating Revenues (Expenses):					
419 Interest Income	16,201.80	8,685.37	71,290.66	44,623.23	59.8%
419 Other	32,402.42	7,249.44	289,808.70	135,011.80	114.7%
426 Return on Investment to Reading	(201,647.50)	(198,722.33)	(806,590.00)	(794,889.32)	1.5%
431 Interest Expense	(426.03)	(192.16)	(1,732.32)	(778.60)	122.5%
Total Non Operating Revenues (Expenses)	(153,469.31)	(182,979.68)	(447,222.96)	(616,032.89)	(27.4%)
Change in Net Assets	321,582.73	135,787.88	3,828,581.39	4,024,545.33	(4.9%)
Net Assets at Beginning of Year	109,368,059.44	104,814,487.24	109,368,059.44	104,814,487.24	4.3%
Ending Net Assets	109,689,642.17	104,950,275.12	113,196,640.83	108,839,032.57	4.0%

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
10/31/2017

	Actual Year to Date	Budget Full Year	Remaining Budget	Remaining Budget %
Operating Revenues				
Base Revenue	$ 9,465,698.81	$26,337,621.00	$ 16,871,922.19	64.1%
Fuel Revenue	10,394,096.91	32,491,810.00	22,097,713.09	68.0%
Purchased Power Capacity	13,895,664.87	38,088,978.00	24,193,313.13	63.5%
Forfeited Discounts	293,585.44	800,000.00	506,414.56	63.3%
Energy Conservation Revenue	240,031.08	675,000.00	434,968.92	64.4%
NYPA Credit	(316,546.20)	(1,200,000.00)	(883,453.80)	73.6%
Total Operating Revenues	33,972,530.91	97,193,409.00	63,220,878.09	65.0%
Expenses				
Power Expenses:				
547 Purchased Power Fuel Expense	9,299,908.90	31,291,810.00	21,991,901.10	70.3%
555 Purchased Power Capacity	8,430,907.04	24,476,161.00	16,045,253.96	65.6%
565 Purchased Power Transamission	5,580,808.63	13,612,817.00	8,032,008.37	59.0%
Total Purchased Power	23,311,624.57	69,380,788.00	46,069,163.43	66.4%
Operations and Maintenance Expenses:				
580 Supervision and Engineering Labor & Expense	159,193.95	764,615.00	605,421.05	79.2%
581 Station Supervisor Labor & Expense	48,260.68	130,662.00	82,401.32	63.1%
581 Line General Operational Expense	214,753.09	596,007.00	381,253.91	64.0%
582 Control Room Labor & Expense	124,204.48	466,783.00	342,578.52	73.4%
585 Street Lighting Operation & Maintenance	49.04	156,893.00	156,843.96	100.0%
586 Meter General Labor & Expense	79,538.63	212,909.00	133,370.37	62.6%
588 Materials Management Labor & Expense	153,904.25	458,328.00	304,423.75	66.4%
590 Maintenance of Structures and Equipment	126,155.29	494,936.00	368,780.71	74.5%
593 Maintenance of Lines - Overhead	527,152.55	1,980,611.00	1,453,458.45	73.4%
594 Maintenance of Lines - Underground	38,116.70	197,002.00	158,885.30	80.7%
595 Maintenance of Line Transformers	478.75	300,000.00	299,521.25	99.8%
Total Operations and Maintenance Expenses	1,471,807.41	5,758,746.00	4,286,938.59	74.4%
General & Administration Expenses:				
902 Meter Reading	10,483.39	37,461.00	26,977.61	72.0%
903 Customer Collection	536,304.02	1,869,393.00	1,333,088.98	71.3%
904 Uncollectible Accounts	50,000.00	150,000.00	100,000.00	66.7%
916 Energy Audit	145,753.53	509,232.00	363,478.47	71.4%
916 Energy Conservation	158,688.43	952,565.00	793,876.57	83.3%
920 Administrative and General Salaries	346,928.58	1,017,151.00	670,222.42	65.9%
921 Office Supplies and Expense	93,229.87	350,000.00	256,770.13	73.4%
923 Outside Services	169,387.30	759,191.00	589,803.70	77.7%
924 Property Insurance	112,595.96	427,200.00	314,604.04	73.6%
925 Injuries and Damages	21,335.51	52,613.00	31,277.49	59.4%
926 Employee Pensions and Benefits	1,033,126.50	3,000,437.00	1,967,310.50	65.6%
930 Miscellaneous General Expense	41,411.90	179,215.00	137,803.10	76.9%
931 Rent Expense	68,715.83	212,000.00	143,284.17	67.6%
933 Transportation Expense	69,374.52	381,116.00	311,741.48	81.8%
933 Transportation Expense Capital Clearing	(123,875.75)	(301,596.00)	(177,720.25)	58.9%
935 Maintenance of General Plant	97,342.29	281,880.00	184,537.71	65.5%
935 Maintenance of Building & Garage	139,756.34	666,457.00	526,700.66	79.0%
Total General & Administration Expenses	2,970,558.22	10,544,315.00	7,573,756.78	71.8%

Town of Reading, Massachusetts
Municipal Light Department
Business Type Proprietary Fund
Statement of Revenues, Expenses and Changes in Fund Net Assets
10/31/2017

Other Operating Expenses:				
403 Depreciation	1,435,329.68	4,362,000.00	2,926,670.32	67.1%
408 Voluntary Payments to Towns	507,406.68	1,500,000.00	992,593.32	66.2%
Total Other Expenses	1,942,736.36	5,862,000.00	3,919,263.64	66.9%
Operating Income	4,275,804.35	5,647,560.00	1,371,755.65	
Non Operating Revenues (Expenses):				
419 Interest Income	71,290.66	150,000.00	78,709.34	52.5%
419 Other Income	289,808.70	890,000.00	600,191.30	67.4%
426 Return on Investment to Reading/Loss on Disposal	(806,590.00)	(2,570,438.00)	(1,763,848.00)	68.6%
431 Interest Expense	(1,732.32)	(2,500.00)	(767.68)	30.7%
Total Non Operating Revenues (Expenses)	(447,222.96)	(1,532,938.00)	(1,085,715.04)	70.8%
Net Income	$ 3,828,581.39	$ 4,114,622.00	$ 286,040.61	

Cost Analysis to Change Financial Reporting from Fiscal Year to Calendar Year

- One time, 6-month, audit fee of approximately $36,000

- Approximately $15,000 of avoided salary costs to combine 6 months of one fiscal year with another 6 months from a prior fiscal year to submit a calendar year DPU report
    - Power Supply calculations
    - Net Plant calculations
    - Combination of entire Balance Sheet and Profit & Loss statements
    - Inefficiency in budget review – calendar year financials would help mitigate the inaccuracies of submitting premature data of rates, which are dependent on power supply costs, publicized in late March

- Tangible and Intangible costs for efficiency purposes
    - Inefficiencies of having the Town and the RMLD finalize fiscal year reports at the same time – this creates excessive demands for the Town of Reading
    - Alleviate Town concerns of accounts payable cutoff and double warrant reporting
    - OPEB/Pension actuarial reporting timeline
    - Vendor cooperation during months on slow productivity – very late invoice submission for fiscal year cut off. It is most common for businesses to clean up at 12/31
    - Lack of Department staff availability during a high vacation season

ENGINEERING & OPERATIONS REPORT
OCTOBER 2017
ATTACHMENT 5

Engineering & Operations Report

RMLD Board of Commissioners Meeting

December 14, 2017

October 2017 Reporting Period

Hamid Jaffari, Director of Engineering & Operations

Engineering & Operations
Capital Improvement Projects

Project #	DESCRIPTION	% COMPLETE	OCT	YTD ACTUAL	BUDGETED	REMAINING BALANCE
100	Distributed Gas Generation Pilot (Demand Management)	100%	5,835	141,002	-	(141,002)
102	Pad mount Switchgear Upgrade at Industrial Parks	7%		226,100	196,285	(29,815)
103	Grid Modernization and Optimization	On-going	11,203	51,477	227,183	175,706
105	New Wilmington Substation	5%	10,555	18,986	650,000	631,014
106	Underground Facilities Upgrades (URDs, Manholes, etc.)	On-going	31,276	68,593	344,725	276,132
107	13.8kV Upgrade (Step-down Areas, etc.)	On-going		1,658	70,851	69,193
108	115 kV Transmission Line Upgrade	50%	3,940	9,307	95,098	85,791
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%	40,634	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		-	560,500	560,500
117	Meter Purchases	On-going		1,659	60,000	58,341
125	GIS	100%	15,944	72,651	218,726	146,075
126	Communication Equipment (Fiber Optic)	On-going		-	214,629	214,629
130	Remote Terminal Unit (RTU) Replacement - Station 3	100%	275	2,564	-	(2,564)
131	LED Street Lights Upgrade - All Towns	79%	46,482	280,667	1,169,332	888,665
133	Station 3: Relay Upgrades and SCADA Integration	100%	70	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%	2,191	12,552	561,347	548,795
175	Pole Replacement Program	On-going	2,241	58,868	209,000	150,132
458	Secondary and Main Replacement Program	On-going	3,423	30,926	222,285	191,359
various	New Service Installations (Residential/Commercial/Industrial)	On-going	5,791	30,587	155,936	125,349

Engineering & Operations
Routine Capital Construction

Description	OCT	YTD
Pole Setting/Transfers	24,356	55,262
Overhead/Underground	39,301	115,174
Projects Assigned as Required • Voltage Regulators – Lynnfield	2,327	78,446
Pole Damage/Knockdowns - Some Reimbursable • Work was done to repair or replace three (3) poles.	6,939	36,339
Station Group	-	9,991
Hazmat/Oil Spills	-	-
Porcelain Cutout Replacement Program	-	-
Lighting (Street Light Connections)	5,700	5,700
Storm Trouble	2,382	3,890
Underground Subdivisions (new construction) • 318 Haverhill Street, NR • Deerfield Place (Charles St. Ext), NR • Murray Hill Subdivision (Phase 2), W	11,141	59,820
Animal Guard Installation	-	415
Miscellaneous Capital Costs • Solar Project – Fordham Road, W • 330 Ballardvale Street, W • 301 Ballardvale Street, W	39,666	46,226
TOTAL	**$131,812**	**$411,263**

Facilities, IRD and IT
Capital Projects/Purchases

	OCT	ACTUAL YTD	FY18 BUDGET	REMAINING BALANCE
Facilities	6,755	60,289	657,000	596,711
Integrated Resources Division (IRD)	0	8,623	35,000	26,377
Information Technology (IT)	4,313	11,529	340,000	328,471

TOTAL CAPITAL SPENDING YTD
(All Divisions)

OCT	YTD	FY18 BUDGET	REMAINING BALANCE
$322,741	**$1,651,984**	**$7,685,521**	**$6,033,537**

Routine Maintenance

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

  Pad mount 26.94% Overhead 18.38%

- **Pole Inspection (as of 12/1/2017)**

  250 poles have been replaced 148 of 250 transfers have been completed

- **Quarterly Inspection of Feeders (as of 12/1/17)**

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

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

  961 of 1,237 manholes have been inspected.

- **Porcelain Cutout Replacements (through October 2017)**

  91% complete 249 remaining to be replaced

- **Tree Trimming**

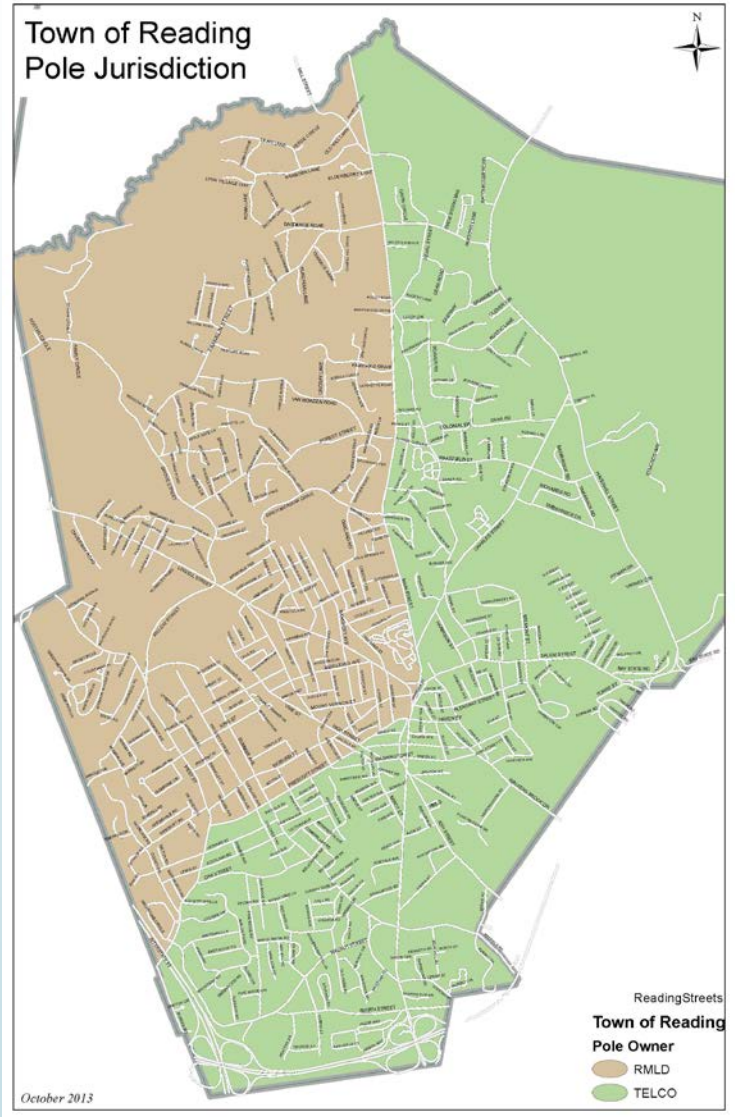
  Oct: 124 spans YTD: 488 spans through October

- **Substation Maintenance**

  Infrared Scanning – through October 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 December 1, 2017

LYNNFIELD

NTG Member and JobType	Count of Ticket Number
CMCTNR	5
Comcast Massachusetts	
TRANSFER	5
LFLDFD	3
Lynnfield Fire Department	
TRANSFER	3
RMLD	5
Reading Municipal Light Department	
TRANSFER	5
VZNESA	4
(blank)	
Grand Total	17

READING

NTG Member and JobType	Count of Ticket Number
CMCTNR	7
Comcast Massachusetts	
TRANSFER	7
NP3PMA	8
Non-participating 3rd Party Attacher - Massachusetts	
TRANSFER	8
RDNGFD	6
Reading Fire Department	
TRANSFER	6
RMLD	99
Reading Municipal Light Department	
TRANSFER	29
PULL POLE	70
VZNESA	35
Verizon Massachusetts	
TRANSFER	35
(blank)	
Grand Total	155

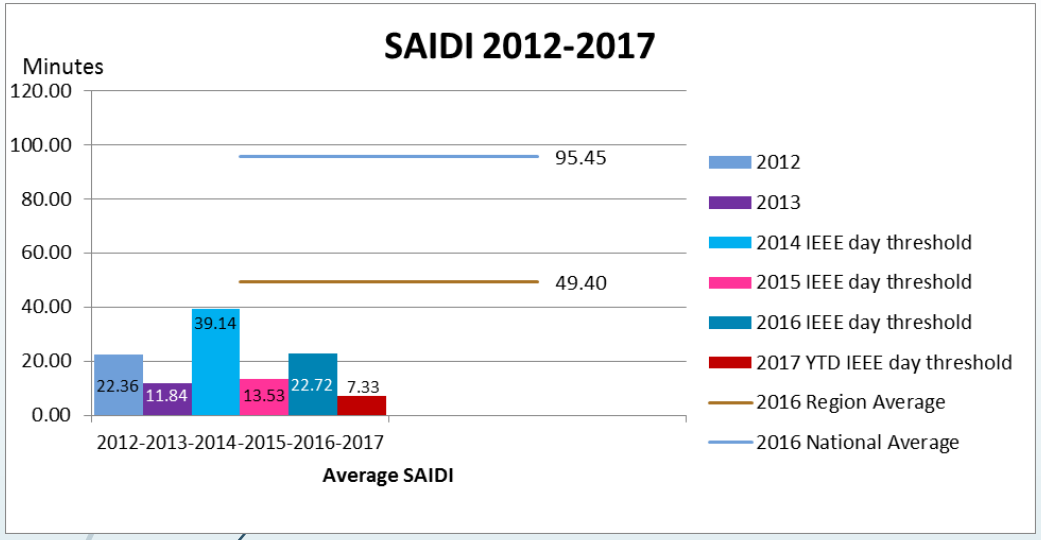
NORTH READING

NTG Member and JobType	Count of Ticket Number
CMCTNR	5
Comcast Massachusetts	
TRANSFER	5
NGMA	1
National Grid	
TRANSFER	1
NRDGFD	37
North Reading Fire Department	
TRANSFER	37
RMLD	44
Reading Municipal Light Department	
TRANSFER	13
PULL POLE	31
VZNEDR	23
Verizon Massachusetts	
TRANSFER	20
PULL POLE	3
(blank)	
Grand Total	110

WILMINGTON

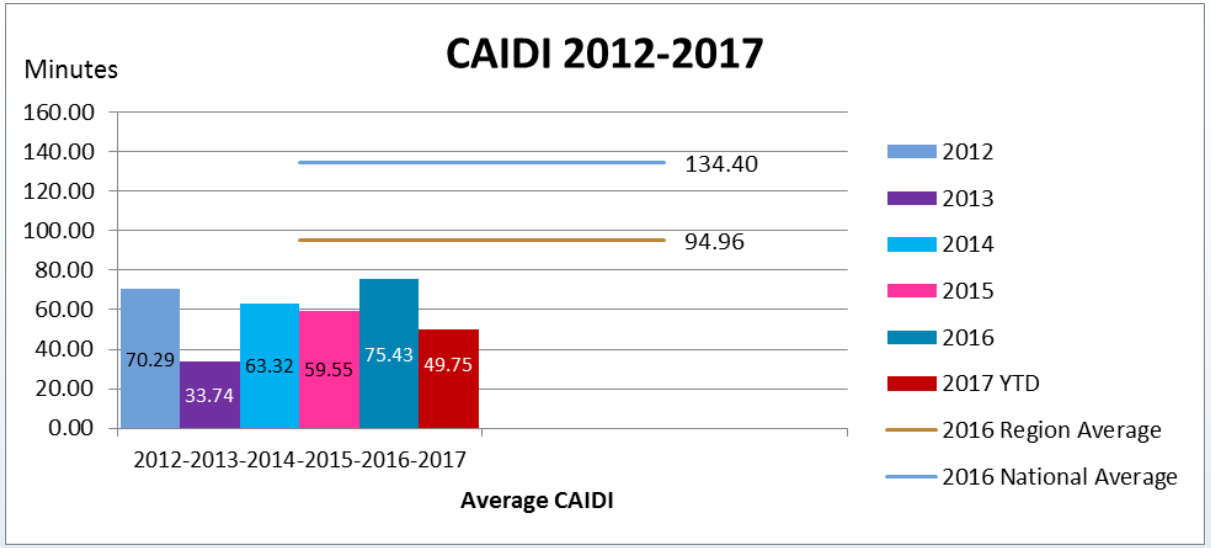
NTG Member and JobType	Count of Ticket Number
CMCTNR	5
Comcast Massachusetts	
TRANSFER	5
NP3PMA	1
Non-participating 3rd Party Attacher - Massachusetts	
TRANSFER	1
NPFAMA	4
Non-participating Fire Alarms - Massachusetts	
TRANSFER	4
RMLD	35
Reading Municipal Light Department	
TRANSFER	31
PULL POLE	4
VZNEDR	57
Verizon Massachusetts	
TRANSFER	54
PULL POLE	3
WLMFIB	10
Town of Wilmington	
TRANSFER	10
WMGNFD	72
Wilmington Fire Department	
TRANSFER	72
(blank)	
Grand Total	184

RMLD Reliability Indices



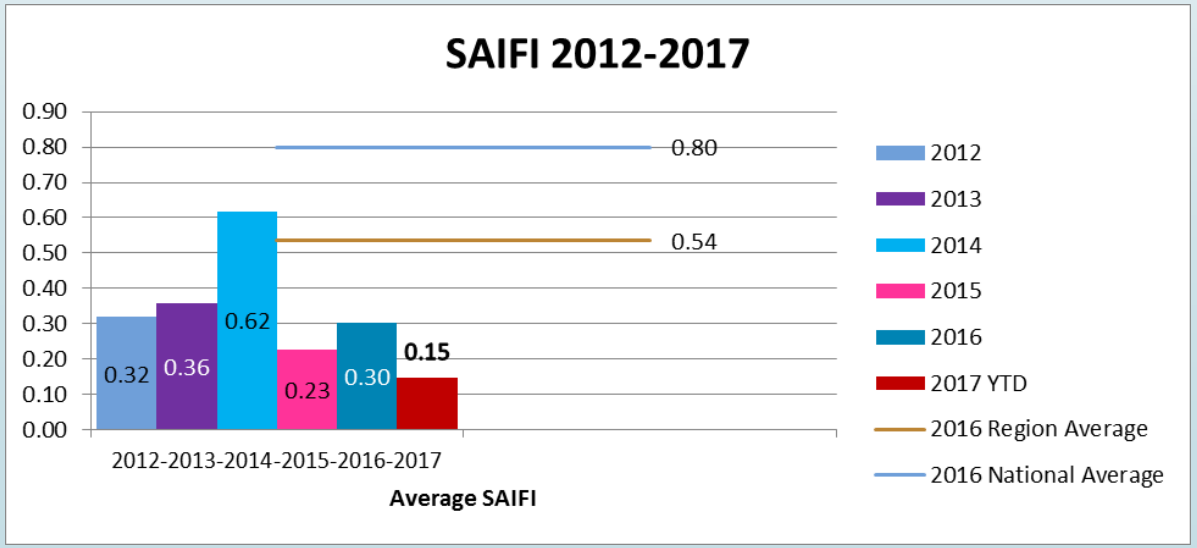
$$SAIDI\ \ (Minutes) = \frac{Total\ Duration\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Served}$$

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.



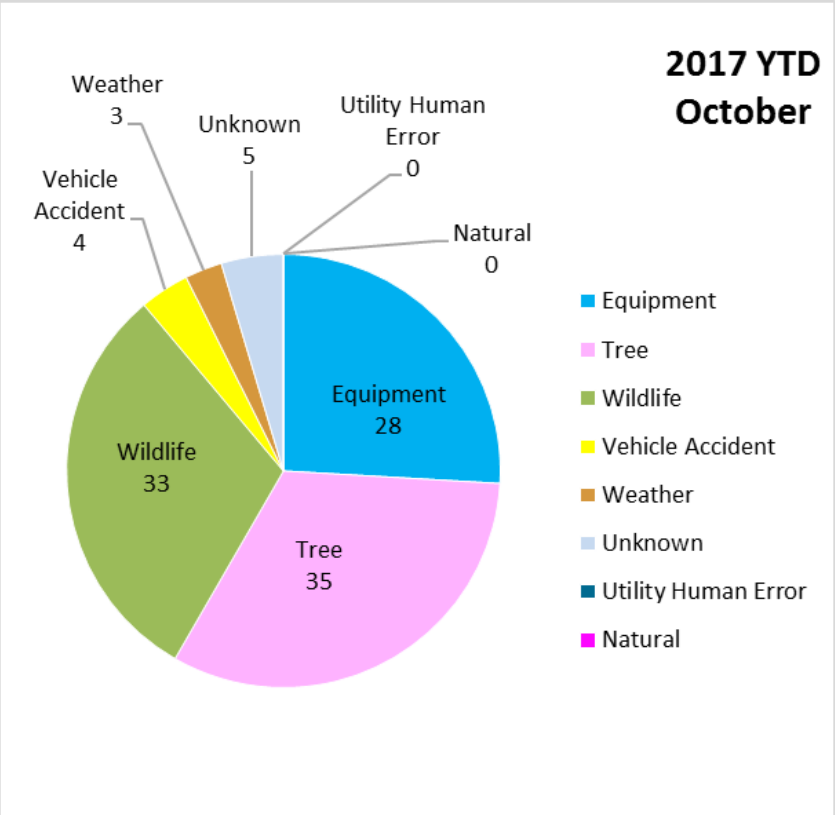
$$CAIDI\,(Minutes) = \frac{Total\ Duration\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Interruptions}$$

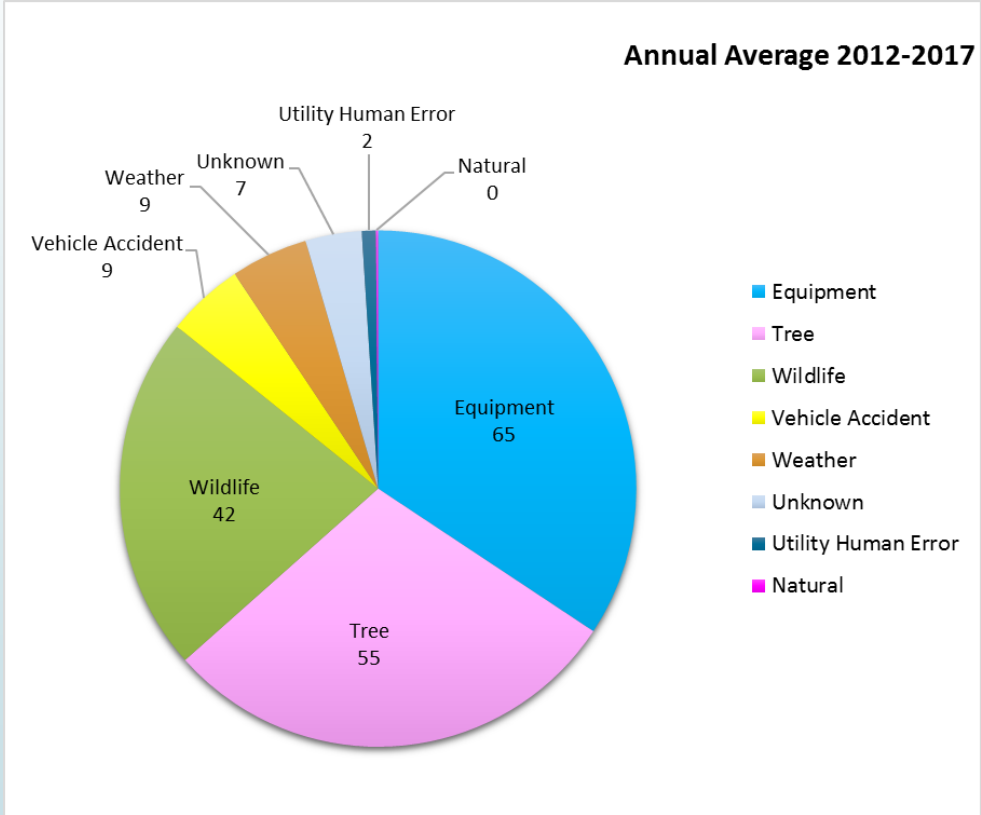
$$SAIFI = \frac{Total\ Number\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Served}$$



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

Outages Causes





Questions ?

RMLD PROCUREMENT REQUESTS REQUIRING BOARD APPROVAL
ATTACHMENT 6

RMLD
Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS
230 Ash Street, P.O. Box 150
Reading, MA 01867-0250

November 29, 2017

Town of Reading Municipal Light Board

Subject: IFB 2018-13 Janitorial Services

Pursuant to M.G.L. c. 30B, on October 9, 2017, an invitation for bid (IFB) requesting sealed bids for Janitorial Services was advertised in the Commonwealth of Massachusetts Goods and Services Bulletin. On October 11, 2017, the IFB was placed as a legal notice in the Middlesex East section of the Daily Chronicle, and on October 12, 2017, posted on COMMBUYS, the RMLD website, and the RMLD bulletin board.

An invitation for bid was sent to the following forty-four companies:

ACP Facility Services	ABM Janitorial Northeast, Inc.	Advanced Maintenance
All Pro Cleaning Systems	American Cleaning Co.	AMPM Facility Services
Brenner Facility Services	Cleaning Services Group, Inc.	Compass Facility Services
Complete Cleaning Co., Inc.	Empire Cleaning, Inc.	Express Janitorial Service Group
Facilities Maintenance & Management, Inc.	FMN Services, Inc.	G Associates Corp.
Green Life Cleaning	Greenlife Janitorial Corp.	Harvard Maintenance, Inc.
Integrity Services	J C Zampell	Janitronics, Inc.
Jan-Pro Cleaning Systems of Massachusetts	M&M Cleaning, Inc.	M & M Contract Cleaning, Inc.
McGarr Service Corp.	Metro Facility Maintenance & Management	MP Building Services
National Cleaning Corp.	NECC Corp.	ONVIA
Prospect Building Services Corp.	Prime Vendor, Inc.	Pro City Facilities Services, Inc.
ResourceOne	S.J. Services, Inc.	Service Master
Star Building Services, Inc. (SBS)	State Cleaning Svc., Inc.	Swilley Commercial Cleaning
T & T Janitorial Services & Sales	T & S Professional Cleaning Service, Inc.	The Cleaning Crew
Tidy Cleaning Service	Transcend Maintenance Services, Inc.	

Sealed bids were received from four companies: Complete Cleaning Co., Inc., S.J. Services, Inc., Star Building Services, Inc. (SBS), and Transcend Maintenance Services, Inc.

RMLD
Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS
230 Ash Street, P.O. Box 150
Reading, MA 01867-0250

The sealed bids were publicly opened and read aloud at 11:00 a.m. on November 2, 2017, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

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

> Move that bid 2018-13 for Janitorial Services be awarded to: **Transcend Maintenance Services, Inc. for $67,325.40,** pursuant to M.G.L., c. 30B, as the lowest responsive and responsible bidder on the recommendation of the General Manager. This is a three-year contract.

These services will be paid from the Operating Budget.

Paul McGonagle

Hamid Jaffari

Coleen O'Brien

File: Bid/FY18/2018-13 Janitorial Services

Janitorial Services
M.G.L. Chapter 30B
Bid 2018-13

Bidder	*Year 1*	*Year 2*	*Year 3*	*Combined 3-Year Total*	*Responsive Bidder*	*Exceptions*
Complete Cleaning Co., Inc.	$25,488.00	$26,376.00	$27,312.00	$79,176.00	Yes	No
S.J. Services, Inc.	$32,808.00	$33,504.00	$34,152.00	$100,464.00	Yes	No
Star Building Services, Inc. (SBS)	$23,494.00	$24,294.00	$24,286.00	$72,074.00	[1]No	No
Transcend Maintenance Services, Inc.	**$22,441.80**	**$22,441.80**	**$22,441.80**	**$67,325.40**	**Yes**	**No**

Non-Responsive Bidder

1 Star Building Services (SBS) - Unauthorized signature on forms.

RMLD
Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS
230 Ash Street, P.O. Box 150
Reading, MA 01867-0250

December 4, 2017

Town of Reading Municipal Light Board

Subject: IFP 2018-17 Cooper Power System or Compatible Meters and Equipment for the AMI Mesh Network System Expansion and Migration

Pursuant to M.G.L c. 164 § 56D, on November 8, 2017, a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle requesting sealed proposals for Cooper Power System or Compatible Meters and Equipment for the AMI Mesh Network System Expansion and Migration.

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

D & D Electrical Sales, Inc.	Eaton	E.L. Flowers & Associates
Genergy Corporation	Graybar	Hasgo Power Sales
J.F. Gray & Associates	Omicron Electronics Corp. USA	ONVIA
Power Sales Group	Power Tech dba UPSC	Robinson Sales
Shamrock Power	Siemens Industry, Inc.	WESCO Distribution

Sealed proposals were received from two companies: Eaton and WESCO Distribution.

The sealed proposals were publicly opened and read aloud at 11:00 a.m., November 27, 2017, 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 2018-17 for Cooper Power System or Compatible Meters and Equipment for the AMI Mesh Network System Expansion and Migration be awarded to: **Eaton for $83,199.36,** pursuant to M.G.L. Chapter 164 § 56D on the recommendation of the General Manager.

The FY18 Capital Budget amount for these items is $92,500.

Nick D'Alleva

Hamid Jaffari

Coleen O'Brien

File: Bid/FY18/2018-17 Meters and Equipment/AMI Mesh Network

Cooper Power System or Compatible Meters and Equipment for the AMI Mesh Network System Expansion and Migration
Bid 2018-17

Bidder	Manufacturer	Delivery Date	Unit Cost	Qty	Total Net Cost	Meet Specification requirement	Specification Data Sheets	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature
Eaton						**yes**	**yes**	**yes**	**yes**	**waived**	**yes**	**yes**
Item 1 Retrofit kits	Eaton	2-8 weeks	$91.80	500	$45,900.00							
Item 2 Mesh Network Relays	Eaton	8-20 weeks	$260.10	25	$6,502.50	**Exceptions:**	Eaton's proposal is based upon the mutually-agreed to Terms & Conditions of the written contract that is in place between our organizations. Eaton complies with all technical specifications per our supplied proposal and Bill of Materials.					
Item 3 6S Meters	Eaton	6-14 weeks	$642.60	25	$16,065.00							
Item 4 5S Meters	Eaton	6-14 weeks	$586.50	15	$8,797.50							
Item 5 16S Meters, Class 200	Eaton	4-14 weeks	$586.50	6	$3,519.00							
Item 6 16S Meters, Class 320	Eaton	4-14 weeks	$603.84	4	$2,415.36	**Note:**	Although Eaton checked exceptions, this is actually a clarification and is acceptable.					
					$83,199.36							
WESCO Distribution						**yes**	**yes**	**yes**	**yes**	**waived**	**no**	**yes**
Item 1 Retrofit kits		no quote			$0.00							
Item 2 Mesh Network Relays		no quote			$0.00							
Item 3 6S Meters		no quote			$0.00							
Item 4 5S Meters	Schweitzer	4-6 weeks	$1,750.00	15	$26,250.00							
Item 5 16S Meters, Class 200		no quote			$0.00							
Item 6 16S Meters, Class 320		no quote			$0.00							
					$26,250.00							

RMLD
Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS
230 Ash Street, P.O. Box 150
Reading, MA 01867-0250

November 29, 2017

Town of Reading Municipal Light Board

Subject: IFB 2018-19 Line Truck Chassis and Trailer Inspection, Preventative Maintenance and Repair Service

Pursuant to M.G.L. c. 30B, on November 6, 2017, an invitation for bid (IFB) requesting sealed bids for Line Truck Chassis and Trailer Inspection, Preventative Maintenance and Repair Service was advertised in the Commonwealth of Massachusetts Goods and Services Bulletin. On November 8, 2017, the IFB was placed as a legal notice in the Middlesex East section of the Daily Chronicle, and on November 9, 2017, posted on COMMBUYS, the RMLD website, and the RMLD bulletin board.

An invitation for bid was sent to the following seven companies:

Altec, Inc.	Dynamic Mobile Repair	HP Fairfield
Lowell Fleet Maintenance	Parker's Pitstop	Ryder Truck Rental
Taylor & Lloyd, Inc.		

Sealed bids were received from one company: Taylor & Lloyd, Inc.

The sealed bid was publicly opened and read aloud at 11:00 a.m. on November 27, 2017, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The bid was reviewed, analyzed and evaluated by staff and recommended to the General Manager.

> Move that bid 2018-19 for Line Truck Chassis and Trailer Inspection, Preventative Maintenance and Repair Service be awarded to: **Taylor & Lloyd, Inc. for $151,462.31**, pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder on the recommendation of the General Manager. This is a three-year contract.

These services will be paid from the Operating Budget.

Paul McGonagle

Hamid Jaffari

Coleen O'Brien

File: Bid/FY18/2018-19 Line Truck Chassis and Trailer Inspection, Preventative Maintenance and Repair Service

Line Truck Chassis and Trailer Inspection, Preventative Maintenance and Repair Service
M.G.L. Chapter 30B
Bid 2018-19

Bidder	*Year 1 Line Trucks*	*Year 1 Trailers*	*Year 2 Line Trucks*	*Year 2 Trailers*	*Year 3 Line Trucks*	*Year 3 Trailers*	*Combined 3-Year Total*	*Responsive Bidder*	*Exceptions*
Taylor & Lloyd, Inc.	**$41,518.54**	**$6,651.54**	**$43,203.54**	**$6,923.00**	**$45,678.74**	**$7,486.95**	**$151,462.31**	**Yes**	**No**

RMLD
Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS
230 Ash Street, P.O. Box 150
Reading, MA 01867-0250

November 29, 2017

Town of Reading Municipal Light Board

Subject: IFB 2018-20 Line Truck Lift Equipment Inspection, Preventative Maintenance and Repair Service

Pursuant to M.G.L. c. 30B, on November 6, 2017, an invitation for bid (IFB) requesting sealed bids for Line Truck Lift Equipment Inspection, Preventative Maintenance and Repair Service was advertised in the Commonwealth of Massachusetts Goods and Services Bulletin. On November 8, 2017, the IFB was placed as a legal notice in the Middlesex East section of the Daily Chronicle and on November 9, 2017, posted on COMMBUYS, the RMLD website, and the RMLD bulletin board.

An invitation for bid was sent to the following four companies:

Consolidated Utility Equipment Service, Inc.

D.C. Bates Equipment Co., Inc.

J&D Power Equipment, Inc.

James A. Kiley Co.

Sealed bids were received from one company: James A. Kiley Co.

The sealed bid was publicly opened and read aloud at 11:00 a.m. on November 27, 2017, in the Town of Reading Municipal Light Department's Audio Visual Spurr Room, 230 Ash Street, Reading, Massachusetts.

The bid was reviewed, analyzed and evaluated by staff and recommended to the General Manager.

> Move that bid 2018-20 for Line Truck Lift Equipment Inspection, Preventative Maintenance and Repair Service be awarded to: **James A. Kiley Co. for $111,495.00,** pursuant to M.G.L. c. 30B, as the lowest responsive and responsible bidder on the recommendation of the General Manager. This is a three-year contract.

These services will be paid from the Operating Budget.

Paul McGonagle

Hamid Jaffari

Coleen O'Brien

File: Bid/FY18/2018-20 Line Truck Lift Equipment Inspection, Preventative Maintenance and Repair Service

Line Truck Lift Equipment Inspection, Preventative Maintenance and Repair Service
M.G.L. Chapter 30B
Bid 2018-20

Bidder	*Year 1*	*Year 2*	*Year 3*	*Combined 3-Year Total*	*Responsive Bidder*	*Exceptions*
James A. Kiley Co.	**$36,240.00**	**$37,140.00**	**$38,115.00**	**$111,495.00**	**Yes**	**No**

BOARD MATERIAL AVAILABLE BUT NOT DISCUSSED

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

December-17

	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
READING MUNICIPAL LIGHT DEPT.							
TOTAL BILL	**$118.46**	**$205.78**	**$144.11**	**$1,031.89**	**$199.96**	**$4,813.55**	**$768,181.01**
PER KWH CHARGE	$0.15795	$0.13719	$0.14411	$0.14135	$0.18515	$0.13753	$0.11166
NATIONAL GRID							
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	48.74%	97.98%	53.10%	63.26%	28.91%	33.19%	52.24%
EVERSOURCE(NSTAR)							
TOTAL BILL	**$146.81**	**$260.13**	**$193.60**	**$1,433.47**	**$238.48**	**$6,948.02**	**$1,185,688.95**
PER KWH CHARGE	$0.19574	$0.17342	$0.19360	$0.19637	$0.22081	$0.19851	$0.17235
% DIFFERENCE	23.93%	26.41%	34.34%	38.92%	19.26%	44.34%	54.35%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	**$83.33**	**$160.46**	**$109.04**	**$976.04**	**$154.58**	**$4,822.98**	**$660,645.16**
PER KWH CHARGE	$0.11111	$0.10697	$0.10904	$0.13370	$0.14313	$0.13780	$0.09603
% DIFFERENCE	-29.65%	-22.02%	-24.33%	-5.41%	-22.70%	0.20%	-14.00%
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	-16.65%	-2.00%	-7.89%	-7.01%	-15.77%	-1.05%	5.08%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
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	8.57%	16.47%	12.33%	18.33%	-2.79%	19.15%	26.68%

From: Tracy Schultz
To: RMLD Board Members Group
Subject: AP and Payroll Questions for 12/14/17 Book of Board
Date: Friday, December 08, 2017 7:26:00 AM

There were no Commissioner questions on the 11.3.17, 11.9.17, 11.17.17, and 12.1.17 AP (there was no AP on 11.24.17 due to the Thanksgiving holiday).

There were no Commissioner questions on the 11.13.17 and 11.27.17 Payroll. This e-mail will be included in the 12.14.17 Board Book.

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