Reading Municipal Light Board of Commissioners

Regular Session
230 Ash Street
Reading, MA 01867
September 24, 2015

tart Time of Regular Session:

7:30 p.m.

End Time of Regular Session:

10:10 p.m.

Commissioners:

Thomas O'Rourke, Chairman Philip B. Pacino, Commissioner

David Talbot, Vice Chairman John Stempeck, Commissioner

Dave Hennessy, Commissioner - Secretary Pro Tem

Staff:

Coleen O'Brien, General Manager Bob Fournier, Accounting/Business Manager Jane Parenteau, Director of Integrated Resources

Jeanne Foti, Executive Assistant Hamid Jaffari, Director of E&O William Seldon, Assist. Director of Integrated Resources

Citizens' Advisory Board:

Mark Chrisos, Member

Public:

There was no public comment.

Call Meeting to Order

Chairman O'Rourke called the meeting to order and stated that the meeting was being videotaped, it is live in Reading only.

Opening Remarks

Chairman O'Rourke read the RMLD Board of Commissioners Code of Conduct.

ntroductions

Chairman O'Rourke welcomed Mark Chrisos Citizens' Advisory Board (CAB) member.

Commissioner Hennessy will be the Secretary this evening.

Report of the Chairman

Northeast Public Power Association (NEPPA) Conference

Chairman O'Rourke reported on the Northeast Public Power Association (NEPPA) Conference, there was one hundred percent Board participation. Chairman O'Rourke stated that one of the commission members was on the conference agenda, Vice Chair Dave Talbot spoke on the monetizing of fiber opportunities for public power utilities. In addition, there was much discussion on opportunities and challenges facing public power and a very detailed presentation on the legislative issues that NEPPA has been engaged in. The issues and updates were informative. It was a great opportunity to network with those who are dealing with similar issues.

Mr. Talbot reported that there is another event next Tuesday, September 29, in which municipal plants in the state are trying to get together to form a new service organization that would help the members understand what to do with their fiber and how to get started. This is Jim Lavelle's idea, who is the Holyoke Gas and Electric Manager. Mr. Talbot said that his light plant is doing a lot, the idea would be that other municipals could help the others involved in fiber to get their heads around the topic without it being very expensive, such as talking engineer to engineer. Mr. Talbot extended an invitation to everyone present to attend this event.

Chairman O'Rourke pointed out that this is a good time to raise the question, it was discussed at the last meeting in general terms what RMLD's role should be for the fiber optic opportunity. Chairman O'Rourke encouraged comments and feedback from the commission members as well as others present on the fiber issue, the next step being to organize a study. Chairman O'Rourke said that there is opportunity with the RMLD currently leveraging some of that economic opportunity, but the RMLD does not have significant in house expertise nor are there resources to divert to this. It is an important topic where the next step is to obtain data to make an informed decision. Chairman O'Rourke said that that the survey to each of the towns that Ms. O'Brien will conduct will how their level of interest. Chairman O'Rourke cautioned that all the information needs to be gathered before proceeding forward.

Mr. Stempeck said that there has been some discussion with the understanding that an independent group would look at the fiber opportunity that would consist of people interested in promoting it and it is a great idea in terms of leveraging it more than the RMLD could.

Report of the Chairman

Northeast Public Power Association (NEPPA) Conference

Mr. Stempeck said that in the past, the RMLD has done a spectacular job in getting the economic value of what it has relative to the iber. There are other things the fiber can be used for and could be expanded. In order to do that, we need to engage with the other towns, not just Reading. An independent group of citizens needs to look at this because the baseline and the backbone are already there. The problem is the laterals, getting it out to the business community who is going to pay for this and how will that be accomplished. Access to the internet should not just be relegated to Verizon, Comcast AT&T or any of the majors.

Chairman O'Rourke stated that he is in agreement with Mr. Stempeck. An independent group getting together, a prelude to that is a consultant or someone with expertise who can package a finely defined scope in order that it will not be an expensive proposition. There must be data collection. The challenge is the committee without the data. Mr. Stempeck added that Mr. Talbot has access to a significant amount of data and history. Mr. Talbot commented that he would be willing to suggest what the RMLD could probably do with fiber. Mr. Talbot suggested that Ms. O'Brien touch base with Tim Haas at Holyoke Gas and Electric, who is one of the leaders in the state that is a hands on engineer. Mr. Talbot stated that Holyoke served as a consultant on two levels to the Town of Leverett when they built its network. Holyoke could provide a cheap common sense approach once looking at RMLD's maps and receiving input. Mr. Talbot said that is the spirit of what we are trying to achieve at the meeting on Tuesday, setting up a squad to do this whether or not that materializes. There are people who are in the business of solely helping municipalities to get their heads around this.

Chairman O'Rourke pointed out that there were volunteers at Harvard event from Reading that expressed interest. The challenge is to what end. Chairman O'Rourke deferred to Ms. O'Brien from the Board's perspective she would be the best to know what she needs, the Board can give her any advice or assistance they need. Chairman O'Rourke said that what is needed is a study or consultancy with a recommendation of what the opportunity may be.

Ms. O'Brien stated that she is hearing the following. Someone like Holyoke would come in to perform an informal consultation. She will conduct the mini survey that she will be speak with each respective town manager/administrator which she asked Tim Haas to look at to see if there were any key areas that would a baseline opportunity. She would need a vote to perform a study. Due to the lack of resources, and it is not our expertise to write out the scope, send it out and manage it. The objective needs to be clear to give the consultant direction.

Chairman O'Rourke said that Holyoke is enlightening, how does that get internalized to the RMLD. Mr. Talbot commented that the RMLD may be better situated because our area is more desirable. Mr. Talbot said that we are in the middle of economic development discussion in Reading about this very site. Looking at the industrial zone, the types of tenants that the types of businesses the town, town planner and MAPC wants this conversation should be jointly had with that process which is taking place on October 7 at the RMLD about economic development in Reading. All those involved with that conversation should understand that there is this opportunity that dovetails on what we are trying to achieve. You want businesses that are high end, high tech, good jobs, good tax base, use electricity and will the super high speed connections they can obtain from Verizon the experience is elsewhere when there is a municipal in the business as well it provides competition. When you are in the game, it helps the economic development situation. If you are not in the game, there is not as much competition. It is an economic development tool that the community needs to understand. Ms. O'Brien had a question in which she cannot seem to get an answer, the head end is going to be bid out to either Verizon or Comcast, you still have to pay Verizon or Comcast even though the RMLD may be the distributor. Mr. Talbot responded not necessarily. Mr. Talbot said that he can get into the technical details, but he does not think that is necessarily true. Ms. O'Brien clarified that the study is looking at the RMLD actually developing and maintaining a head end as well. Mr. Talbot said that he can tell you what he knows from the in depth study they did. In a town they did a loop and the businesses connected off the same loop and provide internet service in the three hundred businesses in that area. The businesses are getting a great deal that are high level service agreements. The businesses pay for the two gigabytes to the municipal utility. The pricing may be equal or better than the competition, but prefer their local municipal which has been the trusted institution that has been around for one hundred years. It is a valuable attribute we have.

Mr. Stempeck said that there may be scale related issues. If the municipal is negotiating for a certain amount of gigabytes as opposed to individual businesses which Comcast and Verizon do in a very fragmented way, which translate into more money per gigabyte. It is not one entity that is negotiating for it, that is where the economy of scale comes in. Mr. Talbot added that the municipal does not have to make that much money under the regulations you can only make eight percent. Mr. Talbot said that you are making a little bit, but doing as a tool to help the community and the businesses. The town and economic development this is what it is and what it can do. Perhaps an educational meeting to educate the communities, the town managers and selectmen why this could be valuable when they think of economic development. Mr. Pacino said that the education and interest needs to be solidified prior to a study summencing. Mr. Pacino noted that one of the suggestions was to have a joint action committee. Mr. Talbot said that we need the selectmen in Reading to understand why this could valuable. Mr. Pacino stated that he heard that released by the White House that internet access will be on the same level as utilities, water and sewer.

Report of the Chairman

Northeast Public Power Association (NEPPA) Conference

Chairman O'Rourke said that there has been a lot of discussion and meetings on the fiber topic, the question is how successful will we with getting people on board without understanding how this will work. Mr. Talbot said that there is a feedback loop. Chairman O'Rourke added that his root concern is before people get overly excited about something that can be larger than a breadbox or the size of a breadbox, we all know that it will provide positive opportunities, his concern is to get some data then we may decide that we want the whole town. (The best example of this is that in April at Harvard at their table there were two Reading residents that wanted to get involved, the question was involved and we could not answer that.) Chairman O'Rourke said that it is time to scope this out to see what is really available. We will get educated in fiber who is an expert and can educate us not what just the opportunities are, but what are the pitfalls. Chairman O'Rourke said that if we do want to go forward with a study, at the meeting in October there are some questions that need to be answered. A realistic timeline needs to be set in order that it has the appropriate level of urgency. Mr. Stempeck added that at the next RMLD Board meeting we will have the results of the questionnaires back from the four towns.

Chairman O'Rourke asked Mr. Chrisos if he had any thoughts. Mr. Chrisos said that the CAB had a general discussion on the fiber optics and are all in agreement going forward that defining the study scope would be the best approach.

Mr. Hennessy said that Mr. Talbot is suggesting something slightly different than Chairman O'Rourke. Mr. Talbot stated that ultimately you need a pull from the community. Mr. Talbot added as Mr. Pacino stated that there needs to be some understanding within the community what this asset could do for the RMLD. Mr. Talbot commented that moving forward with a baseline study we would want everyone understanding what we are trying to achieve in the industrial zone by having meetings. This is a prime opportunity to eject this potential infrastructure asset. The largest municipal light plant in Massachusetts is doing this, which is Taunton in its industrial zone. The RMLD is the second largest municipal in Massachusetts are about to redevelop our industrial zone and are headquartered in the industrial zone. This is an opportunity to raise with Metropolitan Area Planning Council (MAPC) meeting which is taking place in this building in a couple of weeks. Mr. Talbot said that he sent a letter out today which speaks to that. Mr. Talbot said that we do need to involve those parties. We are trying to get our heads around this and you should as well. We do not want to be spending money for a study without people understanding why we are doing this, we want buy in. Mr. Talbot said that it does not hurt to get the other parts of the town involved. Mr. Hennessy clarified with Mr. Talbot that he is saying to do both. Mr. Talbot agreed. There is no harm sharing this with the town manager and board of selectmen who share our desire for better businesses to take hold. This could be a tool for the town to achieve these things because we have this great inexpensive high speed ervice even it were a breakeven it would be good for the towns.

Chairman O'Rourke said that he would like to suggest if we are taking a vote on this we are all in agreement that we would like a study and public communications with differing opinions on the timing of those issues. Chairman O'Rourke stated that the reason he is biased to a study is that his lack of knowledge in the area and to get a room of people excited about this if you cannot answer their questions can be deflationary. Mr. Talbot suggested coming up with a scope. The industrial zone and the depot what would a service offering cost just for the Town of Reading with something equivalent in North Reading and Wilmington. The question for the consultant is what it would take to provide service to the businesses in the industrial zone. A consultant could ball park it from an engineering perspective what would that involve and cost. Mr. Pacino suggested having an Ad Hoc Committee consisting of two members to come up with a recommendation at the next meeting. The committee will consist of Mr. Pacino and Mr. Talbot. Chairman O'Rourke suggested that Ms. O'Brien be a part of this. Mr. Pacino said that right now conceptually we are creating the universe and is not sure if we are not seeing the trees from the forest.

Chairman O'Rourke asked Ms. O'Brien if that is reasonable. Ms. O'Brien said that you need to identify what is potentially viable in order for people to get on board, because people are not sure what it is they are going to get. If a study is performed it can be set up in phases. The first phase is what the consultant sees as the opportunity given the existing infrastructure and what the main objectives are. The result could come back stating that it is not cost effective or these are the directions you could go in.

Mr. Pacino made a motion seconded by Mr. Stempeck that the commission appoint an Ad Hoc Committee to look into the general issue of fiber, members being Mr. Pacino and Mr. Talbot and will report back at the next meeting in which that committee will terminate.

Motion carried 5:0:0.

Approval of Board Minutes May 28, 2015 and June 25, 2015

Mr. Pacino made a motion seconded by Mr. Stempeck that the RMLD Board of Commissioners approve the Regular Session meeting minutes of May 28, 2015 and June 25, 2015 as presented.

lotion carried 5:0:0.

General Manager's Report – Ms. O'Brien – General Manager Organizational and Reliability Studies Recommendations Update

Ms. O'Brien stated that the National Public Power Week celebration for the RMLD is Thursday, October 8 at RMLD 2:00 pm to 5:00 pm. She mentioned at the CAB meeting as well that the format will be different, less focus on construction with more on new programs, rebates and offerings. There will be electric cars from area dealers with charging station samples similar to the ones RMLD installed at Analog. There will be a number of activities and games for the children from two to eight years old. There will also be safety and conservation tips as well as dunk the manager. Ms. O'Brien stated that Ms. Gottwald and Ms. Lamson have been working hard preparing for this event as well as the volunteers. There were be a Candyland maze for children which they will learn about electricity from construction to the home.

Chairman O'Rourke asked what would be the expectation for Board support. Ms. O'Brien said that in the last couple of years several Board members have been able to make this event, the public likes to see you and it is great to network. Ms. O'Brien stated that the committee did a really efficient job of getting this together.

Ms. O'Brien reported on the update of the Organizational and Reliability Study. Ms. O'Brien stated that on the Organizational Study some of the timeframes have been extended for implementation given all the work and staffing being worked on. Aligning Customer Service under the Integrated Resources Group has been completed. Ms. O'Brien said that Mr. Chrisos brought up a very good point at the CAB meeting and the reason the results of the Organizational Study are not on a formal timeline, "Changing the Corporate Culture" because it is very difficult to come up with a timeline for that. Generally the RMLD has accepted everything Leidos has recommended. Ms. O'Brien said that we have committed to quarterly updates on the Organizational Study Implementation Timeline. Ms., O'Brien stated that RMLD is sending Career Development Plans to Leidos, because the job descriptions are twenty years old. Ms. O'Brien said that wage markets they are looking at need to align with the correct job descriptions, the right people performing the correct activities, training and space allocations. A lot of what is happening is in parallel. Ms. O'Brien said that the Workforce Development plan is going to take longer than quarter three of 2015 as suggested by Leidos because it ties into other activities.

Chairman O'Rourke asked about the Strategic Plan. Ms. O'Brien indicated that a new strategic plan will be part of Phase II of the change management piece. Ms. O'Brien said that some of the organizational structures that were recommended have already been put in place, Customer Service reports to Integrated Resources was effective September 1 and is going well. Mr. Hennessy asked where Customer Service reported to prior to this. Ms. O'Brien responded under Finance, Business/Accounting.

. As. O'Brien stated that Mr. Jaffari will be reporting on the quarterly Reliability update.

Mr. Jaffari reported that there were seventy one recommendations in which forty five were suggested by Booth & Associates and twenty six by UPG to test substations. The RMLD accepted sixty one of the recommendations or eighty six percent. The other ten the RMLD has chosen to take another route which are deemed alternate recommendations. The reason for the alternate recommendations is that construction limitations had changed at Station 3 and Station 4. Due to custom limitations at Station 3 and Station 4 the suggested changes are not possible without major construction and duct bank construction which is very costly with minimal gain. The alternate solution for that would be the new Wilmington substation which will provide load relief for Station 3 and Station 4 which can achieve the goal for now by transferring the load of the feeders to keep the cables within thermal ratings. Further testing is required to evaluate Station 5 which was a recommendation which is at the end of its useful life which reinforces the need for the new Wilmington substation. The following aforementioned reasons are the reason why RMLD chose the alternate solution. Alternate solutions there were ten of them which seven of them call for upgrading the feeders. Two of these are related to Station 5 upgrades and one is relay capability at Station 3, the RMLD already has the capability. System wide the RMLD needs to meet the new ISO requirements for compliance. The work in progress and completions status nineteen of the seventy one of the recommendations are in progress or planning stage. Eight of the seventy one are completed that include the repairs at Stations 3, 4 and 5. The RMLD is making progress.

Mr. Stempeck clarified that there is a price tag associated with the projects as well have these costs been incorporated in the capital budget. Mr. Jaffari replied that the costs are included in the capital budget for fiscal year 2016. Some of the costs may come in lower and some higher.

Chairman O'Rourke said that he wanted to compliment Ms. O'Brien and the team on both reports to have the follow up format to the studies assists in accountability and actions. Chairman O'Rourke asked if there is a target date for the items in progress by time lining them. Mr. Jaffari responded that the items in progress most of them will be completed by year end. Mr. Jaffari provided the example of the Implementation of the Arc Flash Study Analysis this has been completed and are waiting to take the recommendations to the 'afety Committee next week. Once the recommendation and operational procedure is approved by the committee it will be forwarded the General Manger for implementation. Ms. O'Brien said that what Mr. Jaffari is saying is that when they made a recommendation to be accomplished in that timeframe we accepted it. Ms. O'Brien asked Chairman O'Rourke if he is looking for a more detailed timeline. Chairman O'Rourke said that he was looking for internal management because sometimes implementation gets delayed. Ms. O'Brien said that for the next quarterly update she will take the year and if it is within 2015 to 2016 it will be narrowed down.

General Manager's Report – Ms. O'Brien – General Manager Organizational and Reliability Studies Recommendations Update

Mr. Talbot asked what the \$11 million for distributed generation would buy. Ms. O'Brien responded that is what we discussed in the budget that it would be \$2 million annually if we were to buy peak shaving gas generators. We were only going to start with a pilot which we are still in the process of studying it. Mr. Talbot said that one could be battery or something else. Mr. Jaffari explained that they are putting the road map together which includes the distributed generation gas peaking units, battery storage, solar and demand response. Ms. O'Brien said that will be on another agenda to provide the analysis. Chairman O'Rourke clarified, does this get shared with the employees at large, how does this get pushed down. Ms. O'Brien responded that staff meetings and a holistic approach has been implemented

Engineering and Operations Report as well as the bids were taken out of order.

Engineering and Operations Report – July 2015 – Mr. Jaffari (Attachment 1)

Mr. Jaffari reported on the capital improvement projects for July.

The construction projects that include the Pole Line Upgrade – Lowell Street, Wilmington eighty percent complete, Upgrade – Cooks Farm, Lynnfield, seventy percent complete, Forced Account – West Street ninety percent complete.

The special projects capital purchases for the month of July include: the oil containment facilities forty percent completed and LED streetlight conversions 420 installed out of the 2,540 that was targeted for fiscal year 2016. For Routine construction RMLD has spent \$109,975 year to date, routine maintenance consists of seven maintenance programs. The maintenance program includes (1) transformer replacement program of which 12% of padmount transformers and 9.93% of overhead transformers have been replaced; (2) Pole inspection program, which 119 poles have been replaced; (3) visual inspection program included inspection of 20 feeders; (4) Manhole inspection program is being performed as part of our UG construction upgrades throughout four communities; (5) Porcelain Cutout Replacement program(90% completed); (6) Tree Trimming Program (317 spans completed); (7) Substation program, which routine maintenance completed; and Infrared Scan showed no hotspot at substations. The total of double poles system wide were 498 (39 in Lynnfield, 134 in Reading, 127 North Reading and 134 in Reading) of which 64 pole transfers have been completed. RMLD is using the NJUNS software that allows this data to be shared with other utilities sharing space on poles to be aware of pole transfer activities and proper scheduling. The double pole numbers will fluctuate because RMLD is doing a lot of constructions and upgrades o maintain system reliability. Chairman O'Rourke asked if there is a double pole and it is risky. Mr. Jaffari explained that the RMLD has tested six hundred and forty poles. The inspection report indicated that forty five to fifty of those failed the integrity test, which they were all replaced immediately.

Mr. Jaffari reported on the System Average Interruption Duration Index, Customer Average Interruption Duration Index, System Average Interruption Frequency Index are well below the national and regional average. Mr. Jaffari reported on the causes of outages for July with the major drivers being equipment 41%, tree 27% and wildlife 22%.

MGL Chapter 30B Bids (Attachment 2)

IFB 2016-02 Preventative Maintenance and Repair Services for all HVAC Equipment, including Ice Machines, Plant Wide Mr. Jaffari reported that the ice machines in the cafeteria and the lineman area are part of this with the majority for the maintenance of the HVAC system. Mr. Talbot asked what this includes. Mr. Jaffari responded that this includes the maintenance of the HVAC system, parts, labor for the HVAC and the ice machine which is a three year contract. Chairman O'Rourke asked if this is a service agreement. Mr. Jaffari replied that it is a service contract for maintenance. Ms. O'Brien added that this is for boilers, chillers and air handlers.

Mr. Pacino said that for full disclosure, his younger brother sells ice machines for Hoshizaki in the event they are the distributor.

Mr. Talbot asked how the Town of Reading Town Hall handles similar maintenance. Ms. O'Brien said that she could look into this, they may have a service contract or have their own HVAC mechanics in their facilities department. Mr. Talbot said that he maintains his own at home. Mr. Jaffari explained that the contract includes maintenance and service calls. The labor is not covered.

Mr. Talbot asked how is has been followed to date. Mr. Jaffari replied that Ambient had the prior contract and are the lowest bidder.

Mr. Pacino made a motion seconded by Mr. Stempeck that 2016-02 for Preventative Maintenance and Repair Services for all HVAC Equipment, including Ice Machines, Plant Wide be awarded to Ambient Temperature Corporation for a total cost of \$71,368.00 as the 'owest qualified and responsive bidder on the recommendation of the General Manager.

lotion carried 4:0:1. Mr. Pacino abstained.

IFB 2016-07 S&C SCADA-Mate CX Switch

Mr. Jaffari explained that these are the SCADA switches which are part of the grid modernization that fit into the long term road map. Two to three will be put in on an annual basis for the SCADA system. Chairman O'Rourke asked how many switches the RMLD will receive from this bid. Mr. Jaffari replied two.

MGL Chapter 30B Bids (Attachment 2) IFB 2016-07 S&C SCADA-Mate CX Switch

Mr. Pacino made a motion seconded by Mr. Stempeck that bid 2016-07 for S&C SCADA-Mate CX Switch be awarded to Yale Electric East LLC for a total cost of \$55,748.00 as the lowest qualified bidder on the recommendation of the General Manager. **Motion carried 5:0:0.**

IFB 2016-08 Relay Test Set

Mr. Jaffari explained that the RMLD set up the Technical Services group and this equipment will be needed by this group for testing the relays. The RMLD does not have any equipment to test the relays. Training will be provided for the Technical Services group which will result in substantial savings because the work will be done in house. Mr. Jaffari explained that RMLD utilizes UPG for its substation testing at a cost of \$150,000 annually. The RMLD will be able to perform ninety percent of its testing in house. The other unit purchased to assist in the testing was \$80,000 the avoided costs will be \$130,000.

Mr. Pacino asked that the budgeted amount was \$100,000 is there any more that needs to be done. Mr. Jaffari responded that before an item is placed on the budget, calls are made and that pricing is used for budgetary purposes. Mr. Jaffari said that this came in below budget.

Mr. Pacino made a motion seconded by Mr. Stempeck that bid 2016-08 for Relay Test Set be awarded to Omicron for a total cost of \$51,640.00 as the lowest qualified bidder on the recommendation of the General Manager.

Motion carried 5:0:0.

IFB 2016-09 60KW Diesel Substation Generator with 400 AMP Automatic Transfer Switch

Mr. Jaffari explained that this generator is required for the Gaw Substation, Station Four. If the feeder and substation is lost, the control bus will be in the dark which would result in the control system not to function. There is a generator required that is independent of the power supply. The budgeted amount was \$107,087.

Mr. Stempeck asked if the power goes out does the equipment need to be manually performed. Mr. Jaffari replied that the problem is that you cannot operate anything. Usually, when you design a substation, if everything is dead how do you get into the control house. Mr. Chrisos asked do the other substations have a generator. Mr. Jaffari responded that the other substations have generators. Mr. 'affari said that when RMLD builds a substation in Wilmington it will have generators.

Mr. Pacino made a motion seconded by Mr. Stempeck that bid 2016-09 for 60KW Diesel Substation Generator with 400 AMP Automatic Transfer Switch be awarded to Authorized Services of New England for a total cost of \$30,235.00 as the lowest qualified bidder on the recommendation of the General Manager.

Motion carried 5:0:0.

IFB 2016-10 Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration

Mr. Jaffari explained that this bid is being awarded in the event of extreme emergencies, when the region is in trouble when power system restoration assistance is required. Mr. Jaffari stated that he wanted to secure someone in the event that RMLD needs assistance. Obviously, the first line of defense is to call mutual aid to assist our crews. If the mutual aid does not provide the resources because such resources are taking care of power restoration in their own communities. This will not cost RMLD anything, the RMLD will secure the price. Chairman O'Rourke asked if RMLD gets priority. Mr. Jaffari said that Eversource and National Grid already have all the contractors in the region hired and pay them to be on standby. Mr. Jaffari said that this contractor will call five hours before the storm to see if RMLD needs crews and will be secured. This is an insurance policy for major emergencies or disasters.

Mr. Stempeck asked why only one bidder. Mr. Jaffari said that because the other vendors are paid the standby fee by Eversource or National Grid. With this bid we do not pay standby. There is a stipulation with this bid that they have to be available in an hour. Mr. Jaffari explained that the non responsive bidders were called was not sufficient time because they pull the linemen from the union hall it would take two to three hours. Mr. Jaffari added that if you had gone for two to three hours response time then there would have been more response by perhaps five to six bidders. The pricing provided by this bidder is within the range.

Mr. Pacino asked since we need this service during an emergency the viability of this company has been checked out and there is no concern that they will not show up. Mr. Jaffari responded that he tested them, because he called the cell phone of the foreman and he called him right back. They have seven trucks, checked the reference and they are a reputable company. They have both underground and overhead work experience.

IFB 2016-10 Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration Mr. Pacino made a motion seconded by Mr. Stempeck that bid 2016-10 for Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration be awarded to Maverick Construction Corporation as the lowest qualified bidder on the recommendation of the General Manager.

Motion carried 5:0:0.

Power Supply Report – July 2015 – Ms. Parenteau (Attachment 3)

Ms. Parenteau reported that the real time clearing prices were looked at, the three year interval, July 2013-2015. The real time prices within the Independent System Operator (ISO) New England Spot Market have declined significantly. That is reflected within RMLD's portfolio in the Fuel Charge, the purchase power is a pass through RMLD's consumers. July 2014 versus July 2015 the Fuel Charge dropped from six cents to five cents. RMLD's customers received a reduction of seventeen percent in fuel from one year to another, it is a pass through for the consumers.

Ms. Parenteau pointed out that the power supply market has evolved to the point where there is negative pricing. Generators are being paid to be shut off. One of the big factors is the influx of wind turbines which are on the ISO grid. Wind is interruptible, once it is blowing it causes the controllers not to have the ability to shut certain generators off. As a result of minimum run time, the characteristics of generators and nuclear units, cannot be shut off once they are on because they run continuously. Now the RMLD is faced with negative pricing, load actually gets paid if you have an open position pay us to increase our load. This typically occurs during the off peak hours. The industry is changing and the RMLD is adapting as well as monitoring these things. Mr. Talbot asked where RMLD's battery is. Ms. Parenteau said that she wanted to point that out to the Commissioners because it is something that has never been experienced.

Ms. Parenteau then addressed the day ahead versus real time pricing. Ms. Parenteau explained that the RMLD tries to purchase its load in the day ahead market which tends to stabilize the rates. In the real time market more volatility is experienced. This happens when there are excessive hot cooling degree days when consumers are putting on their air conditioners. A generator may trip as a result of the increased load and becomes unavailable. The ISO will at this point turn on a higher price unit which increases the real time Locational Marginal Pricing. This is related to weather and load.

Mr. Stempeck commented that the RMLD went down seventeen percent reduction, there was an article in *The Boston Globe* in which National Grid expects a twenty percent rate hike. Mr. Stempeck stated that the RMLD is being very judicious in purchasing its power in which RMLD customers reap the benefit. Ms. Parenteau reported that she spoke to a Lynnfield resident who asked since gas prices are decreasing why this is not reflected in their electricity bill. Ms. Parenteau said that it was an interesting conversation to educate our customers that it is the fuel used to fuel a generator, it is not a straight commodity pass through. Also, with all the ISO rules in place, capacity, transmission and fuel the RMLD has to maintain a certain portfolio and are responsible to meet its obligations. Ms. Parenteau noted that although natural gas prices have dropped by fifty percent, the RMLD does whatever it can to reduce power upply costs. Since the price of natural gas has fallen in pricing by half the RMLD can capture that but, it is a very complex model with a lot of input. Ms. Parenteau said that it is helpful if our consumers understand that purchase power is a pass through where the RMLD minimizes those costs the best it can and the RMLD does not make any money on that, it is a pass through.

Ms. Parenteau then addressed the July peaks for the period 2011 to 2015. In 2011, the peak was 170 megawatts which is attributable to the economy rebounding and it was a very hot summer. Heat drives the peak. This past July RMLD's peak was 156 megawatts. Ms. Parenteau explained factors that are attributable to the peak which include weather, efficiencies and solar. Ms. Parenteau said that the trend is going down which is positive in terms of RMLD's capacity and transmission costs.

Mr. Talbot asked if the July peak is our annual peak. Ms. Parenteau replied that the RMLD peaked in August this year.

Mr. Seldon reported that at the RMLD Board meeting in June a question was raised what the impacts of creating an opt out for the Residential Time of Use Rate as opposed to RMLD's current opt in rate.

Time of Use Rate Discussion - Mr. Seldon

Mr. Seldon explained that RMLD's current Residential Time of Use Rate provides its residential customers the opportunity to reduce their billing by utilizing electricity during RMLD's off peak hours. This opt in for the Residential Time of Use rate would affect 25,000 residential customers with the ability to opt out. There are currently four hundred customers on the Time of Use Rate. Mr. Seldon pointed out that he reached out to the American Public Power Association (APPA) as part of his research. Currently, no New England utilities offer an opt out for this rate. Mr. Seldon said that in California there are areas that are considering this rate option. The Sacramento Municipal Utility District who is a member of APPA performed a pilot program on the opt out Time of Use and has checked with APPA for some data on this, but has not received anything data back.

Mr. Seldon stated that he contacted other municipals as well as Power Line Models (PLM), the firm that conducted the Cost of Service Study.

Mr. Seldon said that PLM's resident expert, Mayhew Seavey who did conduct RMLD's Cost of Service Study noted that for the opt at for the Residential Time of Use option, you are talking about customer behavior not just simple economics you are peeling away a sample in which you have no data. Mr. Seldon said that beyond the RMLD, municipals are looking at this, it is in the infancy stage. Mr. Seldon reported that to adopt the opt out rate from a financial standpoint, the RMLD currently does not have the metering in place to capture the hourly meter, the cost to change out the meters would be a \$2.5 million expenditure. The labor costs would be \$700,000 with \$100,000 for the network upgrade. The administrative and Cogsdale billing costs, have not been looked at. This would be a significant cost outlay.

Time of Use Rate Discussion - Mr. Seldon

Mr. Seldon said that the last piece is what would be the effects on revenue, there is not much data that could be utilized therefore assumptions were made. One of the assumptions was to look at the on and off peak kilowatt hour usage for the four hundred sustomers currently using this rate. Using that spread he pulled out the kilowatt hours from the residential rate class and split that up into the on and off peak usage into the revenue model. This represents a \$1.7 million shortfall in the base revenues. There would have to be a means to make up for that \$1.7 million shortfall. Raising rates in the other customer classes may be an avenue to achieve this shortfall. Chairman O'Rourke clarified on the opt in if the customer does not use electricity during peak periods, how does it work. Mr. Seldon stated that if you opt in for the Residential Time of Use rate from noon to 7:00 pm is the on peak period, the consumer is penalized for using during this timeframe. The locational marginal prices can be higher during the day if the customer shifts the usage off during the peak period, it rewards the customer for not using electricity during this period. Ms. Parenteau commented that on peak power is approximately four times higher than off peak. Mr. Talbot added the cost is five cents on peak and thirteen cents off peak.

Mr. Talbot commented that the opt out for the Residential Time of Use was his request. Mr. Seldon explained that with this new rate if a typical customer did not change their usage pattern with the majority of the kilowatt hours being utilized on peak.

Mr. Talbot said that the question he had asked that currently there are only four hundred residential customers in this program that has been heavily promoted, what would happen if we forced residential customers onto the Time of Use Rate. It would force customers to change their behavior, would it benefit the system by scaling it or is it a program to have for the four hundred customers. The theory is that it benefits the RMLD why are we not scaling it. Chairman O'Rourke asked how we get more opt in customers. Mr. Talbot said that what has been learned from the research is that done anywhere and there is no data available if the opt in is a rate. Ms. Parenteau added that real time pricing is something that could be on the horizon for pricing signals.

Mr. Chrisos asked if it is four hundred residential customers and how is the Residential Time of Use promoted? Mr. Seldon said that this rate is on RMLD's website. Ms. Parenteau said that this rate has been advertised in RMLD's *In Brief* and the Customer Service group does a great job when speaking with customers to promote this program. Ms. Parenteau said that they will go the libraries during the evening for presentations on its programs and cable television. They are looking at grass root efforts to promote this.

Mr. Stempeck added that if all residential customers were to choose this rate the capital costs would be \$3 million plus the loss of evenue. Mr. Seldon pointed out that the \$1.7 million which is the base revenue has to be covered by other customer classes. Mr. Stempeck said that what is the point of moving everyone over to the Residential Time of Use rate then have to increase their rates. Mr. Pacino said that the revenue could be lower as well as the cost. Mr. Hennessy added that the peak rates would drop due to the behavior of the customers. Ms. Parenteau in response to Mr. Hennessy's comment said that would affect the pass through costs, but the base revenues reflect RMLD's operating costs. Ms. Parenteau commented that the purchase power cost would decrease, but would need to recover the base revenue in order to operate. Mr. Chrisos added that the base load would decrease which is the peak demand which is a big cost. Mr. Seldon said that if you were successful the conudum is if you are too successful, which California utilities are experiencing with it shifted the load to the off peak. Mr. Hennessy said that he spoke with a solar expert because of this solar panels are put in facing the west to get the sun later in the day. Mr. Seldon added that battery storage goes along with this.

Financial Update – Mr. Fournier

Mr. Fournier reported on Governmental Accounting Standards Board 68 (GASB 68) which concerns the accounting and financial reporting for pensions. RMLD's auditors have not had the opportunity to look at pension valuation for the town therefore the audit results will be presented at the Board meeting in October. The unfunded accrued liability will be reflected on RMLD's balance sheet for audited financial statements which will be completed in early October. The preliminary results demonstrate that RMLD has \$11 million of unfunded pension liability. The preliminary number reflects that RMLD has \$5.5 million in the pension trust as of June 30, 2015. In fiscal year 2015, there may be a small profit and loss effect due to GASB 68 which is immaterial. Once the auditors complete with the town if the adjustment is required.

Chairman O'Rourke asked how much the unfunded liability is. Mr. Fournier replied \$11 million based on the 2013 study. Chairman O'Rourke asked when this will be fully funded. Mr. Fournier replied by 2028. Mr. Fournier said that the RMLD will most likely follow the same schedule to be in sync with the town.

Mr. Fournier then addressed the fiscal year 2015 highlights. The Net Income \$2.5 million which represents at 5.7% of the possible 8% return. The kilowatt hour sales were flat. The cash position is strong. There is \$14.5 million in the Operating Fund, \$6.8 in the Rate Stabilization Fund, \$5.2 million in the Deferred Fuel Fund.

.r. Fournier pointed out that since fiscal year 2015 has not been closed out he does not have the July Financials. Mr. Fournier has results for the month of July. The profit is approximately \$282,000 the pass through amounts for the fuel, purchase power and transmission were \$525,000, where expenses exceeded the revenue.

Mr. Fournier noted that August and September were the warmest months of the year and will have those results next month.

Financial Update - Mr. Fournier

Chairman O'Rourke asked, this is a go forward question, what other opportunities can the Board get on signals if there were a significant downturn because the Financials are delayed. Mr. Fournier explained that every month the books are closed and there is a neeting with senior staff to discuss RMLD's financial position. An example of this is if the trending is a cool summer and the budgeted base numbers are not being met instead of waiting until the spring something would happen over the fall to correct this situation. Any unique situations are looked at and revisited in the following month.

Mr. Fournier reported as it has been stated, the kilowatt hour sales compared to last year are down. It is a little less than budgeted and will wait to see how September comes in. Once the first few months of the fiscal year come in we can make a better determination n where we stand.

General Discussion

There was none.

BOARD MATERIAL AVAILABLE BUT NOT DISCUSSED

E-Mail responses to Account Payable/Payroll Questions

Rate Comparisons, August and September 2015

Mr. Stempeck said that with the exception of Peabody, RMLD is below all the other contiguous towns.

RMLD Board Meetings

Thursday, October 29, 2015 Thursday, December 10, 2015

General Manager Committee

Thursday, October 14, 2015

Policy Committee Meeting

To Be Determined.

CAB Meeting

Wednesday, October 21, 2015 – Commissioner Pacino will cover this meeting.

Executive Session

At 9:18 p.m. Mr. Pacino made a motion seconded by Mr. Stempeck that the Board go into Executive Session to approve Executive Session meeting minutes of June 25, 2015, discuss strategy with respect to collective bargaining, Verizon pole agreement and return to Regular Session for the sole purpose of adjournment.

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

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

Motion carried by a polling of the Board 5:0:0.

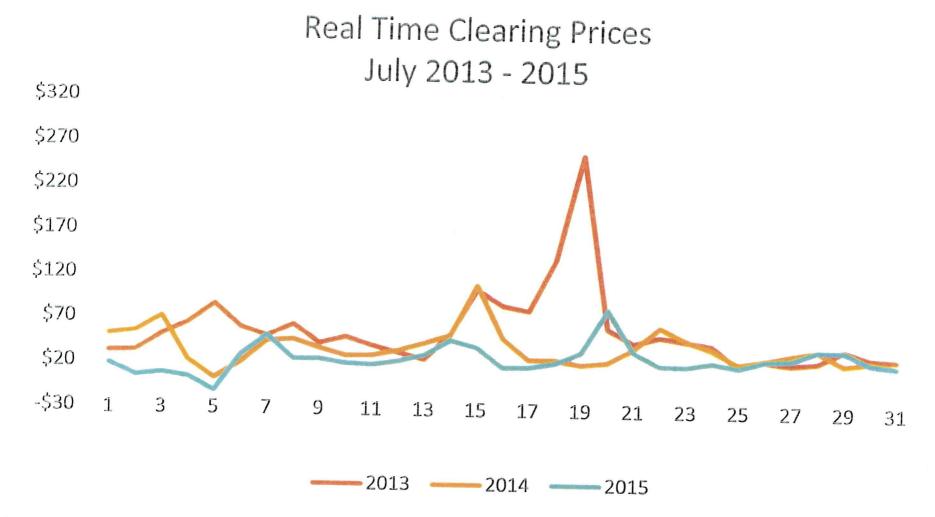
Adjournment

At 10:10 p.m. Mr. Pacino made a motion seconded by Mr. Stempeck that the RMLD Board of Commissioners move to adjourn the Regular Session.

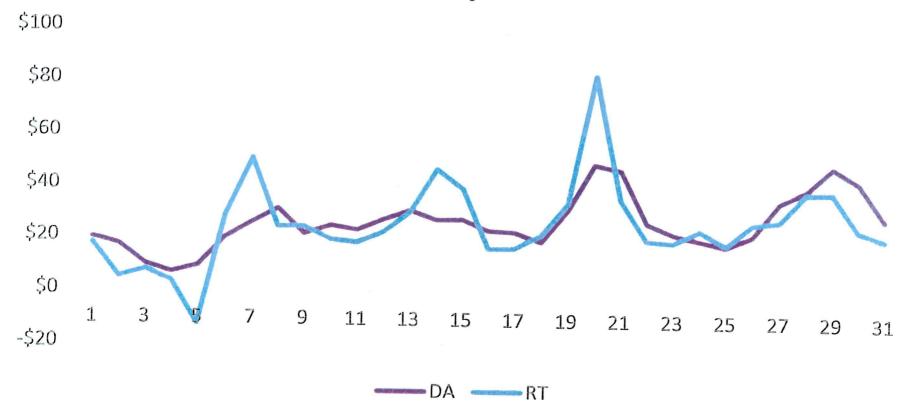
Motion carried 5:0:0.

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

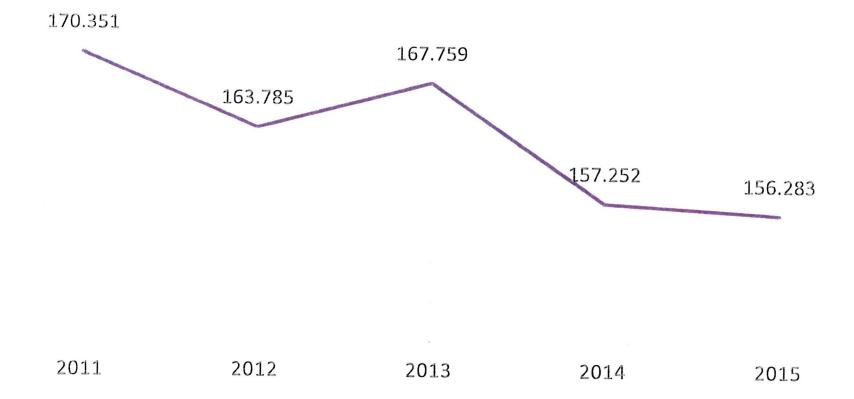
Dave Hennessy, Secretary Pro Tem RMLD Board of Commissioners



Day Ahead vs. Real Time Pricing July 2015



Historical Peak Demand (mW) for July 2011 - 2015



To:

Coleen O'Brien

From:

Maureen McHugh, Jane Parenteau

Date:

September 3, 2015

Subject:

Purchase Power Summary - July, 2015

Energy Services Division (ESD) has completed the Purchase Power Summary for the month of July, 2015.

ENERGY

The RMLD's total metered load for the month was 72,139,379 kWh, which is a .57% decrease from the July, 2014 figures.

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

Table 1

Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy	Total \$ Costs	\$ as a %
Millstone #3	3,674,197	\$6.71	5.09%	\$24,654	0.71%
Seabrook	5,881,768	\$6.69	8.15%	\$39,326	1.13%
Stonybrook Intermediate	4,702,416	\$31.80	6.52%	\$149,519	4.28%
Shell Energy	16,072,400	\$71.82	22.27%	\$1,154,271	33.05%
NextEra	11,630,000	\$59.52	16.12%	\$692,237	19.82%
NYPA	1,842,999	\$4.92	2.55%	\$9,068	0.26%
ISO Interchange	1,847,004	\$66.12	2.56%	\$122,132	3.50%
NEMA Congestion	0	\$0.00	0.00%	-\$56,503	-1.62%
Coop Resales	20,114	\$153.52	0.03%	\$3,088	0.09%
BP Energy	12,378,800	\$47.73	17.15%	\$590,840	16.92%
Hydro Projects*	2,140,659	\$92.93	2.97%	\$198,936	5.70%
Braintree Watson Unit	329,456	\$16.03	0.46%	\$5,283	0.15%
Saddleback Wind	152,255	\$76.93	0.21%	\$11,713	0.34%
Exelon	11,491,000	\$47.72	15.92%	\$548,386	15.70%
Stonybrook Peaking	0	\$0.00	0.00%	\$0	0.00%
Monthly Total	72,163,068	\$48.40	100.00%	\$3,492,950	100.00%

^{*}Pepperell, Woronoco,Indian River,Turner Falls,Collins, Pioneer,Hosiery Mills, Summit Hydro

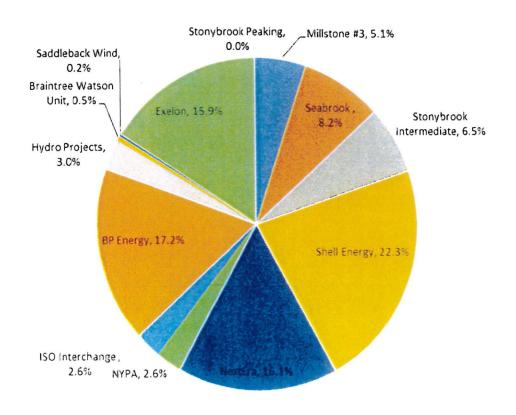
Table 2 breaks down the ISO interchange between the DA LMP Settlement and the RT Net Energy for the month of July, 2015.

7

Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy
ISO DA LMP * Settlement	3,081,929	32.70	4.27%
RT Net Energy ** Settlement	-1,234,574	20.71	-1.71%
ISO Interchange (subtotal)	1,847,355	66.11	2.56%

^{*} Independent System Operator Day-Ahead Locational Marginal Price

JULY 2015 ENERGY BY RESOURCE



^{**} Real Time Net Energy

CAPACITY

The RMLD hit a demand of 158,283 kW, which occurred on July 20, at 4 pm. The RMLD's monthly UCAP requirement for July, 2015 was 222,905 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	34.69	\$171,720	11.18%
Seabrook	7,910	39.35	\$311,219	20.26%
Stonybrook Peaking	24,981	1.82	\$45,543	2.96%
Stonybrook CC	42,925	7.65	\$328,414	21.38%
NYPA	4,019	4.19	\$16,834	1.10%
Hydro Quebec	0	0	\$17,673	1.15%
Nextera	60,000	5.90	\$354,000	23.04%
Braintree Watson Unit	10,520	10.86	\$114,258	7.44%
ISO-NE Supply Auction	65,598	2.69	\$176,550	11.49%
Hydro Projects	2,002	0.00	\$0	0.00%
Total	222,905	\$6.89	\$1,536,212	100.00%

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

				Table 4			Cost of
					% of	Amt of Energy	Power
	Resource	Energy	Capacity	Total cost	Total Cost	(kWh)	(\$/kWh)
	Millstone #3	\$24,654	\$171,720	\$196,374	3.90%	3,674,197	0.0534
	Seabrook	\$39,326	\$311,219	\$350,545	6.97%	5,881,768	0.0596
	Stonybrook Intermediate	\$149,519	\$328,414	\$477,934	9.50%	4,702,416	0.1016
	Hydro Quebec	\$0	\$17,673	\$17,673	0.35%	-	0.0000
	Shell Energy	\$1,154,271	\$0	\$1,154,271	22.95%	16,072,400	0.0718
	NextEra	\$692,237	\$354,000	\$1,046,237	20.80%	11,630,000	0.0900
*	NYPA	\$9,068	\$16,834	\$25,901	0.52%	1,842,999	0.0141
	ISO Interchange	\$122,132	\$176,550	\$298,682	5.94%	1,847,004	0.1617
	Nema Congestion	-\$56,503	\$0	-\$56,503	-1.12%	-	0.0000
	BP Energy	\$590,840	\$0	\$590,840	11.75%	12,378,800	0.0477
×	Hydro Projects	\$198,936	\$0	\$198,936	3.96%	2,140,659	0.0929
	Braintree Watson Unit	\$5,283	\$114,258	\$119,540	2.38%	329,456	0.3628
*	Saddleback Wind	\$11,713	\$0	\$11,713	0.23%	152,255	0.0769
	Coop Resales	\$3,088	\$0	\$3,088	0.06%	20,114	0.1535
	Exelon Energy	\$548,386	\$0	\$548,386	10.90%	11,491,000	0.0477
	Stonybrook Peaking	\$0	\$45,543	\$45,543	0.91%	-	0.0000
	Monthly Total	\$3,492,950	\$1,536,212	\$5,029,161	100.00%	72,163,068	0.0697

^{*} Renewable Resources

RENEWABLE ENERGY CERTIFICATES (RECs)

Table 5 shows the amount of banked and projected RECs for the Swift River Hydro Projects through July 2015, as well as their estimated market value.

Table 5
Swift River RECs Summary
Period - January 2015 - July 2015

	Banked RECs	Projected RECs	Total RECs	Est. Dollars
Woronoco	0	2,098	2,098	\$100,704
Pepperell	0	3,863	3,863	\$185,424
Indian River	0	2,165	2,165	\$103,920
Turners Falls Sub total RECs Sold	<u>0</u> 0	<u>1,185</u> 9,311	1,185 9,311 0	\$0 \$390,048 \$0
Grand Total	0	9,311	9,311	\$390,048

TRANSMISSION

The RMLD's total transmission costs for the month of July, 2015 were \$1,180,976. This is increase of 7.91% from the June transmission cost of \$1,094,390. In July, 2014 the transmission costs were \$1,238,157.

Table 6

	Current Month	Last Month	Last Year
Peak Demand (kW)	156,283	133,390	157,252
Energy (kWh)	72,163,068	60,483,802	72,817,931
Energy (\$)	\$3,492,950	\$2,572,724	\$3,287,590
Capacity (\$)	\$1,536,212	\$1,439,583	\$1,397,243
Transmission(\$)	\$1,180,976	\$1,094,390	\$1,238,157
Total	\$6,210,137	\$5,106,698	\$5,922,990

Engineering & & Operations Report

September 24, 2015, RMLD Board of Commissioners Meeting

July 2015 Reporting Period

Hamid Jaffari, Director of Engineering & Operations

Capital Improvement Projects

Construction Projects

- Pole Line Upgrade Lowell Street Wilmington 80% complete
- Upgrade Old Lynnfield Center URDs (Cook's Farm) 70% complete
- ➡ West Street Force Account, Reading 90% complete

Special Projects/Capital Purchases

- Oil Containment Facility Construction 40% Complete
- LED Street Light Conversion 420 (of 2,450) installed as of 9/6/15

■ Routine Construction

July: \$109,975

YTD: \$109,975

Routine Maintenance

Transformer Replacement

Pad mount 12.18%

Overhead 9.93%

Pole Inspection

119 poles have been replaced 64 of 119 transfers have been completed

Double Poles

Total # of Double Poles: 498

Pending RMLD Transfer: 51

Lynnfield – 39 Reading – 134 North Reading – 127

Wilmington - 198

Visual Inspection of OH Lines

Inspected circuits 5W8, 5W9, 5W5, 4W10, 5W4, 4W28, 4W5, 4W6, 3W8, 3W18, 4W13 (as of September 15,

Routine Maintenance (continued)

Manhole Inspection

Pending

Porcelain Cutout Replacements

90% complete

279 remaining to be replaced

Tree Trimming

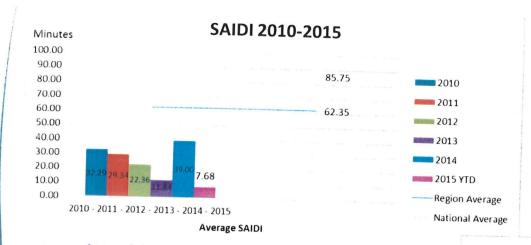
July: 317 spans

YTD: 317 spans

Substation Maintenance

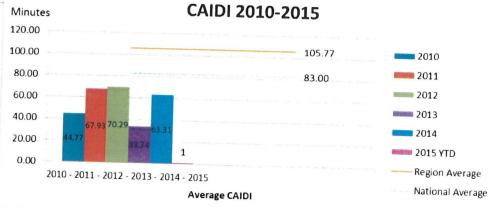
Infrared Scanning – July complete - no hot spots found

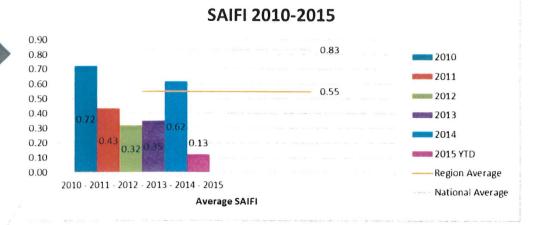
Reliability exceeds regional and local indices . . .

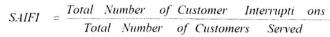


 $SAIDI(Minutes) = \frac{Total\ Duration\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Served}$

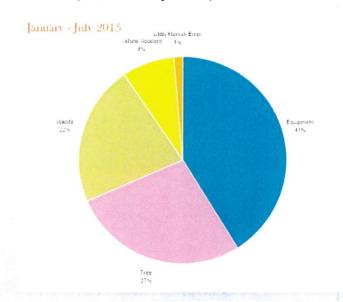








Outages Causes Calendar YTD (from eReliability website)



Outage Cause	Count
Equipment	30
Tree	20
Wildlife	16
Vehicle Accident	6
Utility Human Error	
Total	73

Questions?



READING MUNICIPAL LIGHT DEPARTMENT FY 15 CAPITAL BUDGET VARIANCE REPORT FOR PERIOD ENDING JULY 31, 2015

PROJ	DESCRIPTION	TOWN	ACTUAL COST JUL	YTD ADDITIONS	ANNUAL BUDGET	REMAINING BALANCE
600-0000 M	CONSTRUCTION:					
101	5W9 Reconductoring - Ballardvale Area	W			100,000	100,000
102	Pole Line Upgrade - Lowell Street, W	W	14,353	14,353	113,000	98,647
104	Upgrade Old Lynnfield Center URDs (Cook's Farm)	LC	30,449	30,449	42,000	11,551
106	URD Upgrades	ALL			340,000	340,000
107	Step-down Area Upgrades	ALL			352,000	352,000
110	Pole Line Upgrade - Woburn Street, W	W	11.010	44.040	91,000	91,000
212	Force Account West Street SUB-TOTAL	R	44,240 89,042	44,240 89,042	150,000 1,188,000	105,760 1,098,958
	STATION UPGRADES:					
96	Station 4 (GAW) Back-up Generator	R			107,000	107,000
108	Station 4 (GAW) Relay Replacement Project	R			73,000	73,000
109	Station 4 (GAW) Transformer Replacement	R			41,000	41,000
111	Station Equipment Upgrade (all)	ALL			254,000	254,000
112	Station 4 (GAW) Switchgear/Breaker Replacement	R			508,000	508,000
113	Station 4 (GAW) Battery Bank Upgrade	R			57,000	57,000
130	Station 3 - Remote Terminal Unit (RTU) Replacement SUB-TOTAL	NR			94,000	94,000
	SUB-TOTAL			•	1,134,000	1,134,000
	NEW CUSTOMER SERVICES:	***				
112	New Service Installations (Commercial / Industrial)	ALL	44.450	44.450	34,000	34,000
113	New Service Installations (Residential)	ALL	14,452	14,452	164,000	149,548
	SUB-TOTAL		14,452	14,452	198,000	183,548
	ROUTINE CONSTRUCTION:					
114	Routine Construction	ALL	109,975	109,975	1,000,000	890,025
	SPECIAL PROJECTS / CAPITAL PURCHASES:					
100	Distributed Generation	ALL			2,164,000	2,164,000
103	Distribution Protection and Automation	ALL			70,000	70,000
114	Fiber Optic Test Equipment	ALL			15,000	15,000
115	Fault Indicators	aLL			50,000	50,000
116	Transformers and Capacitors	ALL			668,000	668,000
117	Meter Purchases (including "500 Club")	ALL			219,000	219,000
122	Engineering Analysis Software and Data Conversion	ALL			73,000	73,000
125	GIS	ALL			420,000	420,000
126	Communication Equipment (Fiber Optic)	ALL			98,000	98,000
131	LED Street Light Implementation	ALL	15,270	15,270	1,200,000	1,184,730
134	Substation Test Equipment SUB-TOTAL	ALL	15,270	15,270	100,000 5,077,000	100,000 5,061,730
	303-10172		13,270	13,270	3,077,000	3,061,730
0.5	OTHER CAPITAL PROJECTS:	5				
95	230 Ash St Building	R			80,000	80,000
97	HVAC Roof Units - Garage	R			50,000	50,000
98	IRD hardware	R			10,000	
99	Electric Vehicle Supply Equipment	R			50,000	
118	Rolling Stock Replacement	ALL			448,000	10 March 200 Mar
119 120	Security Upgrades All Sites Great Plains / Cogsdale Upgrade	ALL			50,000	
121	HVAC System Upgrade - 230 Ash Street	ALL R			127,000	
123	Oil Containment Facility Construction	LC	4 705	1 705	600,000	and in the second
123	Hardware Upgrades		4,735	4,735	59,000	
128	Software and Licensing	ALL ALL	E 40E	E 400	152,000	
129	Master Facilities Site Plan	R	5,495	5,496	172,000	AL 1985/000-000 NO 1995
136	Voltage Data Recorders	ALL			150,000	
130		ALL			50,000	50,000
	SUB-TOTAL		10,230	10,231	1,998,000	1,987,769

TOTAL CAPITAL BUDGET

\$ 238,968 \$ 238,969 \$ 10,595,000 \$ 10,356,031

READING MUNICIPAL LIGHT DEPARTMENT

Engineering and Operations Monthly Report

July 2015

CAPITAL IMPROVEMENTS

Const	ruction Projects:	% Complete Status	Month	YTD
102	Pole Line Upgrade - Lowell Street, Wilmington	80%	\$14,353	\$14,353
104	Upgrade Old Lynnfield Center URDs (Cook's Farm)	70%	\$30,449	\$30,449
212	West Street – Force Account, Reading	90%	\$44,240	\$44,240
New C	ustomer Service Connections:			
113	Service Installations – Residential: This item includes new or upgraded overhead and underground services.	On-going	\$14,452	\$14,452
Specia	l Projects/Capital Purchases:			
123	Oil Containment Facility Construction	40%	\$4,735	\$4,735
131	LED Street Light Conversion	9%	\$15,270	\$15,270

ROUTINE CONSTRUCTION	Jul	YTD
Pole Setting/Transfers	21,404	21,404
Overhead/Underground	31,879	31,879
Projects Assigned as Required	21,043 9,019	21,043 9,019
damaged poles. Station Group	0	0
Hazmat/Oil Spills	0	0
Porcelain Cutout Replacement Program	1,257	1,257
Lighting (Street Light Connections)	271	271
Storm Trouble	0	0
Underground Subdivisions (new construction)	4,001	4,001
Animal Guard Installation	484	484
Miscellaneous Capital Costs	20,617	20,617
TOTAL:	\$ 109,975	<u>\$ 109,975</u>

September 18, 2015 2

MAINTENANCE PROGRAMS

Aged/Overloaded Transformer Replacement through July 31, 2015

Padmount:

Single-Phase: 12.99% replaced (of those over 20 years old) Three-Phase: 8.97% replaced (of those over 20 years old)

Overhead:

Single-Phase: 10.77% replaced (of those over 20 years old) Three-Phase: 3.89% replaced (of those over 20 years old)

Pole Testing System-wide (600-1,000 poles/year) (as of 9/15/2015)

Year-one inspection complete: 645 poles tested (~10%)

- 390 silver tag (PASSED)
- 191* red tag (FAILED): 97 have been replaced
- 22 double red tag (CONDEMNED): 22 have been replaced

64 of 119 transfers have been completed

*42 red tag (failed) poles were revaluated and removed from the list.

Double Poles (as of 9/9/15)

Total # of Double Poles: 498

Pending RMLD Transfer: 51

Lynnfield - 39

North Reading - 127

Reading - 134 Wilmington – 198

Manhole Inspections

Pending.

Porcelain Cutout Replacements (with Polymer)

As of July 31, 2015, there are 279 remaining porcelain cutouts to be replaced. 90% complete.

Tree Trimming

YTD thru July - 317 spans complete.

Substations:

Infrared Scanning (Monthly)

Cubatatian	Cubatation Maintenance Dunance		
Station 5	Scanning complete through July - no hot spots found		
Station 4	Scanning complete through July – no hot spots found		
Station 3	Scanning complete through July – no hot spots found		

Substation Maintenance Program

Inspection of all three stations by UPG complete.

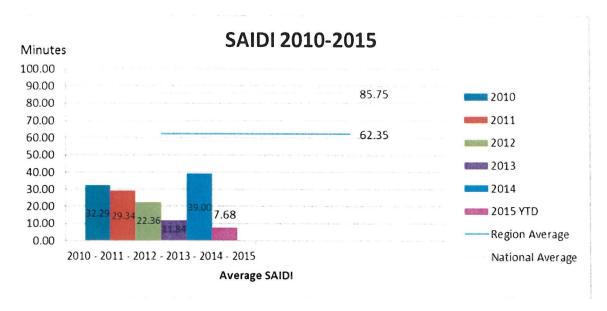
September 18, 2015 3

SYSTEM RELIABILITY

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

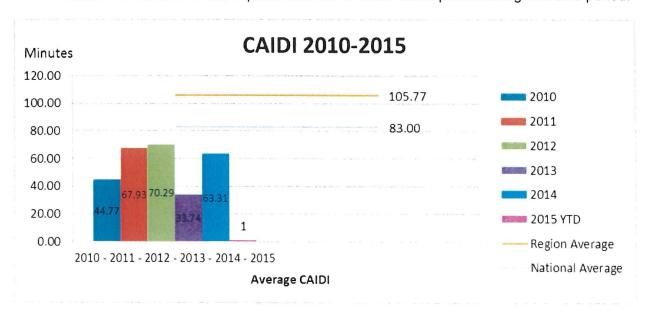
SAIDI (System Average Interruption Duration Index) is defined as the average interruption duration (in minutes) for customers served by the utility system during a specific time period.

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



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

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

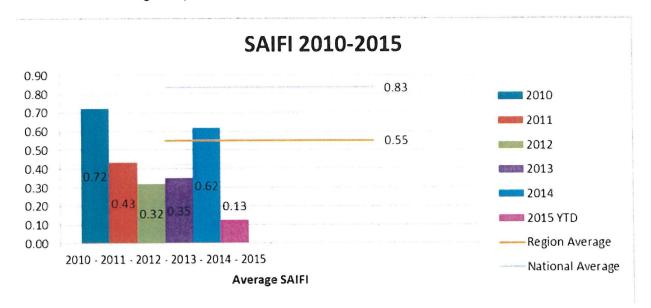


This matric reflects the average customer experience (minutes of duration) during an outage.

September 18, 2015

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

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

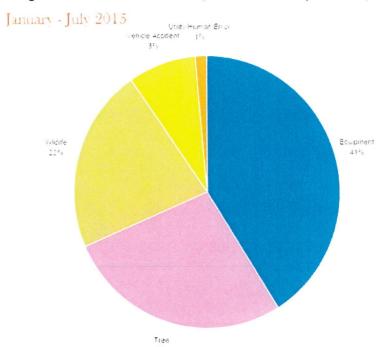


Note: Since SAIDI, SAIFI and CAIDI are sustained interruption indices; only outages lasting longer than one minute are included in the calculations.

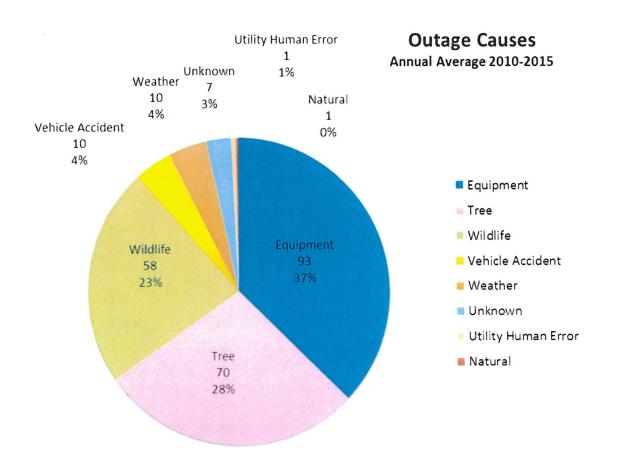
September 18, 2015

5

Outages Causes Calendar YTD (from eReliability website)



Outage Cause	Count				
Equipment	30				
Tree	20				
Wildlife	16				
Vehicle Accident	6				
Utility Human Error	1				
Total	73				



September 18, 2015 6



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

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

September 15, 2015

Town of Reading Municipal Light Board

Subject: Preventative Maintenance and Repair Services for all HVAC Equipment, including Ice Machines, Plant Wide

On August 10, 2015 a bid invitation was placed in the Goods and Services Bulletin and on August 12, 2015 placed as a legal notice in the Reading Chronicle, Middlesex East, requesting proposals for HVAC and Ice Machine Preventative Maintenance and Repair Service for the Reading Municipal Light Department.

An invitation to bid was sent to the following nineteen companies:

Ambient Temperature

Corporation

Boston Mechanical Services

Breen & Sullivan Mechanical

Services, Inc.

Carriere HVAC

Central Cooling & Heating, Inc.

Cooling & Heating Specialists, Inc.

Cooling Unlimited, Inc.

Cranney Companies

Enoch C. Shaw Co., Inc.

Falite Bros., Inc.

Honeywell Corp.

Lake Industries

Lohrman HVAC

Northeast Mechanical

Seaboard Mechanical Contractors

Soracco Plumbing & Heating

Stebbins Duffy

Total Temperature Control, Inc.

Trane Company

Bids were received from three companies: Ambient Temperature Corporation, Johnson Controls Inc. and N.B. Kenney Company, Inc.

The bids were publicly opened and read aloud at 11:00 a.m. on September 10, 2015, in the Town of Reading Municipal Light Department's General Manager's Conference Room, 230 Ash Street, Reading, Massachusetts.

The bids were reviewed, analyzed and evaluated by staff and recommended to the General Manager. Move that bid 2016-02 for Preventative Maintenance and Repair Services for all HVAC Equipment, including Ice Machines, Plant Wide be awarded to: Ambient Temperature Corporation for \$71,368.00 as the lowest, qualified and responsive bidder on the recommendation of the General Manager.

The FY2016 Operating Budget amount for this item is \$38,000.00. (This is a 3-year contract.)

Coleen O'Brien

Hamid Jaffaf

Paula O'Leary

Preventative Maintenance and Repair Services for all HVAC Equipment, including Ice Machines, Plant Wide

Bid 2016-02

<u>Bidder</u>	<u>Total 3-Year</u> <u>Cost</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Responsive</u> <u>Bidder</u>	Exceptions
Ambient Temperature Corporation	\$71,368.00	\$12,769.00	\$28,077.00	\$30,522.00	Yes	No
Johnson Controls	\$84,836.65	\$18,319.50	\$32,778.00	\$33,739.15	Yes	No
N.B. Kenney Company, Inc.	\$140,661.44	\$27,897.00	\$55,699.43	\$57,065.01	Yes	No



Reading Municipal Light Department

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September 15, 2015

Town of Reading Municipal Light Board

Subject: S&C SCADA-Mate CX Switch

On August 19, 2015 a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle requesting proposals for S&C SCADA-Mate CX Switch for the Reading Municipal Light Department.

An invitation to bid was emailed to the following:

Power Sales Group JF Gray & Associates

Hasgo Power Sales
HD Supply

MVA Power, Inc.

WESCO

MetroWest Robinson Sales

HD Industrial Services

Siemens

Shamrock Power Power Tech-UPSC

EL Flowers & Associates

Genergy Corp.

Bids were received from Yale Electric East LLC and WESCO.

The bids were publicly opened and read aloud at 11:00 a.m. September 10, 2015 in the Town of Reading Municipal Light Department's Board Room, 230 Ash Street, Reading, Massachusetts.

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

Move that bid 2016-07 for S&C SCADA-Mate CX Switch be awarded to:

Yale Electric East LLC for a total cost of \$55,748.00

Item (desc.)
Item 1 - S&C Switch

Oty 2 Total Net Cost \$55,748.00

as the lowest qualified bidder on the recommendation of the General Manager.

The FY16 Capital Budget allocation for the purchase of these units under the Distribution Protection & Automation project was estimated at \$69,000.

Coleen O'Brien

Hamid Jaffari

Peter Price

S&C SCADA-Mate CX Switch Bid 2016-07

Bidder	Delivery Date	Total Net <u>Cost</u>	Meet Specification requirement	Firm <u>Price</u>	All forms filled out	Certified Check or <u>Bid Bond</u>	Exceptions to stated bid requirements	Authorized signature
Yale Electric East LLC Item 1 - S&C Switch - quantity 2	14-16 weeks	\$55,748.00	yes	yes	yes	yes	no	yes
WESCO Item 1 S&C Switch - quantity 2	14-16 weeks	\$56,860.00	yes	yes	yes	yes	no	yes



Reading Municipal Light Department RELIABLE POWER FOR GENERATIONS

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

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

September 15, 2015

Town of Reading Municipal Light Board

Subject: Relay Test Set

On August 5, 2015 a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle requesting proposals for Relay Test Set for the Reading Municipal Light Department.

An invitation to bid was emailed to the following:

Power Sales Group Power Tech-UPSC **EL Flowers & Associates**

Siemens

HD Industrial Services

WESCO

Hasgo Power Sales Genergy Corp. JF Gray & Associates Prime Vendor, Inc.

Shamrock Power **Robinson Sales** MVA Power, Inc. MetroWest

A bid was received from Omicron.

The bid was publicly opened and read aloud at 11:00 a.m. September 3, 2015 in the Town of Reading Municipal Light Department's Board Room, 230 Ash Street, Reading, Massachusetts.

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

Move that bid 2016-08 for Relay Test Set be awarded to:

Omicron for a total cost of \$51,640.00

Item (desc.) Item 1 Relay Test Set Optional 5 year warranty

Qty 1

Total Net Cost \$46,990.00 \$4,650.00 \$51,640.00

Total

as the lowest qualified bidder on the recommendation of the General Manager.

The FY16 Capital Budget allocation for the purchase of these units under the Substation Test Equipment project was estimated at \$100,000.

Coleen O'Brien

Hamid Jaffari

Nick D'Alleva

Relay Test Set Bid 2016-08

Bidder	<u>Manufacturer</u>	Delivery Date	Total Cost	Three (3) year warranty	Five (5) year <u>warranty</u>	All forms filled out	Firm <u>Price</u>	Certified Check or <u>Bid Bond</u>	Authorized signature	Exceptions to stated bid requirements	Meet Specification requirement
Omicron Electronics Corp USA						yes	yes	yes	yes	yes	yes
Item 1 Relay Test Set	Omicron electronics GmbH	3-5 weeks	46,990.00	1,550.00	4,650.00						



Reading Municipal Light Department

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

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

September 15, 2015

Town of Reading Municipal Light Board

Subject: Diesel Substation Generator

On August 5, 2015 a bid invitation was placed as a legal notice in the Middlesex East section of the Daily Times Chronicle requesting proposals for 60KW Diesel Substation Generator with 400 AMP Automatic Transfer Switch for the Reading Municipal Light Department.

An invitation to bid was emailed to the following:

Power Sales Group
Power Tech-UPSC

EL Flowers & Associates Siemens

HD Industrial Services Stuart C Irby

Cummins Northeast

Bond Brothers

WESCO

Hasgo Power Sales Genergy Corp. JF Gray & Associates

Prime Vendor, Inc. Spectrum Industries, Inc.

Kraft Power Milton CAT Shamrock Power

Robinson Sales MVA Power, Inc.

MetroWest

Graybar Electric Company

Power Products
J&D Power

Bids were received from Authorized Services of New England, Power Products, Kraft Power and Milton CAT.

The bids were publicly opened and read aloud at 11:00 a.m. September 3, 2015 in the Town of Reading Municipal Light Department's Board Room, 230 Ash Street, Reading, Massachusetts.

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

Move that bid 2016-09 for 60KW Diesel Substation Generator with 400 AMP Automatic Transfer Switch be awarded to:

Authorized Services of New England for a total cost of \$30,235.00

Item (desc.)	<u>Qty</u>	Total Net Cost
60KW Diesel Substation Generator with 400AMP	1	\$29,285.00
Automatic Transfer Switch		
Optional 5 year warranty		\$950.00
	Tot	\$30,235,00

as the lowest qualified bidder on the recommendation of the General Manager.



The FY16 Capital Budget allocation for the purchase of these units under the Station 4 (Gaw) Back-up Generator project was estimated at \$95,000.

	Caroni.
Coleen O'Brien	
mil	Deblin
Hamid Jaffari	
Mi	D'allen
Nick D'Alleva	

Diesel Substation Generator Bid 2016-08

Bidder	<u>Manufacturer</u>	Delivery Date	Total Cost	Three (3) year <u>warranty</u>	Five (5) year warranty	All forms filled out	Firm <u>Price</u>	Certified Check or <u>Bid Bond</u>	Authorized signature	Exceptions to stated bid requirements	Meet Specification <u>requirement</u>
Authorized Services of New England	10					yes	yes	yes	yes	no	yes
60KW Diesel Substation Generator with 400AMP Automatic Transfer Switch	Generac	8 weeks	29,285.00	500.00	950.00	Note:	Addition	onal closed	transition swi	tch \$4,857 added	to bid form.
Power Products - non-responsive						yes	yes	yes	yes	yes	yes
60KW Diesel Substation Generator with 400AMP Automatic Transfer Switch	Kohler	9-11 weeks	30,699.00	not available	963.00	Exceptio	ns:				
Additional Transfer Switch	Konlei	5-11 Weeks	30,099.00	avallable	903.00	Note:	Additi		is not acceptable. onal closed transition switch \$4,656 added to bid form.		
Kraft Power						yes	yes	yes	yes	no	yes
60KW Diesel Substation Generator with 400AMP Automatic Transfer Switch	Kohler	8 weeks	31,980.00	not available	337.60						
Milton CAT						yes	yes	yes	yes	no	yes
60KW Diesel Substation Generator with 400AMP Automatic Transfer Switch	Catterpilla	9-12 weeks	34,416.00	1,045.00	1,225.00						



Reading Municipal Light Department RELIABLE POWER FOR GENERATIONS

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

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September 15, 2015

Town of Reading Municipal Light Board

Subject: IFB 2016-10 - Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration

On September 2, 2015, a bid invitation was placed as a legal notice in the Middlesex East section of the Reading Chronicle requesting proposals for hourly rates for line construction work as needed, storm management line construction and restoration for the Reading Municipal Light Department.

An invitation to bid was mailed to the following:

Albanese Brothers, Inc.
Aqua Line Utility
ElecComm Corporation
Fischbach & Moore
GEOD Consulting
Grattan Line Construction Corp.
Hamilton Electric Co., Inc.
Hawkeye/Halpin Line Construction Co.
Hi Volt Line Construction & Maintenance
K.B. Aruda Construction, Inc.

Mass Bay Electric
Maverick Construction Corporation
McDonough Electric Construction
N. Granese & Sons, Inc.
Northeast Line Construction Corp.
OSP LLC
Power Line Contractors
Thiraul LLC
Utility Service & Assistance, Inc.

N.B. Arada Construction, mo.

One bid was received from Maverick Construction Corporation.

Bids were publicly opened and read aloud at 11:00 a.m., September 10, 2015, in the Town of Reading Municipal Light Department's Board Room at 230 Ash Street, Reading, Massachusetts.

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

Move that Bid 2016-10 - Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration be awarded to Maverick Construction Corporation as the lowest qualified bidder on the recommendation of the General Manager.

Coleen O'Brien, General Manager

Hamid Jaffari, Director of Engineering & Operations

Steve DeFerrari, General Line Foreman

Hourly Rates for Line Construction Work as Needed, Storm Management Line Construction and Restoration

Bid 2016-10

Bidder: Maverick Construction Corporation

	10/1/2015 thru 9/30/2016	10/1/2016 thru 9/30/2017	10/1/2017 thru 9/30/2018
Regular Hourly Rate - 7:00 am - 3:00 pm			
Leader Lineman or Working Foreman	\$100.00	\$102.50	\$106.00
Lineman Class I/Journeyman	\$96.00	\$97.50	\$100.00
Material Handler	\$48.00	\$48.00	\$49.00
Digger Derrick	\$51.00	\$51.00	\$52.00
Crew Rates:			
Hourly: 2-man crew with material handler	\$244.00	\$248.00	\$255.00
Hourly: 2-man crew with digger derrick	\$247.00	\$251.00	\$258.00
Weekly: 2-man crew with material handler	\$9,760.00	\$9,920.00	\$10,200.00
Weekly: 2-man crew with digger derrick	\$9,880.00	\$10,040.00	\$10,320.00
Overtime Hourly Rate - 3:00 pm - 7:00 am			
Leader Lineman or Working Foreman	\$135.00	\$137.50	\$141.00
Lineman Class I/Journeyman	\$127.00	\$129.50	\$133.00
Material Handler	\$48.00	\$48.00	\$49.00
Digger Derrick	\$51.00	\$51.00	\$52.00
Crew Rates:			
Hourly: 2-man crew with material handler	\$310.00	\$315.00	\$323.00
Hourly: 2-man crew with digger derrick	\$313.00	\$318.00	\$326.00
Emergency Rate (Storms)			and the state of t
Leader Lineman or Working Foreman	\$176.00	\$187.00	\$192.00
Lineman Class I/Journeyman	\$169.00	\$176.00	\$180.00
Material Handler	\$55.00	\$55.00	\$57.00
Digger Derrick	\$58.00	\$58.00	\$60.00
Crew Rates:			
Hourly: 2-man crew with material handler	\$400.00	\$418.00	\$429.00
Hourly: 2-man crew with digger derrick	\$403.00	\$421.00	\$432.00

Note: 2-man crew consists of one Leader Lineman/Working Foreman and one Lineman Class 1/Journeyman

Jeanne Foti

rom:

Jeanne Foti

Sent:

Thursday, September 17, 2015 1:09 PM

To:

RMLD Board Members Group

Cc:

Patricia Mellino

Subject:

Account Payable and Payroll Questions

Good morning.

In an effort to save paper, the following timeframes had no Account Payable and Payroll questions.

Account Payable Warrant - No Questions

July 17, July 24, July 31, August 7, August 21, August 28, September 4 and September 11.

Payroll - No Questions

July 27, August 10, August 24 and September 7, 2015.

This e-mail will be printed for the Board Packet for the RMLD Board meeting on September 24, 2015.

Jeanne Foti Reading Municipal Light Department Executive Assistant 230 Ash Street Reading, MA 01867

781-942-6434 Phone 781-942-2409 Fax

Please consider the environment before printing this e-mail.

Jeanne Foti

From:

Coleen O'Brien

Sent:

Monday, August 17, 2015 1:36 PM

To:

David Talbot

Cc:

Dave Hennessy; John Stempeck; Phil Pacino; Tom O'Rourke; Jeanne Foti; Patricia

Mellino; Accounting Group; Mark Uvanni; Paula O'Leary; Marianne Fabbri

Subject:

Account Payable Warrant Questions - August 14, 2015

Categories:

Blue Category

Good afternoon Dave:

The following are Account Payable Warrant Questions - August 14, 2015.

Talbot

1. Fred Davis - (\$140,985 this mo.) Was the \$518,000 for LED fixtures. Put out for a public bid? I don't recall at the moment.

Since the beginning of the Streetlight Pilot Program, RMLD utilized the OSD Massachusetts State Contract "Maintenance, Repair & Operations (MRO) Products, Supplies and Equipment Statewide Contract" #FAC 76, Cat 6, in lieu of going out to bid, which is acceptable practice under M.G.L., Chapter 30B. Cat 6 of the Contract is specific to Electrical and Lighting including LED Outdoor Lighting.

RMLD obtained quotes from three vendors on this state contract vendor listing under Cat 6. The quotes obtained were from Fred Davis, Standard Electric and Graybar.

RMLD chose Fred David because they were the lowest vendor and satisfied RMLD's requirements. Graybar Electric was non responsive.

2. AT&T – Why still paying \$1/minute on "state to state calls" for bills at \$1,280 - \$1,800 per month? The previous answer was that Town Hall controls this, not RMLD. Any update on looking for savings on various radio/telephone charges including these antiquated phone bills?

The RMLD currently has the capability for voice over IP. RMLD has a meeting with Beacon Communications, Thursday August 20th. Purchasing has been working with AT&T to depart from the current configuration with the town, to consolidate with Verizon for the interim.

Coleen M. O'Brien

General Manager Reading Municipal Light Department 230 Ash Street Reading, MA 01867 TOWN OF READING MUNICIPAL LIGHT DEPARTMENT RATE COMPARISONS READING & SURROUNDING TOWNS

August-15

READING MUNICIPAL LIGHT DEPT. OTAL BILL PER KWH CHARGE	\$105.57 \$0.14076	\$182.53			10.000 kW Demand	35000 kWh's 130.5 kW Demand	250.000 kW Demand 80/20 Split
	1. *	£182 52					
PER KWH CHARGE	\$0.14076	•	\$128.98	\$924.79	\$180.77	\$4,335.08	\$697,874.72
	45	\$0.12169	\$0.12898	\$0.12668	\$0.16738	\$0.12386	\$0.10144
ATIONAL GRID							
OTAL BILL	\$128.23	\$250.68	\$170.97	\$1,284.84	\$184.71	\$4,710.12	\$781,925.81
PER KWH CHARGE	\$0.17098	\$0.16712	\$0.17097	\$0.17601	\$0.17103	\$0.13457	\$0.11366
6 DIFFERENCE	21.46%	37.34%	32.56%	38.93%	2.18%	8.65%	12.04%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$144.18	\$284.78	\$190.10	\$1,497.67	\$211.31	\$7,259.45	\$905,682.70
PER KWH CHARGE	\$0.19224	\$0.18985	\$0.19010	\$0.20516	\$0.19566	\$0.20741	\$0.13165
% DIFFERENCE	36.57%	56.01%	47.39%	61.95%	16.90%	67.46%	29.78%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$91.82	\$177.33	\$120.32	\$987.06	\$148.19	\$4,875.83	\$672,170.80
PER KWH CHARGE	\$0.12242	\$0.11822	\$0.12032	\$0.13521	\$0.13722	\$0.13931	\$0.09770
% DIFFERENCE	-13.03%	-2.85%	-6.71%	6.73%	-18.02%	12.47%	-3.68%
MIDDLETON MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$99.77	\$198.39	\$132.64	\$959.51	\$168.44	\$4,762.93	\$807,171.40
PER KWH CHARGE	\$0.13303	\$0.13226	\$0.13264	\$0.13144	\$0.15596	\$0.13608	\$0.11733
% DIFFERENCE	-5.50%	8.69%	2.84%	3.75%	-6.82%	9.87%	15.66%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$126.74	\$235.92	\$159.38	\$1,202.79	\$191.68	\$5,648.08	\$955,959.30
PER KWH CHARGE	\$0.16898	\$0.15728	\$0.15938	\$0.16477	\$0.17749	\$0.16137	\$0.13896
% DIFFERENCE	20.04%	29.25%	23.57%	30.06%	6.04%	30.29%	36.98%

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

September-15

	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	\$104.74	\$180.87	\$127.87	\$924.79	\$180.77	\$4,335.08	\$697,874.72
PER KWH CHARGE	\$0.13965	\$0.12058	\$0.12787	\$0.12668	\$0.16738	\$0.12386	\$0.10144
NATIONAL GRID							
TOTAL BILL	\$128.23	\$250.68	\$170.97	\$1,284.84	\$184.71	\$4,710.12	\$787,284.64
PER KWH CHARGE	\$0.17098	\$0.16712	\$0.17097	\$0.17601	\$0.17103	\$0.13457	\$0.11444
% DIFFERENCE	22.43%	38.60%	33.71%	38.93%	2.18%	8.65%	12.81%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$144.18	\$284.78	\$190.10	\$1,497.67	\$211.31	\$7,259.45	\$905,682.70
PER KWH CHARGE	\$0.19224	\$0.18985	\$0.19010	\$0.20516	\$0.19566	\$0.20741	\$0.13165
% DIFFERENCE	37.66%	57.45%	48.67%	61.95%	16.90%	67.46%	29.78%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$91.82	\$177.33	\$120.32	\$987.06	\$148.19	\$4,875.83	\$672,170.80
PER KWH CHARGE	\$0.12242	\$0.11822	\$0.12032	\$0.13521	\$0.13722	\$0.13931	\$0.09770
% DIFFERENCE	-12.34%	-1.95%	-5.90%	6.73%	-18.02%	12.47%	-3.68%
MIDDLETON MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$99.77	\$198.39	\$132.64	\$959.51	\$168.44	\$4,762.93	\$807,171.40
PER KWH CHARGE	\$0.13303	\$0.13226	\$0.13264	\$0.13144	\$0.15596	\$0.13608	\$0.11733
% DIFFERENCE	-4.75%	9.69%	3.73%	3.75%	-6.82%	9.87%	15.66%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$126.74	\$235.92	\$159.38	\$1,202.79	\$191.68	\$5,648.08	\$955,959.30
PER KWH CHARGE	\$0.16898	\$0.15728	\$0.15938	\$0.16477	\$0.17749	\$0.16137	\$0.13896
% DIFFERENCE	21.00%	30.44%	24.64%	30.06%	6.04%	30.29%	36.98%