

**READING MUNICIPAL
LIGHT DEPARTMENT**

**BOARD
OF
COMMISSIONERS**

REGULAR SESSION

OCTOBER 20, 2016

READING MUNICIPAL LIGHT DEPARTMENT
BOARD OF COMMISSIONERS MEETING

230 Ash Street
Reading, MA 01867
October 20, 2016
7:30 p.m.

1. Call Meeting to Order
2. Opening Remarks
3. Introductions
4. Public Comment
 - RMLD Citizens' Advisory Board
 - Liaisons to RMLD Board
 - Public Comment
5. Presentation of Fiscal Year 2016 Audit (Attachment 1)
Melanson Heath & PC – Frank Biron and Zackary Fentross
6. Report of the Committee ACTION ITEM
 - a. Audit Committee – Vice Chair Pacino
7. Report of the Chairman
 - a. Board response to NEPPA on climate change denial by one of the recent conference speakers.
8. Report RMLD Board Member Attendance at RMLD Citizens' Advisory Board Meeting
Note: Commissioner Hennessy was in attendance at the CAB meeting on October 12, 2016.
9. General Manager's Report – Ms. O'Brien (Attachment 2)
 - a. Quarterly Update Organizational and Reliability Report
10. Power Supply Report – August 2016 – Ms. Parenteau (Attachment 3) ACTION ITEM
 - a. Solar Choice Rate
Suggested Motion:
Move that the RMLD Board of Commissioners approve the Solar Choice Rate MDPU 269 to be effective on billings after December 1, 2016 on the recommendation of the General Manager.
11. Engineering and Operations Report – August 2016 – Mr. Jaffari (Attachment 4)
12. RMLD Procurement Requests Requiring Board Approval (Attachment 5) ACTION ITEM
 - a. IFP 2017-15 Capacitor Bank
Suggested Motion:
Move that proposal 2017-15 for Capacitor Bank be awarded to WESCO for \$54,480.00 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.
 - b. IFP 2017-20 750 MCM Cable
Suggested Motion:
Move that proposal 2017-20 for 750 MCM Cable be awarded to Arthur Hurley Company for \$104,513.10 pursuant to Chapter 164 § 56D on the recommendation of the General Manager.

12. RMLD Procurement Requests Requiring Board Approval (Attachment 5)

c. IFP 2017-22 Single Phase Step Voltage Regulator

Suggested Motion:

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

d. IFP 2017-24 15kV Single Phase Submersible Transformers

Suggested Motion:

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

e. IFP 2017-25 Control Devices for Substation 3

Suggested Motion:

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

f. IFB 2017-28 Material Handle with Trade-In

Suggested Motion:

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

13. General Discussion

BOARD MATERIAL AVAILABLE BUT NOT DISCUSSED

E-Mail responses to Account Payable/Payroll Questions

Rate Comparisons, October 2016

Subsequent Town Meeting

Monday, November 14, 2016

RMLD Board Meetings

No RMLD Board Meeting in November

Thursday, December 15, 2016

RMLD Committee Meetings

Thursday, November 10, 2016 RMLD Board Policy Committee Meeting

CAB Meetings

Wednesday, November 16, 2016

14. Executive Session

Suggested Motion:

Move that the Board go into Executive Session to approve the Executive Session Meeting minutes of September 29, 2016, to consider the purchase of real property and discuss strategy with respect to collective bargaining and return to Regular Session for the sole purpose of adjournment.

ACTION ITEM

15. Adjournment

Suggested Motion:

Move to adjourn the Regular Session.

ACTION ITEM

PRESENTATION OF
FISCAL YEAR 2016 AUDIT
ATTACHMENT 1

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

Annual Financial Statements

For the Year Ended June 30, 2016

DRAFT

Reading Municipal Light Department

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INDEPENDENT AUDITORS' REPORT

To the Municipal Light Board
Town of Reading Municipal Light Department

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities and the aggregate remaining fund information of the Town of Reading Municipal Light Department ("the Department") (an enterprise fund of the Town of Reading, Massachusetts), as of and for the year ended June 30, 2016 and the related notes to the financial statements, which collectively comprise the Department's basic financial statements as listed in the Table of Contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

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

Opinions

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

Report on Summarized Comparative Information

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

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of OPEB Funding Progress, Schedule of Proportionate Share of the Net Pension Liability, and Schedule of Pension Contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board*, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with evidence sufficient to express an opinion or provide any assurance.

_____, 2016

MANAGEMENT'S DISCUSSION AND ANALYSIS

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

A. OVERVIEW OF THE FINANCIAL STATEMENTS

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

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

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

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

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

Summary of Net Position

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

(continued)

(continued)

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

Summary of Changes in Net Position

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

B. FINANCIAL HIGHLIGHTS

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

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

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

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

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

C. CAPITAL ASSET AND DEBT ADMINISTRATION

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

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

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

REQUESTS FOR INFORMATION

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

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

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND
STATEMENTS OF NET POSITION

JUNE 30, 2016 AND 2015

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

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

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

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

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

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

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

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

BUSINESS-TYPE PROPRIETARY FUND
STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

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

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

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS
STATEMENTS OF FIDUCIARY NET POSITION

JUNE 30, 2016 AND 2015

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

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

TOWN OF READING, MASSACHUSETTS
MUNICIPAL LIGHT DEPARTMENT

FIDUCIARY FUNDS
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015

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

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

Town of Reading, Massachusetts Municipal Light Department

Notes to Financial Statements

1. Summary of Significant Accounting Policies

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

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

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

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

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

D. Retirement Trust - The Reading Municipal Light Department Employees' Retirement Trust (the "Pension Trust") was established by the Reading

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- L. Long-Term Obligations - The proprietary fund financial statements report long-term debt and other long-term obligations as liabilities in the Statements of Net Position.

- M. Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures for contingent assets and liabilities at the date of the financial statements, and the reported amounts of the revenues and expenses during the fiscal year. Actual results could vary from estimates that were used.

- N. Rate of Return - The Department's rates must be set such that earnings attributable to electric operations do not exceed eight percent of the net cost of plant. The Department's audited financial statements are prepared

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

2. Cash and Investments

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

DRAFT

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

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

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

Disclosures Relating to Interest Rate Risk

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

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

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

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

Disclosures Relating to Credit Risk

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

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

Concentration of Credit Risk

The Department follows the Town of Reading's investment policy, which does not limit the amount that can be invested in any one issuer beyond that stipulated by Massachusetts General Laws. At June 30, 2016, the Department and Pension Trust investments were held in domestic and foreign fixed income bonds, as detailed in the sections above. Five of the bonds each individually represent approximately 16% of the Department's and System's total investments, while the investment in Rabobank Nederland Bank represents approximately 20%.

Custodial Credit Risk

Custodial Credit Risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, the Department will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, the Department will not be able to recover the value of its investments or collateral securities that are in the possession of another party. Massachusetts General Laws, Chapter 44, Section 55, limits deposits "in a bank or trust company or banking company to an amount not exceeding sixty per cent of the capital and surplus of such bank or trust company or banking company, unless satisfactory security is given to it by such bank or trust company or banking company for such excess." The Department follows the Massachusetts statute as written, as well as the Town of Reading's deposit policy for custodial credit risk.

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

As of June 30, 2016, none of the Department or Pension Trust investments were exposed to custodial credit risk because the related securities are registered in the Department's name.

3. Restricted Cash and Investments

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

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

The Department maintains the following reserves:

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

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

4. Accounts Receivable

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

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

5. Prepaid Expenses

Prepaid expenses consist of the following:

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

6. Inventory

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

7. Investment in Associated Companies

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

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

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

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

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

9. Deferred Outflows of Resources

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

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

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

10. Accounts Payable

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

11. Accrued Liabilities

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

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

12. Customer Deposits

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

13. Customer Advances for Construction

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

14. Accrued Employee Compensated Absences

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

15. Deferred Inflows of Resources

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

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

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

16. Restricted Net Position

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

17. Post-Employment Health Care and Life Insurance Benefits

Other Post-Employment Benefits

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

A. Plan Description

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

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

B. Benefits Provided

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

C. Funding Policy

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

D. Annual OPEB Costs and Net OPEB Obligation

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

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

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

(1) See Part E for additional information

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

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

E. Funded Status and Funding Progress

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

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

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

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

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

F. Actuarial Methods and Assumptions

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

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

18. Reading Contributory Retirement System

The Department follows the provisions of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – An Amendment of GASB Statement No. 27*, with respect to the employees' retirement funds.

A. Plan Description

Substantially all employees of the Department are members of the Town of Reading Contributory Retirement System (the System), a cost sharing, multiple-employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, as well as contribution percentages and benefits paid. The System Retirement Board does not have the authority to amend benefit provisions. Additional information is disclosed in the System's annual financial reports, which are publically available from the System's administrative offices located at Reading Town Hall, 16 Lowell Street, Reading, Massachusetts, 01867.

B. Benefits Provided

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

compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation and group classification. Members become vested after 10 years of creditable service. A retirement allowance may be received upon reaching age 65 or upon attaining 20 years of service. The plan also provides for early retirement at age 55 if the participant (1) has a record of 10 years of creditable service, (2) was on the Department payroll on January 1, 1978, (3) voluntarily left Department employment on or after that date, and (4) left accumulated annuity deductions in the fund. A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100 percent, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement.

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

C. Contributions

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

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

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

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

D. Summary of Significant Accounting Policies

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the System and additions to/deductions from System's fiduciary net position have been determined on the same basis as they are reported by System. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

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

At June 30, 2016, the Department reported a liability of \$8,833,549 for its proportionate share of the System's net pension liability. The net pension liability was measured as of December 31, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2015 rolled forward to December 31, 2015. The Department's proportion of the net pension liability was based on an actuarially determined projection of the Department's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers. At December 31, 2015, the Department's proportion was 28.25%.

Town of Reading Municipal Light Department Employees' Retirement Trust ("Pension Trust"): The Department has established an irrevocable trust for the purpose of currently funding its annual required contribution to the Town of Reading Contributory Retirement System (RCRS). Annual contributions to the trust are actuarially determined to be the net normal cost for funding the Department's liability for pension benefits for covered employees, and both the principal and income of the trust is restricted for the exclusive benefit of Department employees and their beneficiaries. This Pension Trust is reported as a fiduciary fund type in the Department's basic financial statements.

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

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

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

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

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

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

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

Year ended June 30:	
2017	\$ 2,421,062
2018	921,062
2019	921,061
2020	909,108
2021	<u>282,753</u>
Total	<u>\$ 5,455,046</u>

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

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

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

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

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

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

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

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

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

19. Participation in Massachusetts Municipal Wholesale Electric Company

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

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

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

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

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

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

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

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

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

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

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

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

20. Renewable Energy Certificates

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

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

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

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

REC Sales During Fiscal 2016

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

⁽¹⁾ Sale proceeds netted against fiscal year 2016 purchased power fuel charge

REC Holdings at June 30, 2016

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

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

Because there is no formal accounting guidance under GAAP or IFRS for RECs and the Department does not have a formal policy for the future disposition of RECs, the estimated fair value of the Department's REC holdings at June 30, 2016 are not recognized as an asset on the proprietary fund Statements of Net Position.

21. Leases

Related Party Transaction - Property Sub-Lease

The Department is the lessor of facilities that are currently sub-leased to the Reading Town Employees Federal Credit Union. The original sub-lease agreement commenced in December 2000 and was extended by various amendments through November 30, 2016. Following is the future minimum rental income to be received by the Department under the terms of this lease for the year ending June 30:

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

Operating Lease - Warehouse

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

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

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

**June 30, 2016
(Unaudited)**

Other Post-Employment Benefits

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

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See Independent Auditors' Report.

TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

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

JUNE 30, 2016
(Unaudited)

Reading Contributory Retirement System

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

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

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

See Independent Auditors' Report.

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TOWN OF READING, MASSACHUSETTS, MUNICIPAL LIGHT DEPARTMENT

SCHEDULE OF PENSION CONTRIBUTIONS
REQUIRED SUPPLEMENTARY INFORMATION

JUNE 30, 2016
(Unaudited)

Reading Contributory Retirement System

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

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

See Independent Auditors' Report.

GENERAL MANAGER'S REPORT
ATTACHMENT 2

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
 Recommendation Not Accepted

RMLD Proposed Timeline
 Recommendation Completed

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

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
 Recommendation Not Accepted

RMLD Proposed Timeline
 Recommendation Completed

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

LEIDOS - 2015 ORGANIZATIONAL STUDY

Leidos Timeline
 Recommendation Not Accepted

RMLD Proposed Timeline
 Recommendation Completed

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

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		✓	in progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Scheduled for the first week in November.
3	BOOTH	Replace fence at Sub 4 and fix grounding issues	2015-16	\$100,000	✓		completed	
4	BOOTH	Rebuild pole line along Lowell Street	2015-16	\$375,000	✓		completed	
5	BOOTH	Complete AMI Upgrade and RF Mesh Network	2015-16	\$350,000	✓		in progress	Five gateways installed. Relays to be installed. Additional meters in stock. Working on communicating issue with 2 deployed meters.
6	BOOTH	Implement GIS Upgrade Program	2015-16	\$350,000 - \$750,000	✓		in progress	GIS asset survey is in-progress
7	BOOTH	Implement Arc Flash Study Analysis	2015-16	\$30,000	✓		completed	
8	BOOTH	Develop construction standards	2015-16	in-house	✓		in progress	
9	BOOTH	Update Joint-Use Agreement with Verizon	2015-16	in-house	✓		in progress	
10	BOOTH	Replace bushings on Sub 4 transformer.	2015-16	\$150,000	✓		completed	
11	BOOTH	CT wiring at Sub 3 should be fixed. The CT circuits should only be bonded on grounding in exactly one spot	2015-16	O&M	✓		completed	CT's are grounded in only one location.
12	BOOTH	Sub 3 has NO under-frequency trips. Relay is not programmed to trip.	2015-16	O&M		✓	completed	Station 3 has UF capability. RMLD is in compliance with ISO's UF requirement.
13	BOOTH	Fence grounding is not up to code@ Station 4. Fabric and barbed wire should be grounded.	2015-16	O&M	✓		completed	
14	BOOTH	Earth/gravel around fence at Sub 5	2015-16	O&M	✓		completed	
15	BOOTH	Interface 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. As each feeder is completed by DRG it is being sent to Milsoft to create the model.
17	BOOTH	Complete SCADA software and hardware upgrade	2015-17	\$350,000	✓		in progress	nDimensions cyber security software complete.
18	BOOTH	Upgrade main feeder of Circuit 5W9 to 795 to address voltage and conductor capacity issues (1.6 miles)	2015-17	\$240,000	✓		in progress	The first 3000' has been reconducted. This work can only be done during the fall/winter months. May have a hurdle with Verizon and pole replacements.
19 (1)	BOOTH	Upgrade UG circuit 3W5, 3W13, 4W9, 3W14, 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-ways at Station 3, no room for the second set of cables in the back of the switchgear. Solution: Load relief by feeder switching and/or new Wilmington Substation.
20	BOOTH	Replace breakers at Sub 4 due to age and condition	2015-20	\$3,000,000	✓		completed	All 26 breakers were replaced by 1/10/2016.
21	BOOTH	Pole inspection and replacement program. RMLD currently inspects 10% of RMLD-owned poles per year. Negotiate with Verizon to address Verizon-owned poles. Total 13,000 poles.	2015-24	\$9,000,000	✓		in progress	2014 /2015 /2016 inspection completed. Pole replacement in-progress.
22	BOOTH	Continued implementation of Grid Modernization Plan (GMP)	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

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

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

CONSULTANT RECOMMENDATION			YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
					ACCEPTED	ALTERNATE SOLUTION		
69	UPG	Station 5 15kV Breakers: #2. Remove breaker 5W9, inspect for corossions, and correct misalignment of the Breaker contact Rosette and cell stab during maintenance cycle.			✓		in progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16
70	UPG	Station 5 15kV Breakers: #3. Take bus out of service and check alignment and correct if possible.			✓		in progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16
71	UPG	Station 5 15kV Breakers: #4. Take bus tie breaker out of service and check alignment and correct if possible.			✓		in progress	Bus E has been tested. Bus D tested on 12/4 and 12/5. Followup needed with Bus side connection in switchgear and additional heaters added. Switchgear to be reinsulated in early Nov 16

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

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

POWER SUPPLY REPORT
ATTACHMENT 3

Integrated Resources

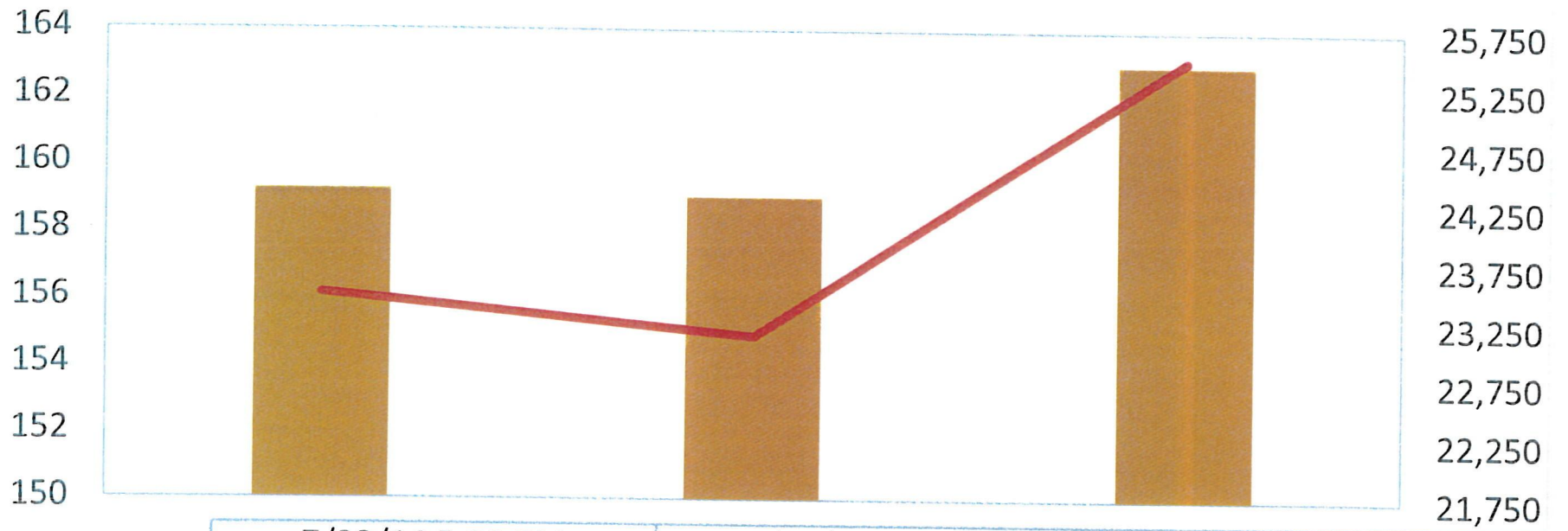
October 20, 2016

RMLD Board of Commissioners Meeting

Reporting for August, 2016

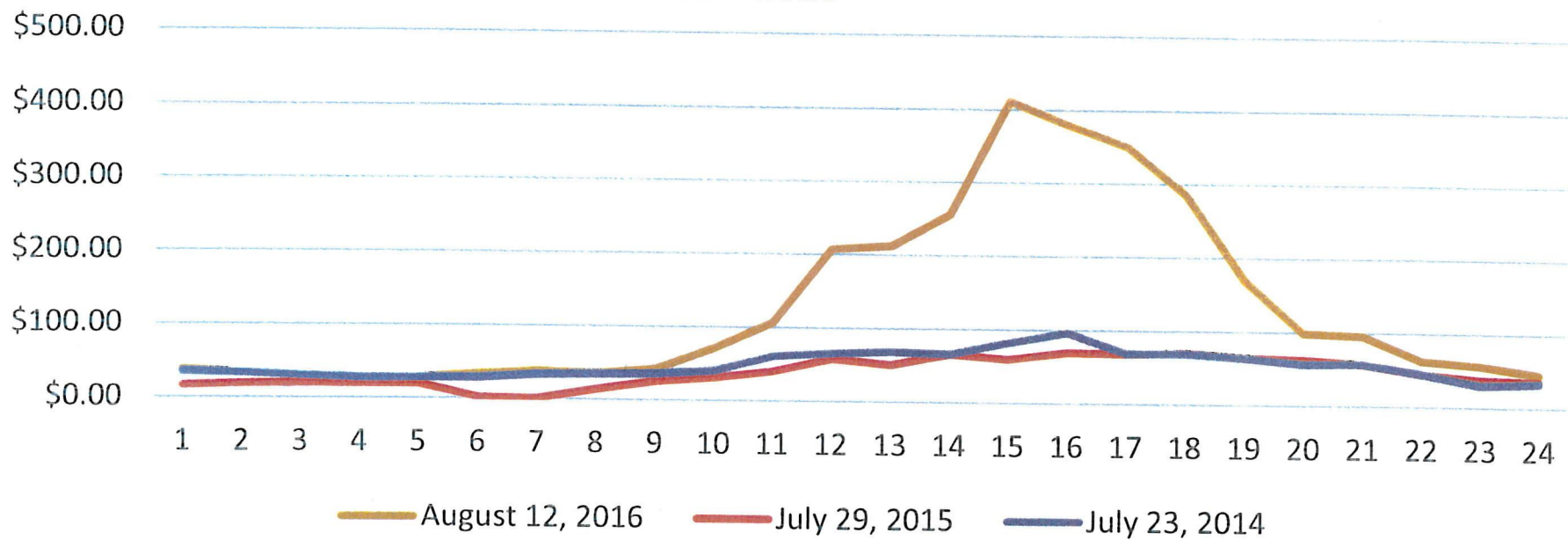
Jane Parenteau
Director of Integrated Resources

ISO System Peak 2014-2016 Coincident with RMLD Load

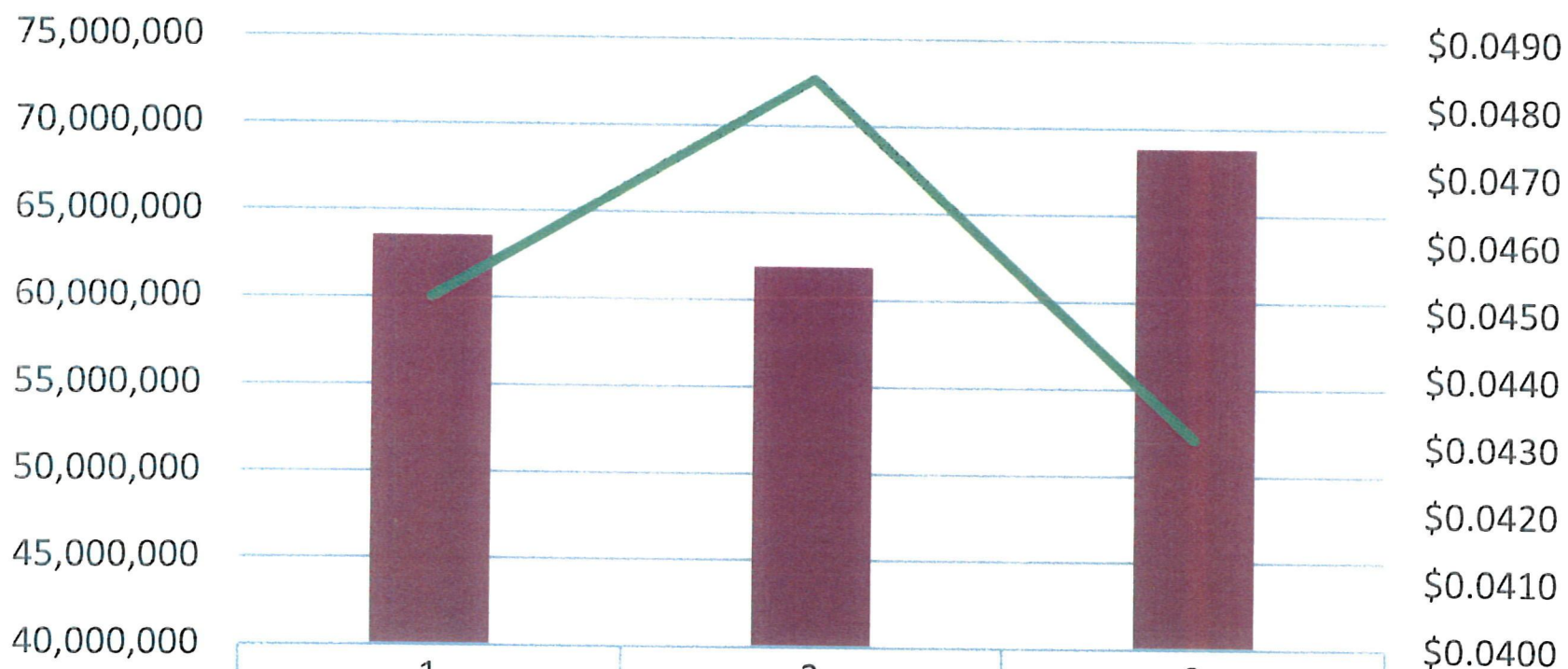


	7/23/14 5:00 PM	7/29/15 6:00 PM	8/12/16 4:00 PM
ISO	24,385	24,329	25,463
RMLD	156	155	163

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



Imbedded Fuel Costs vs. kWh Sales



 kWh Sales	1	2	3
	63,572,718	61,918,559	68,850,293
 Fuel Costs	\$0.0451	\$0.0484	\$0.0431

To: Coleen O'Brien

From:  Maureen McHugh, Jane Parenteau 

Date: October 12, 2016

Subject: Purchase Power Summary – August, 2016

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

ENERGY

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

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

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

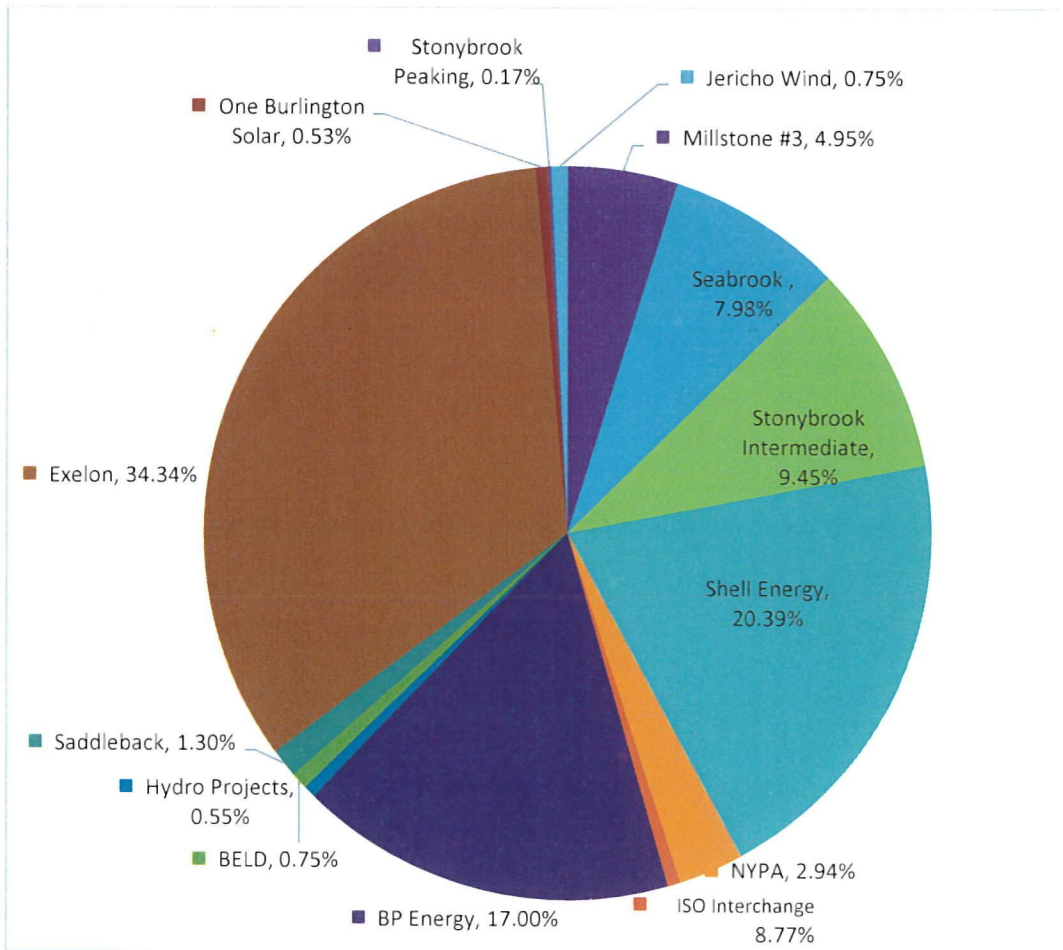
**Pepperell, Woronoco, Indian River, Turner Falls, Collins, Pioneer, Hosiery Mills, Summit Hydro*

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

Table 2				
Resource	Amount of Energy (kWh)	Cost of Energy (\$/Mwh)	% of Total Energy	
ISO DA LMP *	4,488,925	\$27.33	6.06%	
RT Net Energy **	(4,910,141)	(\$52.65)	-6.63%	
ISO Interchange (subtotal)	(421,216)	(\$32.93)	-0.57%	

* Independent System Operator Day-Ahead Locational Marginal Price
 ** Real Time Net Energy

AUGUST 2016 ENERGY BY RESOURCE



CAPACITY

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

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

Table 3				
Source	Amount (kW)	Cost (\$/kW-month)	Total Cost \$	% of Total Cost
Millstone #3	4,950	33.34	\$165,020	8.59%
Seabrook	7,909	36.45	\$288,273	15.01%
Stonybrook Peaking	24,981	1.98	\$49,368	2.57%
Stonybrook CC	42,925	7.08	\$304,076	15.83%
NYPA	0	0.00	-\$6,506	-0.34%
Hydro Quebec	0	0	\$13,287	0.69%
Nextera	60,000	6.15	\$369,000	19.21%
Braintree Watson Unit	0	0.00	\$243,624	12.68%
ISO-NE Supply Auction	89,919	5.50	\$494,562	25.75%
Total	230,684	\$8.30	\$1,920,704	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	\$24,661	\$165,020	\$189,681	3.71%	3,649,666	0.0520
Seabrook	\$37,177	\$288,273	\$325,449	6.36%	5,882,459	0.0553
Stonybrook Intermediate	\$244,738	\$304,076	\$548,814	10.73%	6,961,625	0.0788
Hydro Quebec	\$0	\$13,287	\$13,287	0.26%	-	0.0000
Shell Energy	\$981,620	\$0	\$981,620	19.19%	15,027,000	0.0653
NextEra	\$0	\$369,000	\$369,000	7.21%	-	0.0000
* NYPA	\$10,665	-\$6,506	\$4,159	0.08%	2,167,620	0.0019
ISO Interchange	-\$138,670	\$494,562	\$355,891	6.96%	(421,216)	-0.8449
Nema Congestion	\$70,472	\$0	\$70,472	1.38%	-	0.0000
BP Energy	\$587,526	\$0	\$587,526	11.49%	12,527,200	0.0469
* Hydro Projects	\$33,257	\$0	\$33,257	0.65%	408,778	0.0814
Braintree Watson Unit	\$38,811	\$243,624	\$282,435	5.52%	552,004	0.5117
* Saddleback/Jericho	\$138,827	\$0	\$138,827	2.71%	1,509,069	0.0920
* One Burlington Solar	\$27,346	\$0	\$27,346	0.53%	390,650	0.0700
Coop Resales	\$916	\$0	\$916	0.02%	6,304	0.1454
Exelon Energy	\$1,108,057	\$0	\$1,108,057	21.66%	25,307,800	0.0438
Stonybrook Peaking	\$28,691	\$49,368	\$78,060	1.53%	123,109	0.6341
Monthly Total	\$3,194,092	\$1,920,704	\$5,114,796	100.00%	74,092,068	0.0690
* Renewable Resources					6.04%	

RENEWABLE ENERGY CERTIFICATES (RECs)

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

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

TRANSMISSION

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

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

RMLD SOLAR CHOICE PROGRAM

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

SOLAR CHOICE RATE

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicability:

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

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

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

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

SC Energy Component Charge:

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

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

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

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

SC Capacity Component Credit:

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

The SC Capacity Component Credit will be calculated as follows:

Rate Filed: October 28, 2016

Effective: On Billings on or After December 1, 2016

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

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

SC Transmission Component Credit:

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

The SC Transmission Component Credit will be calculated as follows:

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

SC Rate:

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

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

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

Term:

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

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

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

Rate Filed: October 28, 2016

Effective: On Billings on or After December 1, 2016

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

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

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

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

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

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

General Terms and Conditions:

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

Rate Filed: October 28, 2016

Effective: On Billings on or After December 1, 2016

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

ENGINEERING AND OPERATIONS
REPORT
ATTACHMENT 4



Engineering & Operations Report

RMLD Board of Commissioners Meeting

October 20, 2016

August 2016 Reporting Period

Hamid Jaffari, Director of Engineering & Operations

Capital Improvement Projects

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

Routine Construction

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

Routine Maintenance

➤ Transformer Replacement (through August 2016)

Pad mount 21.24% Overhead 14.46%

➤ Pole Inspection (as of 10/9/2016)

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

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

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

➤ Manhole Inspection (through August 2016)

614 manholes have been inspected.

➤ Porcelain Cutout Replacements (through August 2016)

91% complete 256 remaining to be replaced

➤ Tree Trimming

August: 110 spans trimmed YTD: 176 spans trimmed

➤ Substation Maintenance

Infrared Scanning – August complete - no hot spots found

Double Poles

- Ownership: 16,000 (approximately)

50% RMLD

50% Verizon

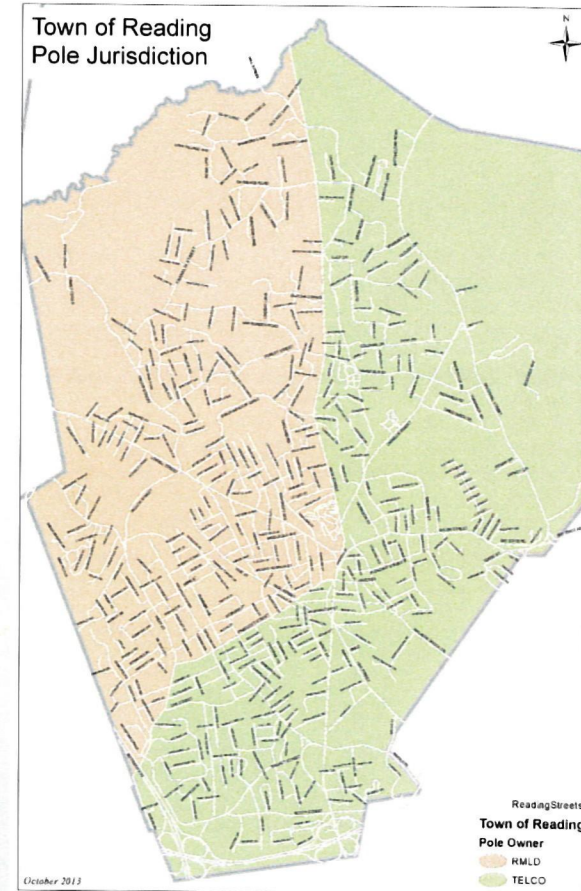
- Custodial:

Reading – split (see map)

North Reading – RMLD

Lynnfield – Verizon

Wilmington - Verizon



NJUNS

"Next to Go" as of October 11, 2016

LYNNFIELD

NTG Member and Job Type	Count of Ticket Number
LFLDFD	2
Lynnfield Fire Department	
TRANSFER	2
RMLD	5
Reading Municipal Light Department	
TRANSFER	5
VZNEA	13
Verizon	
TRANSFER	7
PULL POLE	6
(blank)	
Grand Total	20

NORTH READING

NTG Member and Job Type	Count of Ticket Number
NGMA	1
National Grid	
TRANSFER	1
NRDGF	41
North Reading Fire Department	
TRANSFER	41
RMLD	62
Reading Municipal Light Department	
TRANSFER	16
SET POLE	1
PULL POLE	45
VZNEDR	100
Verizon	
TRANSFER	90
PULL POLE	10
(blank)	
Grand Total	204

READING

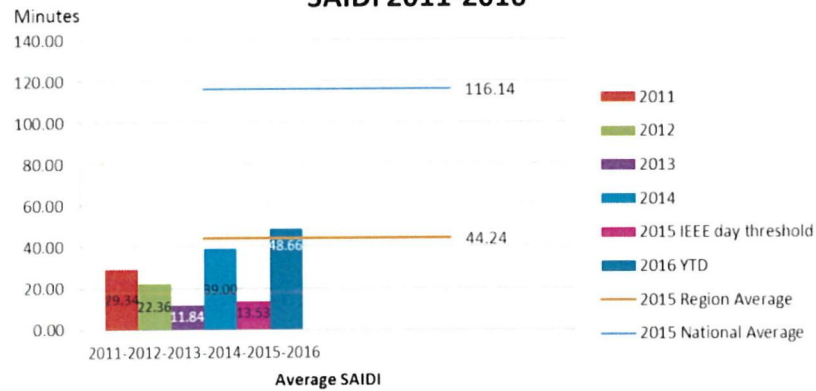
NTG Member and Job Type	Count of Ticket Number
CMCTNR	12
Comcast	
TRANSFER	12
NP3PMA	10
Non-participating 3rd Party Attacher - Massachusetts	
TRANSFER	10
RDNGFD	4
Reading Fire Department	
TRANSFER	4
RMLD	94
Reading Municipal Light Department	
TRANSFER	55
PULL POLE	39
VZNEA	116
Verizon	
TRANSFER	92
PULL POLE	24
(blank)	
Grand Total	236

WILMINGTON

NTG Member and Job Type	Count of Ticket Number
NGMA	2
National Grid	
TRANSFER	2
NP3PMA	10
Non-participating 3rd Party Attacher - Massachusetts	
TRANSFER	10
RMLD	47
Reading Municipal Light Department	
TRANSFER	42
PULL POLE	4
INSTL GUY	1
VZBMA	1
Verizon Business	
TRANSFER	1
VZNEDR	75
Verizon	
TRANSFER	56
PULL POLE	19
WGMNFD	71
Wilmington Fire Department	
TRANSFER	71
(blank)	
Grand Total	206

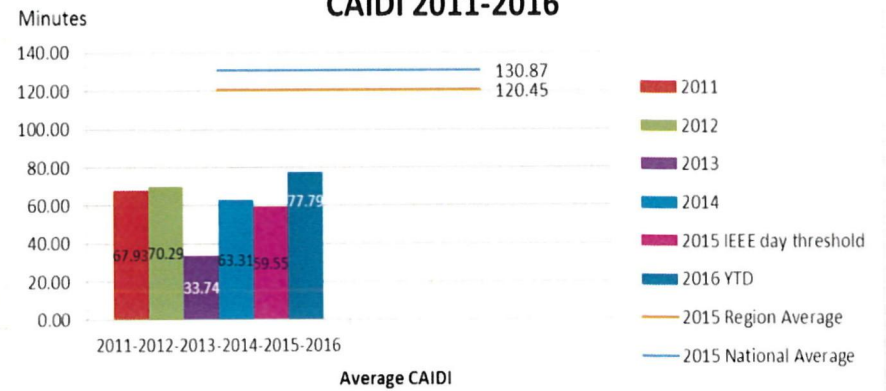
RMLD Reliability Indices

SAIDI 2011-2016



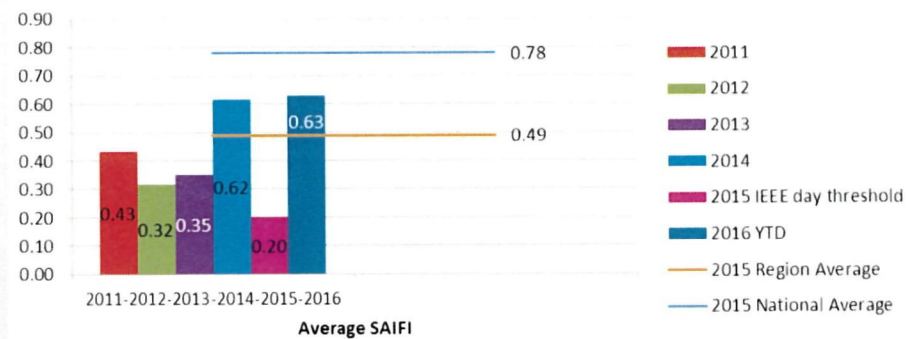
$$SAIDI(\text{Minutes}) = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

CAIDI 2011-2016



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

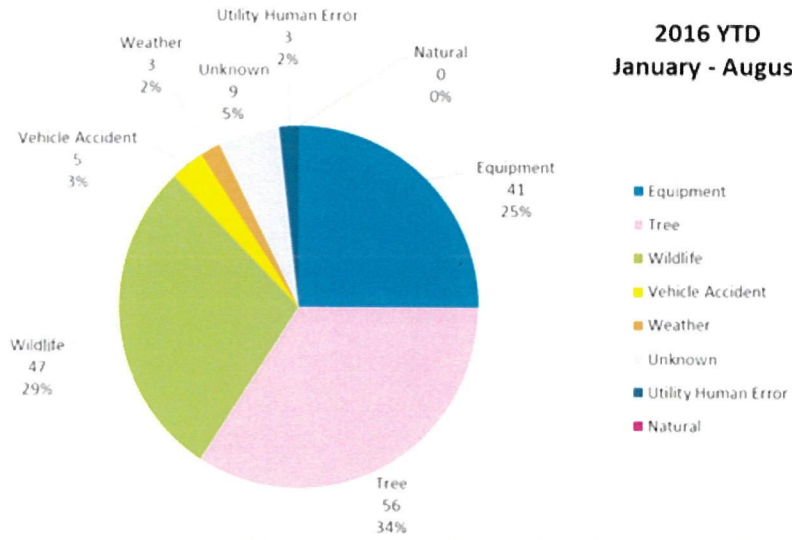
SAIFI 2011-2016



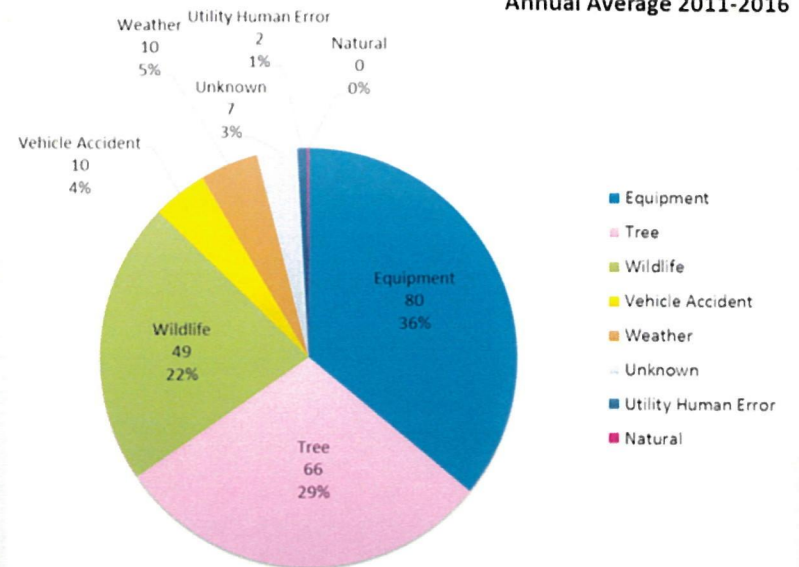
$$SAIFI = \frac{\text{Total Number of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

Outages Causes

2016 YTD
January - August



Annual Average 2011-2016



Questions ?



RMLD PROCUREMENT REQUESTS
REQUIRING BOARD APPROVAL
ATTACHMENT 5



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

October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-15 Capacitor Bank

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

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

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

A sealed proposal was received from one company: WESCO.

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

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

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


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



Peter Price



Hamid Jaffari



Coleen O'Brien

**Capacitor Bank
IFP 2017-15**

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

RMLD



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

230 Ash Street
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Fax: (781) 942-2409
Web: www.rml.com

October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-20 750 MCM Cable

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

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

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

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

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

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

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

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

Peter Price

Hamid Jaffari

Coleen O'Brien

**750 MCM Cable
Bid 2017-20**

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

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

Took exception to firm pricing - included an excalation/de-escalation clause.

Took exception to firm pricing - Noted: Pricing will be subject to metals adjustment at time of shipment.

RMLD



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October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-22 Single Phase Step Voltage Regulator

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

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

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

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

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

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

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

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

Peter Price

Hamid Jaffari

Coleen O'Brien

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

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



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RELIABLE POWER FOR GENERATIONS

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October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-24 Single Phase Submersible Transformer

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

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

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

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

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

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

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

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

Peter Price

Hamid Jaffari

Coleen O'Brien

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

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

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

October 17, 2016

Town of Reading Municipal Light Board

Subject: IFP 2017-25 Control Devices for Substation 3

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

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

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

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

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

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

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

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

Nick D'Alleva

Hamid Jaffari

Coleen O'Brien

**Control Devices for Station 3
Bid 2017-25**

Bidder	Manufacturer	Delivery Date	Unit Price	Qty	Total Net Price	Awarding Prices	Meet Specification requirement	Specification Data Sheets	Firm Price	All forms filled out	Certified Check or Bid Bond	Exceptions to stated bid requirements	Authorized signature
WESCO							yes	yes	yes	yes	yes	no	yes
Item 1	Schweitzer	4-6 weeks	\$3,814.00	2	\$7,628.00	\$7,628.00							
Item 2	Schweitzer	4-6 weeks	\$3,182.00	12	\$38,184.00								
Item 3	Schweitzer	4-6 weeks	\$1,146.00	6	\$6,876.00								
Item 4	Schweitzer	4-6 weeks	\$2,300.00	2	\$4,600.00								
Item 5	ABB	2 weeks	\$147.00	16	\$2,352.00	\$2,352.00							
Item 6	ABB	2 weeks	\$147.00	2	\$294.00	\$294.00							
Item 7	ABB	3 weeks	\$144.00	8	\$1,152.00	\$1,152.00							
Item 8	Electro Switch	3-4 weeks	\$124.00	12	\$1,488.00	\$1,488.00							
Item 9	Electro Switch	4-6 weeks	\$734.00	24	\$17,616.00	\$17,616.00							
Item 10	Electro Switch	8-9 weeks	\$1,258.00	17	\$21,386.00	\$21,386.00							
Item 11	Artisan	2-4 weeks	\$50.00	1	\$50.00								
Item 12													
Item 13	Electro Switch	2-4 weeks	\$506.00	2	\$1,012.00	\$1,012.00							
Item 14	Struthers Dunn	2-4 weeks	\$266.00	1	\$266.00	\$266.00							
Item 15	Fairchild Semiconductor	2-4 weeks	\$4.00	12	\$48.00	\$48.00							
Item 16	Electro Switch	8-9 weeks	\$802.00	12	\$9,624.00	\$9,624.00							
Item 17	Schweitzer	4-6 weeks	\$5,527.00	2	\$11,054.00								
Item 18	Schweitzer	4-6 weeks	\$127.00	10	\$1,270.00								
Item 19	Schweitzer	4-6 weeks	\$127.00	10	\$1,270.00								
Item 20	Schweitzer	4-6 weeks	\$67.00	8	\$536.00								
Item 21	Schweitzer	4-6 weeks	\$67.00	2	\$134.00								
Item 22	GE	4 weeks	\$55.00	12	\$660.00								
Item 23	GE	4 weeks	\$55.00	4	\$220.00								
					\$127,720.00	\$62,866.00							
Graybar Electric							yes	yes	yes	yes	yes	no	yes
Item 1	SEL	8 weeks	\$3,854.00	2	\$7,708.00								
Item 2	SEL	8 weeks	\$3,179.00	12	\$38,148.00	\$38,148.00							
Item 3	SEL	8 weeks	\$1,139.00	6	\$6,834.00	\$6,834.00							
Item 4	SEL	8 weeks	\$2,297.00	2	\$4,594.00	\$4,594.00							
Item 5				16									
Item 6				2									
Item 7				8									
Item 8	Electro Switch	4 weeks	\$127.49	12	\$1,529.88								
Item 9	Electro Switch	4 weeks	\$738.89	24	\$17,733.36								
Item 10	Electro Switch	4 weeks	\$1,263.62	17	\$21,481.54								
Item 11	Artisan	4 weeks	\$31.92	1	\$31.92	\$31.92							
Item 12													
Item 13	Electro Switch	4 weeks	\$537.59	2	\$1,075.18								
Item 14				1									
Item 15				12									
Item 16	Electro Switch	4 weeks	\$805.86	12	\$9,670.32								
Item 17	SEL	8 weeks	\$5,519.00	2	\$11,038.00	\$11,038.00							
Item 18	SEL	8 weeks	\$126.00	10	\$1,260.00	\$1,260.00							
Item 19	SEL	8 weeks	\$126.00	10	\$1,260.00	\$1,260.00							
Item 20	SEL	8 weeks	\$66.98	8	\$535.84	\$535.84							
Item 21	SEL	8 weeks	\$66.98	2	\$133.96	\$133.96							
Item 22	GE	2 weeks	\$43.63	12	\$523.56	\$523.56							
Item 23	GE	4 weeks	\$10.50	4	\$42.00	\$42.00							
					\$123,599.56	\$64,401.28							

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

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



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

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

October 14, 2016

Town of Reading Municipal Light Board

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

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

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

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

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

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

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

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

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



Paul McGonagle



Hamid Jaffari



Coleen O'Brien

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

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

¹ **Exceptions (14):** Too many modifications to the vehicle RMLD was requesting.

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

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

BOARD MATERIAL AVAILABLE
BUT NOT DISCUSSED

Jeanne Foti

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

Good morning,

The following timeframes had no Account Payable and Payroll questions.

Account Payable Warrant – No Questions

September 30 and October 7

Payroll – No Questions

October 3

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

Thanks!

Tracy Schultz

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

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

October-16

	RESIDENTIAL 750 kWh's	RESIDENTIAL-TOU 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	\$112.82	\$194.16	\$137.46	\$1,005.04	\$198.88	\$4,669.00	\$749,233.90
PER KWH CHARGE	\$0.15042	\$0.12944	\$0.13746	\$0.13768	\$0.18415	\$0.13340	\$0.10891
NATIONAL GRID							
TOTAL BILL	\$132.40	\$266.91	\$176.52	\$1,263.41	\$182.01	\$4,919.07	\$1,375,423.23
PER KWH CHARGE	\$0.17653	\$0.17794	\$0.17652	\$0.17307	\$0.16853	\$0.14054	\$0.19993
% DIFFERENCE	17.35%	37.47%	28.42%	25.71%	-8.48%	5.36%	83.58%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$148.80	\$263.35	\$196.25	\$1,477.61	\$202.60	\$7,655.11	\$1,113,175.35
PER KWH CHARGE	\$0.19839	\$0.17557	\$0.19625	\$0.20241	\$0.18759	\$0.21872	\$0.16181
% DIFFERENCE	31.89%	35.64%	42.77%	47.02%	1.87%	63.96%	48.58%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$92.81	\$179.22	\$121.61	\$988.74	\$156.46	\$4,883.88	\$672,615.67
PER KWH CHARGE	\$0.12374	\$0.11948	\$0.12161	\$0.13544	\$0.14487	\$0.13954	\$0.09777
% DIFFERENCE	-17.74%	-7.69%	-11.53%	-1.62%	-21.33%	4.60%	-10.23%
MIDDLETON MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$98.74	\$201.66	\$132.75	\$959.51	\$168.44	\$4,762.93	\$807,171.40
PER KWH CHARGE	\$0.13165	\$0.13444	\$0.13275	\$0.13144	\$0.15596	\$0.13608	\$0.11733
% DIFFERENCE	-12.48%	3.86%	-3.43%	-4.53%	-15.31%	2.01%	7.73%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$122.99	\$228.42	\$154.38	\$1,166.29	\$186.28	\$5,473.08	\$921,561.30
PER KWH CHARGE	\$0.16398	\$0.15228	\$0.15438	\$0.15977	\$0.17249	\$0.15637	\$0.13396
% DIFFERENCE	9.01%	17.65%	12.31%	16.04%	-6.33%	17.22%	23.00%