



## AGENDA

### REGULAR SESSION

#### READING MUNICIPAL LIGHT DEPARTMENT CITIZENS' ADVISORY BOARD (CAB) MEETING

WEDNESDAY, APRIL 12, 2017

6:30 pm

230 Ash Street, Winfred Spurr AV Room  
Reading, MA 01867

1. Call Meeting to Order – G. Hooper, Chair
2. Approval of Minutes – G. Hooper, Chair  
**Suggested Motion:** Move that the Citizens' Advisory Board approve the Minutes of the March 1, 2017, meeting as written.
3. FY18 Operating Budget – H. Jaffari, Director of Engineering & Operations  
**Suggested Motion:** Move that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Fiscal Year 2018 Operating Budget with a Net Income of \$4,114,622 as presented.  
**Suggested Motion:** Move that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Fiscal Year 2018 Capital Budget in the amount of \$7,685,715 as presented on April 5, 2017. Any significant changes are to be submitted to the CAB for review and recommendation.
4. Proposed Rate Adjustment – J. Parenteau, Director of Integrated Resources and M. Seavey, Principal, PLM
5. Public Comment – G. Hooper, Chair
6. Next Meeting – G. Hooper, Chair
7. Adjournment – G. Hooper, Chair

This Agenda has been prepared in advance and does not necessarily include all matters which may be taken up at this meeting.



## Town of Reading Meeting Minutes

### Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2017-03-01

Time: 6:30 PM

Building: Reading Municipal Light Building

Location: Winfred Spurr Audio Visual Room

Address: 230 Ash Street

Session: Open Session

Purpose: General Business

Version: Draft

#### Attendees: **Members - Present:**

Mr. George Hooper, Chair (Wilmington); Mr. Dennis Kelley, Secretary (Wilmington); Mr. Neil Cohen (Reading); Mr. Jason Small (North Reading)

#### **Members - Not Present:**

#### **Others Present:**

Mr. David Hennessy, Board of Commissioners  
Ms. Jane Parenteau, Ms. Kathleen Rybak

**Minutes Respectfully Submitted By:** Mr. Dennis Kelley, Secretary

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#### **Topics of Discussion:**

1. Call Meeting to Order – G. Hooper, Chair  
Chair Hooper called the meeting of the Citizens' Advisory Board to order at 6:30 PM and noted that the meeting was being audio recorded.
2. Introductions – G. Hooper, Chair  
Chair Hooper welcomed new CAB members Mr. Neil Cohen representing Reading and Mr. Jason Small representing North Reading.
3. Approval of Minutes – G. Hooper, Chair  
*Materials: Draft Minutes from the December 14, 2016, meeting.*

Mr. Kelley made a motion that the Citizens' Advisory Board approve the Minutes of the December 14, 2016, meeting as written, seconded by Chair Hooper. Hearing no further discussion, **Motion carried 4:0:0** (4 in favor, 0 opposed, 0 absent).

4. General Manager's Report – J Parenteau, Director of Integrated Resources  
Ms. Parenteau presented in Ms. O'Brien's absence. Staff have been conducting the bi-annual Selectmen updates with each of the four towns. Lynnfield and Wilmington meetings have taken place, and the Reading and North Reading meetings are still pending. The presentation includes highlights of FY16 and some of the projects that the RMLD is currently working on, as well as, a preliminary projection for budgeting and planning. The presentations to date are being well received.
5. Energy Services Update – J. Parenteau, Director of Integrated Resources  
*Grant Applications Update:* Ms. Parenteau reported that Integrated Resources (IRD) is working on a number of grant initiatives. The Department has been successful in partnering with WattJoule on a \$150k grant through the DOER (as part of their energy storage initiative) for a 25-kilowatt flow battery project. This will be a two to three-



year study to see how this technology works. The unit will be located in the Station 1 building (at the Ash Street facilities). The DOER is due to release \$10m in grants, and RMLD will be submitting requests for a few larger projects. Additionally, through the DOER, RMLD has applied for grants for electrical vehicle charging stations at 8-10 different locations. These grants are the result of Volkswagen's \$2.9m settlement.

As part of the Capital Improvements Budget, RMLD will be installing a charging station in the parking lot at the front of 230 Ash Street. This will be a potential revenue source to offset declining sales. Ms. Parenteau spoke about some of the current charging stations in place at commercial sites in Wilmington and North Reading.

Ms. Parenteau noted that IRD continues to explore additional grant opportunities for solar/battery storage initiatives.

*Community Solar:* Ms. Parenteau provided an overview of the Community Solar Program and the solar installation at 326 Ballardvale Street in Wilmington. The project has been fully installed, and the developer and bank are finalizing some tax forms through the FDIC. An April 1 go-live date is anticipated; we were not able to make the March 1 deadline. There are currently 80-90 customers on a waiting list for the next project and staff is exploring options for a second site. Mr. Kelley asked if CAB members could tour one of the solar facilities. Ms. Parenteau agreed to follow-up on that request.

*Residential Water Heater Program:* RMLD currently has about 263 residential customers with load-control modules installed in their homes which control their water heaters. The project has been in place for approximately six years and the load-control modules are approaching the end of their useful life. We are having difficulty with the software and communications with the units. It is very difficult to have RMLD equipment inside customers' homes; if we have a telecommunication issue, we have no way of communicating with the devices and correcting the issue. Therefore, we are discontinuing the program, and the devices will be removed from the homes. IRD is evaluating new technology for incentive programs to reduce residential use during peak periods.

6. LED Streetlight Upgrade Project/State Grant Opportunities - G. Hooper, Chair  
Chair Hooper requested an update on the status of the LED streetlight project and the potential for additional funding through a proposed \$12m State grant available to municipalities.

Ms. Parenteau noted that RMLD is in the process of looking into this grant opportunity. However, in 2014, RMLD applied for and received a \$250k grant for municipal projects through the DOER. A portion of this grant (\$125k) was used for the LED streetlight conversion program. Therefore, we are not sure if RMLD would be eligible for this latest grant opportunity. We did reach out through the MAPC (an administrator for part of the grant), but this portion is only available for municipalities that are served by investor-owned utilities.

Ms. Parenteau updated the group on the current LED conversion program, which is scheduled to be completed by June of 2018. The lights have been very well received by customers.

7. FY18 Budget Review Meetings - G. Hooper, Chair  
The FY18 budget review meetings were scheduled for April 5<sup>th</sup> and April 12<sup>th</sup>. One of the meetings will be held in Wilmington.

Chair Hooper asked (relative to resolution of double poles), whether RMLD transfers their own fiber or contracts out for the transfers. Wilmington does not want to hold up pole replacements, so would like to explore the option of RMLD transferring town fiber. Ms. Parenteau agreed to follow-up with Ms. O'Brien.

8. Adjournment – G. Hooper, Chair  
Mr. Kelley made a motion to adjourn the Citizens' Advisory Board meeting, seconded by Mr. Cohen. Hearing no further discussion, **Motion carried 4:0:0** (4 in favor, 0 opposed, 0 absent).

The Citizens' Advisory Board Meeting adjourned at 7:07 PM.

DRAFT

# READING MUNICIPAL LIGHT DEPARTMENT

## *FY 18 OPERATING BUDGET*

March 31, 2017

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Coleen O'Brien  
General Manager

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READING MUNICIPAL LIGHT DEPARTMENT  
SIX YEAR PLAN  
March 31, 2017 (as revised 4/11/17)

FISCAL YEAR	ACTUAL 2016	8 ACT / 4 BUD 2017		2018	change	2019	change	2020	change	2021	change	2022
<b>OPERATING REVENUE:</b>												
SALES OF ELEC - BASE	\$ 23,207,288	\$ 25,446,977	3.50%	\$ 26,337,621	3.50%	\$ 27,259,438	3.00%	\$ 28,077,221	2.50%	\$ 28,779,152	2.00%	\$ 29,354,735
SALES OF ELEC - BASE CAPACITY	18,900,249	20,137,351		24,476,160		23,263,233		19,600,575		17,124,283		21,449,835
SALES OF ELEC - BASE TRANSMISSION	12,807,770	13,113,601		13,612,815		14,638,396		15,397,350		15,840,074		16,679,986
SALES OF ELEC - FUEL	33,528,502	33,516,934		32,491,810		32,791,807		33,107,725		33,426,802		33,749,070
NYPA	(1,165,456)	(1,192,136)		(1,200,000)		(1,200,000)		(1,200,000)		(1,200,000)		(1,200,000)
FORFEITED DISCOUNTS	791,780	812,450		800,000		817,783		842,317		863,375		880,642
ENERGY CONSERVATION	665,850	686,949		675,000		675,000		675,000		675,000		675,000
<b>TOTAL OPERATING REVENUE</b>	<b>\$ 88,735,983</b>	<b>\$ 92,522,126</b>		<b>\$ 97,193,406</b>		<b>\$ 98,245,657</b>		<b>\$ 96,500,188</b>		<b>\$ 95,508,685</b>		<b>\$ 101,589,268</b>
<b>OPERATING EXPENSES:</b>												
PURCHASED POWER - BASE CAPACITY	\$ 18,900,249	\$ 20,281,164		\$ 24,476,160		\$ 23,263,233		\$ 19,600,575		\$ 17,124,283		\$ 21,449,835
PURCHASED POWER - BASE TRANSMISSION	12,373,633	12,969,787		13,612,815		14,638,396		15,397,350		15,840,074		16,679,986
PURCHASED POWER - FUEL	32,426,456	32,324,798		31,291,810		31,591,807		31,907,725		32,226,802		32,549,070
OPERATING & MAINTENANCE EXPENSE	5,312,445	5,542,785		5,941,700	3.00%	6,119,951	3.00%	6,303,550	3.00%	6,492,656	3.00%	6,687,436
GENERAL & ADMINISTRATIVE EXPENSE	9,788,822	9,938,502		10,361,361	3.00%	10,672,202	3.00%	10,992,368	3.00%	11,322,139	3.00%	11,661,803
DEPRECIATION EXPENSE	3,944,792	4,112,205		4,362,000		4,563,000		4,877,000		5,045,000		5,152,000
TOWN PAYMENTS	1,400,347	1,421,179		1,500,000		1,700,380		1,715,260		1,685,420		1,643,920
<b>TOTAL OPERATING EXPENSES</b>	<b>\$ 84,146,744</b>	<b>\$ 86,590,420</b>		<b>\$ 91,545,846</b>		<b>\$ 92,548,969</b>		<b>\$ 90,793,827</b>		<b>\$ 89,736,374</b>		<b>\$ 95,824,050</b>
<b>TOTAL OPERATING INCOME</b>	<b>\$ 4,589,239</b>	<b>\$ 5,931,706</b>		<b>\$ 5,647,560</b>		<b>\$ 5,696,688</b>		<b>\$ 5,706,360</b>		<b>\$ 5,772,311</b>		<b>\$ 5,765,218</b>
<b>NONOPERATING REVENUES:</b>												
OTHER INCOME - JOBBING, ADVANCE IN AID	\$ 1,039,927	\$ 798,245		\$ 890,000		\$ 890,000		\$ 890,000		\$ 890,000		\$ 890,000
INTEREST INCOME	209,514	138,384		150,000		150,000		150,000		150,000		150,000
<b>TOTAL OTHER INCOME</b>	<b>\$ 1,249,441</b>	<b>\$ 936,629</b>		<b>\$ 1,040,000</b>		<b>\$ 1,040,000</b>		<b>\$ 1,040,000</b>		<b>\$ 1,040,000</b>		<b>\$ 1,040,000</b>
<b>NONOPERATING EXPENSES:</b>												
CUSTOMER DEPOSIT INTEREST EXP	\$ 1,957	\$ 3,989		\$ 2,500		\$ 3,000		\$ 3,000		\$ 3,500		\$ 3,500
OTHER DEDUCTIONS (INCLUDING ROI)	2,467,319	2,434,668		2,570,438		2,596,142		2,622,104		2,648,325		2,674,808
<b>TOTAL MISCELLANEOUS DEDUCTIONS</b>	<b>\$ 2,469,276</b>	<b>\$ 2,438,657</b>		<b>\$ 2,572,938</b>		<b>\$ 2,599,142</b>		<b>\$ 2,625,104</b>		<b>\$ 2,651,825</b>		<b>\$ 2,678,308</b>
<b>NET INCOME</b>	<b>\$ 3,369,404</b>	<b>\$ 4,429,678</b>		<b>\$ 4,114,622</b>		<b>\$ 4,137,546</b>		<b>\$ 4,121,256</b>		<b>\$ 4,160,486</b>		<b>\$ 4,126,910</b>



READING MUNICIPAL LIGHT DEPARTMENT  
SIX YEAR PLAN  
March 31, 2017 (as revised 4/11/17)

FISCAL YEAR	ACTUAL 2016	8 ACT / 4 BUD 2017	2018	change	2019	change	2020	change	2021	change	2022
Net Income			\$ 4,114,622		\$ 4,137,546		\$ 4,121,256		\$ 4,160,486		\$ 4,126,910
ROI Payment			2,570,438		2,596,142		2,622,104		2,648,325		2,674,808
Fuel adjustment			-		-		-		-		-
PPCT adjustment			-		-		-		-		-
Interest Income			(150,000)		(150,000)		(150,000)		(150,000)		(150,000)
Advanced in Aid of Construction			(400,000)		(400,000)		(400,000)		(400,000)		(400,000)
Adjusted Net Income for ROR			\$ 6,135,060		\$ 6,183,688		\$ 6,193,360		\$ 6,258,811		\$ 6,251,718
NET PLANT at END of FY			\$ 79,119,000		\$ 85,019,000		\$ 85,763,000		\$ 84,271,000		\$ 82,196,000
Allowable 8%			\$ 6,329,520		\$ 6,801,520		\$ 6,861,040		\$ 6,741,680		\$ 6,575,680
ROR			7.75%		7.27%		7.22%		7.43%		7.61%

**READING MUNICIPAL LIGHT DEPARTMENT  
FISCAL YEAR 2018 OPERATING BUDGET  
SCHEDULE OF REVENUES AND EXPENSES**

	2016 Budget	2016 Actual	2017 Budget	2017 4 Months Budget	2017 8 Months Actual	2017 8 Actual/4 Budget	2018 Budget
<b>Operating Revenues</b>							
Base Revenue	\$ 23,020,930	\$ 23,207,288	\$ 25,500,000	\$ 7,720,118	\$ 17,726,859	\$ 25,446,977	\$ 26,337,621
Fuel Revenue	35,226,324	33,528,502	34,074,492	10,120,250	23,396,684	33,516,934	32,491,810
Purchased Power Capacity & Transmission	29,696,424	31,708,019	34,322,278	9,774,333	23,476,618	33,250,951	38,088,978
Forfeited Discounts	690,628	791,780	688,500	229,500	582,950	812,450	800,000
Energy Conservation Revenue	707,288	665,850	673,000	224,333	462,616	686,949	675,000
NYPA Credit	(900,000)	(1,165,456)	(900,000)	(413,771)	(778,365)	(1,192,136)	(1,200,000)
<b>Total Operating Revenues</b>	<b>\$ 88,441,594</b>	<b>\$ 88,735,983</b>	<b>\$ 94,358,270</b>	<b>\$ 27,654,764</b>	<b>\$ 64,867,362</b>	<b>\$ 92,522,126</b>	<b>\$ 97,193,409</b>
<b>Expenses</b>							
<b>Power Expenses:</b>							
547 Purchased Power Fuel Expense	\$ 34,326,329	\$ 32,426,456	\$ 33,174,492	\$ 9,726,169	\$ 22,598,629	\$ 32,324,798	\$ 31,291,810
555 Purchased Power Capacity	17,095,785	18,900,249	20,943,651	6,981,217	13,299,947	20,281,164	24,476,161
565 Purchased Power Transmission	12,600,639	12,373,633	13,378,627	3,835,949	9,133,838	12,969,787	13,612,817
<b>Total Purchased Power</b>	<b>\$ 64,022,753</b>	<b>\$ 63,700,338</b>	<b>\$ 67,496,770</b>	<b>\$ 20,543,335</b>	<b>\$ 45,032,414</b>	<b>\$ 65,575,749</b>	<b>\$ 69,380,788</b>
<b>Operations and Maintenance Expenses:</b>							
580 Supervision and Engineering	632,691	562,841	658,195	224,839	270,071	494,910	829,705
581 Station Supervisor	84,858	157,474	91,269	30,423	93,802	124,225	130,662
581 Line General	666,641	755,206	901,213	300,404	444,439	744,843	638,107
582 Control Room	448,347	406,831	472,879	157,626	311,651	469,278	473,878
585 Street Lighting	93,347	126,789	102,402	34,134	78,135	112,269	119,398
586 Meter General	277,523	228,126	250,375	83,458	140,368	223,826	222,280
588 Materials Management	457,068	465,948	464,418	154,806	297,302	452,108	450,828
590 Maintenance of Structures and Equipment	384,655	479,471	419,599	139,866	313,051	452,917	495,731
593 Maintenance of Lines - Overhead	1,971,953	1,871,739	2,044,499	681,500	1,352,569	2,034,068	2,036,277
594 Maintenance of Lines - Underground	124,508	137,127	125,066	41,689	195,627	237,315	198,592
595 Maintenance of Line Transformers	300,000	94,909	300,000	100,000	23,558	123,558	300,000
596 Maintenance of Street Lights	10,072	25,984	10,287	3,429	70,039	73,468	46,242
<b>Total Operations Expenses</b>	<b>\$ 5,451,663</b>	<b>\$ 5,312,445</b>	<b>\$ 5,840,202</b>	<b>\$ 1,952,175</b>	<b>\$ 3,590,610</b>	<b>\$ 5,542,785</b>	<b>\$ 5,941,700</b>
<b>General &amp; Administration Expenses:</b>							
902 Meter Reading	32,578	20,803	32,640	10,880	16,878	27,758	39,847
903 Customer Collection	1,693,219	1,651,557	1,792,724	597,575	1,051,736	1,649,311	1,986,508
904 Uncollectible Accounts	120,000	64,770	150,000	50,000	100,000	150,000	150,000
916 Energy Audit and Conservation	1,298,875	1,195,418	1,501,806	500,602	809,435	1,310,037	1,490,463
920 Administrative and General Salaries	838,461	909,832	1,134,674	378,225	624,921	1,003,146	1,017,151
921 Office Supplies and Expenses	301,000	375,675	349,000	116,333	186,212	302,546	350,000
923 Outside Services	377,332	505,139	418,100	139,367	336,649	476,016	471,900
924 Property Insurance	466,200	356,212	424,500	141,500	223,045	364,545	427,200
925 Injuries and Damages	51,254	63,072	57,215	19,072	41,067	60,138	52,613
926 Employee Pensions and Benefits	2,633,591	3,521,732	2,922,673	974,224	2,444,043	3,418,267	3,000,437
930 Miscellaneous General Expense	231,022	138,385	219,158	73,053	107,673	180,726	207,205
931 Rent Expense	212,000	192,115	212,000	70,667	116,514	187,181	212,000
935 Maintenance of General Plant	178,200	203,657	180,000	60,000	196,668	256,668	281,880
935 Maintenance of Building & Garage	660,131	590,456	590,523	196,841	355,324	552,165	674,157
<b>Total Maintenance Expenses</b>	<b>\$ 9,093,863</b>	<b>\$ 9,788,822</b>	<b>\$ 9,985,013</b>	<b>\$ 3,328,338</b>	<b>\$ 6,610,164</b>	<b>\$ 9,938,502</b>	<b>\$ 10,361,361</b>
<b>Other Operating Expenses:</b>							
403 Depreciation	\$ 3,983,145	\$ 3,944,792	\$ 4,134,000	\$ 1,378,000	\$ 2,734,205	\$ 4,112,205	\$ 4,362,000
408 Voluntary Payments to Towns	1,416,000	1,400,347	1,445,420	481,807	939,372	1,421,179	1,500,000
<b>Total Other Expenses</b>	<b>\$ 5,399,145</b>	<b>\$ 5,345,139</b>	<b>\$ 5,579,420</b>	<b>\$ 1,859,807</b>	<b>\$ 3,673,577</b>	<b>\$ 5,533,384</b>	<b>\$ 5,862,000</b>
<b>Operating Income</b>	<b>\$ 4,474,170</b>	<b>\$ 4,589,239</b>	<b>\$ 5,456,865</b>	<b>\$ (28,890)</b>	<b>\$ 5,960,596</b>	<b>\$ 5,931,706</b>	<b>\$ 5,647,560</b>
<b>Non Operating Revenues (Expenses):</b>							
419 Interest Income	\$ 150,000	\$ 209,514	\$ 125,000	\$ 41,667	\$ 96,718	\$ 138,384	\$ 150,000
419 Other Income	910,000	1,039,927	890,000	296,667	501,578	798,245	890,000
426 Return on Investment to Reading	(2,520,000)	(2,467,319)	(2,534,668)	(844,889)	(1,589,779)	(2,434,668)	(2,570,438)
431 Interest Expense	(2,100)	(1,957)	(2,100)	(700)	(3,289)	(3,989)	(2,500)
<b>Total Non Operating Revenues (Expenses)</b>	<b>\$ (1,462,100)</b>	<b>\$ (1,219,835)</b>	<b>\$ (1,521,768)</b>	<b>\$ (507,256)</b>	<b>\$ (994,772)</b>	<b>\$ (1,502,028)</b>	<b>\$ (1,532,938)</b>
<b>Net Income</b>	<b>\$ 3,012,070</b>	<b>\$ 3,369,404</b>	<b>\$ 3,935,097</b>	<b>\$ (536,146)</b>	<b>\$ 4,965,825</b>	<b>\$ 4,429,678</b>	<b>\$ 4,114,622</b>

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**READING MUNICIPAL LIGHT DEPARTMENT  
FISCAL YEAR 2018 OPERATING BUDGET  
SUPPLEMENTAL INFORMATION**

<b>SEMI VARIABLE COSTS:</b>	<b>FY18 OPERATING BUDGET</b>	<b>FY18 CAPITAL BUDGET</b>	<b>TOTAL COST</b>
Labor	\$ 6,376,181.00	\$ 1,104,638.00	\$ 7,480,819.00
Employee Benefits/Pension	\$ 3,000,437.00	\$ 614,179.00	\$ 3,614,616.00
Groups (all)	\$ 1,953,597.00	\$ 189,428.00	\$ 2,143,025.00
Conservation Expenses	\$ 952,565.00	\$ -	\$ 952,565.00
Tree Trimming	\$ 886,340.00	\$ -	\$ 886,340.00
Overtime	\$ 763,517.00	\$ 134,372.00	\$ 897,889.00
Property Insurance	\$ 427,200.00	\$ -	\$ 427,200.00
Professional Services	\$ 471,900.00	\$ -	\$ 471,900.00
Office Supplies	\$ 350,000.00	\$ -	\$ 350,000.00
Vehicle	\$ 89,520.00	\$ 301,596.00	\$ 391,116.00
Rent Expense	\$ 212,000.00	\$ -	\$ 212,000.00
Training/Tuition	\$ 289,691.00	\$ -	\$ 289,691.00
Transformer (hazard material)	\$ 300,000.00	\$ -	\$ 300,000.00
Bad Debt Expense	\$ 150,000.00	\$ -	\$ 150,000.00
Injuries & Damages	\$ 52,613.00	\$ 24,987.00	\$ 77,600.00
RMLD/CAB	\$ 30,000.00	\$ -	\$ 30,000.00
<b>SUB-TOTAL</b>	<b>\$ 16,305,561.00</b>	<b>\$ 2,369,200.00</b>	<b>\$ 18,674,761.00</b>



## **Description of RMLD's Power Supply**

### **Stony Brook Intermediate Unit**

The Stony Brook Intermediate Unit is a 354-megawatt, combined-cycle power plant that entered commercial operation in 1981.

The unit's three gas turbines generate electricity using either No. 2 oil or natural gas, with additional electricity produced using a single steam turbine in the combined-cycle process. MMWEC completed construction of a natural gas pipeline to serve the Intermediate Unit in September 2002. The RMLD has a Life of Unit (LOU) entitlement for 14.453% of the unit or approximately 51 Mws. The RMLD has paid off the debt service associated with this project.

#### **Quick Facts – Stonybrook Intermediate Unit**

Location	Ludlow, Massachusetts
On-Line Date	1981
Fuel	No. 2 oil/natural gas
Principal Owner/Operator	MMWEC
Total Capacity	354 megawatts

### **Stony Brook Peaking Unit**

The Stony Brook Peaking Unit is a 172-megawatt peaking plant that entered commercial operation in 1982.

The unit's two turbines generate electricity using No. 2 oil. The RMLD has a Life of Unit (LOU) entitlement for 19.516% of the unit which is equivalent to approximately 33 Mws. The RMLD has paid off the debt service associated with this project.

#### Quick Facts – Stonybrook Peaking Unit

Location	Ludlow, Massachusetts
On-Line Date	1982
Fuel	No. 2 oil
Principal Owner/Operator	MMWEC
Total Capacity	172 megawatts

#### **Braintree Electric Light Department - Watson Unit**

The simple-cycle gas fired plant is powered by the first two Rolls-Royce Trent 60 gas turbines built for the U.S. power generation market – known as Watson Units #1 and #2. The units entered commercial operation on June 23, 2009.

Both Watson Units are bid into the ISO New England market system daily and are dispatched based on their bid price.

The units two turbines generate electricity using natural gas, with No. 2 oil as backup fuel. The RMLD has a 20 year entitlement for 10% of the unit which is equivalent to about 10 Mws.

#### Quick Facts – Watson Unit

Location	Braintree, Massachusetts
On-Line Date	2009
Fuel	Natural gas/No. 2 oil
Principal Owner/Operator	BELD
Total Capacity	100 megawatts

#### **Seabrook Station**

Seabrook Station is a 1,244-megawatt nuclear generating plant located in Seabrook, New Hampshire. An operating license for Seabrook was issued in 1986, but the plant did not begin commercial operation until 1990. The principal owner and operator of Seabrook Station is NextEra Energy Resources LLC, a subsidiary of Florida based FPL

Group, Inc. NextEra owns 88.2% of Seabrook Station. The other owners are MMWEC (11.59%) and two Massachusetts municipal utilities, the Taunton Municipal Lighting Plant (0.13%) and Hudson Light & Power Department (0.08%).

NextEra has announced plans to seek an extension of its Seabrook operating license from the current license expiration of 2030 to 2050. RMLD signed 3 different projects to finance Seabrook, Mix 1, Project 4, and Project 5. The debt service associated with these projects will be paid-off in 2014, 2017 & 2018 respectively. The RMLD has a Life of Unit (LOU) for 0.635% or approximately 8 Mws of the unit.

#### Quick Facts – Seabrook Station

Location	Seabrook, New Hampshire
On-Line Date	1990
Fuel	Nuclear – Pressurized Water Reactor
Principal Owner/Operator	NextEra Energy Resources, LLC
Total Capacity	1,244 megawatts

#### Millstone Unit 3

Millstone Unit 3 is a 1,237-megawatt nuclear generating plant located in Waterford, Connecticut. Millstone Unit 3, which began operation in 1986, is the newest and largest of the Millstone Station's three nuclear units, one of which is retired from service. The principal owner and operator of Millstone Station is Dominion Nuclear Connecticut, Inc., a subsidiary of Virginia-based Dominion Resources, Inc. Dominion Connecticut owns 93.4% of Millstone Unit 3.

The Nuclear Regulatory Commission (NRC) on November 28, 2005 approved Dominion Nuclear Connecticut's request for a 20-year operating license extension for Millstone's Unit 3 reactor. The license now expires in November, 2045. RMLD signed two different projects to finance Millstone #3, Mix 1 and Project 3. The debt service associated with these projects will be paid off in 2014 & 2018 respectively. The RMLD has a LOU agreement for 0.404% of the units which equates to approximately 4.6 Mws.

### Quick Facts – Seabrook Station

Location	Waterford, Connecticut
On-Line Date	1986
Fuel	Nuclear – Pressurized Water Reactor
Principal Owner/Operator	Dominion Nuclear Connecticut, Inc.
Total Capacity	1,237 megawatts

### **New York Power Authority (NYPA)**

The RMLD receives inexpensive hydroelectric power from the NYPA. RMLD receives capacity and energy from this contract. The Massachusetts Department of Public Utilities (DPU) has appointed MMWEC as the administrator of this contract. The current contract expires in 2025.

### **Hydro-Quebec Interconnection**

The Hydro-Quebec Interconnection is an approximate 2000 Mw, direct current electric transmission line connecting central New England with the Canadian utility Hydro Quebec. Construction of the U.S. portion of the interconnection, which stretches from Groton/Ayer, in Massachusetts to the Canadian border in northern Vermont, was a joint effort of many New England utilities. The RMLD receives approximately 4.5 Mws of capacity from this contract.

### **BP Energy**

In July, 2013 the RMLD signed a system power contract with BP Energy that is effective from January 1, 2014 through December 31, 2017. The RMLD receives energy only from this contract. The amount of energy purchased fluctuates on a monthly basis for both the on-peak and off-peak period. RMLD has secured fixed pricing for this contract.

### **Shell Energy**

In November, 2014 the RMLD signed a system power contract with Shell Energy that is effective from January 1, 2015 through December 31, 2018. The RMLD receives energy



only from this contract. The amount of energy purchased fluctuates on a monthly basis for both the on-peak and off-peak period. RMLD has secured fixed pricing for this contract.

### **Exelon**

In May, 2015 the RMLD signed a system power contract with Exelon that is effective from January 1, 2016 through December 31, 2019. The RMLD receives energy only from this contract. The amount of energy purchased fluctuates on a monthly basis for both the on-peak and off-peak period. RMLD has secured fixed pricing for this contract.

### **EDF Trading**

In June, 2016 the RMLD signed a system power contract with EDF Trading that is effective from January 1, 2017 through December 31, 2018. The RMLD receives energy only from this contract. The amount of energy purchased fluctuates on a monthly basis for both the on-peak and off-peak period. RMLD has secured fixed pricing for this contract.

### **NextEra**

In June, 2016 the RMLD signed a system power contract with NextEra that is effective from January 1, 2019 through December 31, 2020. The RMLD receives energy only from this contract. The amount of energy purchased fluctuates on a monthly basis for both the on-peak and off-peak period. RMLD has secured fixed pricing for this contract.

### **Swift River Hydro**

In March, 2011 the RMLD signed a purchase power agreements with Swift River Hydro LLC for the output of four hydro systems located in Massachusetts that are effective from February 1, 2011 through January 31, 2026. The Swift River Trading Company is the lead market participant for and represents these hydroelectric generators with a total nameplate capacity of approximately 7 Mws and average annual generation of 25,000 megawatt-hours per year.

These facilities include the Woronoco Hydro facility in Russell, MA, Pepperell Hydro in Pepperell, MA; Indian River Power Supply in Russell, MA; and Turners Falls Hydro in Turners Falls, MA. Each of these facilities is owned by a special purpose entity, e.g., the Woronoco facility is owned by Woronoco Hydro LLC. The four facilities are managed by the Swift River Trading Company, LLC as the lead market participant for each of the facilities. Dr. Peter Clark is the manager of the Swift River Trading Company. RMLD is the only buyer.

- **Pepperell Hydro:** 15 year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1.9 Mws. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs). The contract price for these products is \$100/Mwh for the first year, escalated 2.25% thereafter.
- **Woronoco Hydro:** 15 year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 2.7 Mws. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs). The contract price for these products is \$100/Mwh for the first year, escalated 2.25% thereafter. The facility is not currently qualified for FCM. Until the Seller qualifies the facility for FCM the contract price is reduced by \$5.00/Mwh.
- **Turners Falls Hydro:** 15 year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1 Mw. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs). The contract price for these products is \$100/Mwh for the first year, escalated 2.25% thereafter. The facility is not currently qualified for FCM. Until the Seller qualifies the facility for FCM the contract price is reduced by \$5.00/Mwh.
- **Indian River Hydro:** 15 year term beginning on February 1, 2011 and ending January 31, 2026. RMLD is purchasing all of the products produced by or attributable to the facility. The facility has a nameplate capacity of 1.4 Mws. The products include, but are not limited to, Energy, Installed Capacity, Ancillary Services, Renewable Energy Certificates and Environmental Attributes (to the extent not included in the RECs). The contract price for these products is \$100/Mwh for the first year, escalated 2.25% thereafter. The facility is not currently qualified for FCM. Until the Seller qualifies the facility for FCM the contract price is reduced by \$5.00/Mwh.

### **Collins Hydro**

In August, 2013 the RMLD signed a purchase power agreements with Swift River Hydro LLC for the output of Collins Hydro located in between Ludlow and Wilbraham Massachusetts. The contract with Swift River Hydro is effective from September 1, 2013 through August 31, 2028. The RMLD receives enery only from this contract. The average annual generation is approximately 5,667 megawatt-hours per year.

### **Pioneer Hydro**

In August, 2013 the RMLD signed a purchase power agreements with Ware River Power Inc. for the output of Pioneer Hydro located in Ware, Massachusetts. The contract for Pioneer Hydro is effective from September 1, 2013 through August 31, 2028. The RMLD receives enery only from this contract. The average annual generation is approximately 4,480 megawatt-hours per year.

### **Hoisery Mills Hydro**

In March, 2014 the RMLD signed a purchase power agreements with Silver Street Hydro Inc. for the output of Hosiery Mills located in Hillsborough, New Hampshire. The contract for Hosiery Mills Hydro is effective from March 1, 2014 through February 28, 2034. The RMLD receives enery only from this contract. The average annual generation is approximately 2,046 megawatt-hours per year.

### **Aspinook Hydro**

In August, 2016 the RMLD signed a purchase power agreements with Aspinook Hydro Inc. for the output of Aspinook Hydro located in Connecticut. The contract is effective from August, 2016 through August, 2017. The RMLD receives enery only from this contract. The average annual generation is approximately 9,300 megawatt-hours per year.

### **Saddleback Ridge Wind**

In December, 2013 the RMLD signed a purchase power agreement with Saddleback Ridge Wind, LLC for the output of Saddleback Ridge Wind located in Carthage, Maine. The contract for Saddleback Ridge Wind is effective from January 1, 2015 through



December 31, 2035. The RMLD receives energy plus all attributes this contract. The average annual generation is estimated to be approximately 15,820 megawatt-hours per year.

### **Jericho Wind**

In November, 2014 the RMLD signed a purchase power agreement with Jericho Power, LLC for the output of Jericho Wind located in Berlin, New Hampshire. The contract for Jericho Wind is for 20 years. The project went Commercial December, 2015. The RMLD receives energy plus all attributes from this contract. The average annual generation is estimated to be approximately 10,788 megawatt-hours per year.

### **One Burlington - Solar**

In March, 2015 the RMLD signed a purchase power agreement with CREECA Energy LLC for the output of 2,000 kW AC solar array located at One Burlington Ave., Wilmington, Massachusetts. The solar array went on-line in November, 2015. The term of the contract for One Burlington is effective for ten years. The average annual generation is estimated to be approximately 3,450 megawatt-hours per year.



## 2018 BUDGET SUMMARY

### PURCHASE POWER EXPENSE

PROJECT	CAPACITY	% of Total	TRANSMISSION	% of Total	ENERGY	% of Total	TOTAL	% of Total
NUC. MIX #1 MILLSTONE	837,319	3.4%	18,546	0.1%	170,392	0.5%	1,026,258	1.5%
NUC. MIX #1 SEABROOK	79,155	0.3%	172	0.0%	16,836	0.1%	96,163	0.1%
PROJ. #3 MILLSTONE	625,937	2.6%	13,165	0.1%	130,654	0.4%	769,756	1.1%
PROJ. #4 SEABROOK	1,458,551	6.0%	3,897	0.0%	413,208	1.3%	1,875,655	2.7%
PROJ. #5 SEABROOK	184,754	0.8%	481	0.0%	50,990	0.2%	236,224	0.3%
NYPA	206,061	0.8%	634,410	4.7%	146,228	0.5%	986,699	1.4%
STONYBROOK PEAKING PROJECT	674,476	2.8%	26,237	0.2%	43,520	0.1%	744,233	1.1%
STONYBROOK INTERMEDIATE PROJECT	1,850,722	7.6%	33,534	0.2%	3,713,914	11.9%	5,598,171	8.1%
ISO-NE	17,008,334	69.5%	12,882,374	94.6%	813,175	2.6%	30,703,883	44.3%
NEMA CONGESTION					120,000	0.4%	120,000	0.2%
BRAINTREE WATSON	1,600,050	6.5%			469,176	1.5%	2,069,226	3.0%
NEXTERA	0	0.0%			1,900,043	6.1%	1,900,043	2.7%
HYDRO QUEBEC SUPPORT SERVICES	(49,200)	-0.2%				0.0%	(49,200)	-0.1%
REMVEC					10,200	0.0%	10,200	0.0%
EXELON					4,811,021	15.4%	4,811,021	6.9%
BP ENERGY					4,495,789	14.4%	4,495,789	6.5%
SHELL ENERGY					6,703,864	21.4%	6,703,864	9.7%
SWIFT RIVER HYDRO					2,739,879	8.8%	2,739,879	3.9%
SUMMIT HYDRO					605,475	1.9%	605,475	0.9%
COLLINS HYDRO					457,707	1.5%	457,707	0.7%
PIONEER HYDRO					361,870	1.2%	361,870	0.5%
HOSIERY MILL HYDRO					147,406	0.5%	147,406	0.2%
SADDLEBACK WIND					1,502,900	4.8%	1,502,900	2.2%
JERICO WIND					1,186,680	3.8%	1,186,680	1.7%
ONE BURLINGTON SOLAR					242,888	0.8%	242,888	0.4%
COOP / RESALE					25,200	0.1%	25,200	0.0%
<b>TOTAL</b>	<b>24,476,160</b>	<b>100.0%</b>	<b>13,612,815</b>	<b>100.0%</b>	<b>31,279,017</b>	<b>100.0%</b>	<b>69,367,991</b>	<b>100.0%</b>

NYPA : New York Power Authority

ISO-NE: Independent System Operator - New England

REMVEC: Rhode Island, Eastern Massachusetts, Vermont, Energy Control

NEMA: Northeast Massachusetts