

**READING MUNICIPAL
LIGHT DEPARTMENT**

BOARD OF COMMISSIONERS

REGULAR SESSION

THURSDAY, JUNE 15, 2017

**QUARTERLY UPDATE:
ORGANIZATIONAL & RELIABILITY REPORTS
ATTACHMENT 1**



LEIDOS - 2015 ORGANIZATIONAL STUDY



Leidos Timeline
 Recommendation Not Accepted






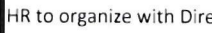










































RMLD Proposed Timeline
 Recommendation Completed

	DIVISION	CONSULTANT RECOMMENDATION	CY 2015		CY 2016				CY 2017				CY 2018		RMLD WORK-PLAN/COMMENTS
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
1		ESTABLISH PLANNING CULTURE													
1.1	GM	Update 2008 Strategic Plan (New Strategic Plan)													
1.2	GM	Establish planning culture													On-going
1.3	I	Update Integrated Resources plan													
1.4	GM	Update six-year plan													Annually
1.5	EO	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; CBA
2.2		Develop succession plans													Leidos Support - CY16 Q2 and Q3; CBA
2.3	HR	Update job descriptions													Leidos Support - CY16 Q2 and Q3; CBA
2.4		Implement consistent performance review process													Leidos Support - CY16 Q2 and Q3; CBA
2.5		Hire additional HR personnel													on hold
2.6		Increase efforts to fill vacant positions													On-going; evaluating
3		IMPROVE ORGANIZATIONAL EFFECTIVENESS													
3.1		Reorganize to better align functions													On-going
3.2	GM	Create new Finance and Administration division													Completed
3.3	GM	Align Customer Services under the Integrated Resources Division													Completed
3.4	EO	Reorganize & Expand Engineering group (Develop System Engineering Group)													Tied to IBEW negotiations. Posted two systems engineer positions; CBA
3.5		Formalize business process and performance measurement													Assessing IT roadmap and staffing - near completion.
3.6		Develop and implement internal and external communication plans													Review roadmap.
3.7		Assess organizational culture and employee satisfaction													Leidos Support
4		DEVELOP LEADERSHIP CAPABILITIES													
4.1	GM	Assess leadership													Completed
4.2		Provide management and leadership training.													On-going
4.3		Provide cross-divisional management training.													On-going

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		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
5	ESTABLISH PROJECT MANAGEMENT CULTURE													
5.1	Develop project management policies and procedures													Completed
5.2	Establish project management training plan													HR to organize with Director of E&O; CBA
5.3	Add project management experience and certifications to job descriptions													On-going - job description revisions; CBA
5.4	Establish project management performance expectations													CBA
6	ENSURE COMPETITIVELY PRICED SERVICES													
6.1	IR Continue regular cost of service and rate design review													Performing COS 2017
6.2	IR Increase customer and engagement and education of alternate rates													TOU, DSM, Education, Solar Choice
7	IMPROVE FINANCIAL PLANNING AND RISK MANAGEMENT													
7.1	B Review and update reserve policies													All policies - steady progress
7.2	Establish a risk management committee and enterprise risk management plan.													Integrated Resources
7.3	B Develop a succession plan for the Manager of Accounting and Business													Completed
7.4	B Formalize financial and accounting business processes													In progress.
8	STRENGTHEN SAFETY CULTURE													
8.1	GM Review Board Safety Policy													All policies. Developed Safety Program.
8.2	Develop injury and illness prevention program													Review of existing manual and OSHA requirements
9	DIVERSIFY RESOURCES													
9.1	IR Develop distributed generation penetration study													Complete ? DSM and max/feeder?
9.2	Review cost effectiveness and economic potential for end-use measures													Tangent and DSM
10	ESTABLISH A CULTURE OF COMPLIANCE													
10.1	Assign Compliance Manager and develop compliance plan and requirements.													Leidos Support
11	IMPROVE CUSTOMER SERVICE													
11.1	IR Conduct customer satisfaction surveys.													Communication Plan

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			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
11.2	IR	Conduct post transaction surveys.		Leidos	Leidos				Leidos	Leidos				Leidos	Leidos	Communication Plan
11.3	IR	Develop and implement customer engagement plan.		Leidos	Leidos	Leidos										Service Requirements Handbook completed. Issued new Terms and Conditions. Constant Contact - 17,000 email addresses
12		PLAN FOR FUTURE TECHNOLOGIES														
12.1	I	Complete operating technology roadmap	Leidos	Leidos												
13		FOCUS ON ASSET MANAGEMENT														
13.1		Develop and implement an asset management plan		Leidos	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	Asset Management System - GIS/Cogsdale
13.2		Develop and implement asset management business processes		Leidos	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	
13.3		Implement asset management system		Leidos		Leidos	Leidos		RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	
13.4	IR	Develop customer service manual (Service Requirement Handbook)	Leidos	Leidos	Leidos	Leidos										Completed
14		LEVERAGE GEOGRAPHIC INFORMATION SYSTEMS														
14.1	EO	Conduct robust GPS-based inventory of assets and infrastructure	RMLD	Leidos	Leidos	Leidos			RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	CDM - on-going
14.2		Adopt and implement industry standard common information model	Leidos	Leidos	Leidos	Leidos				RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	CDM - on-going
14.3	EO	Develop and implement business processes for GIS management		Leidos	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	CDM- on-going
14.4	EO	Provide GIS training for Engineering and Operations (Add Other Divisions)		Leidos	Leidos	Leidos			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	RMLD	RMLD	RMLD	RMLD	Integrated with asset management plan. SpryPoint
15.2		Implement modern work management system		Leidos	Leidos	Leidos	Leidos		RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	Completed
16		PLAN FOR RESILIENCY														
16.1		Develop disaster recovery and business continuity plans	Leidos	Leidos		Leidos	Leidos									Emergency OP Procedure - completed.
17		ENHANCE FACILITIES														
17.1		Enhance current workspace	RMLD	RMLD	Leidos	Leidos	Leidos		RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	RMLD	On-going - carpet, gym, paint, reorganize office space

BOOTH AND ASSOCIATES - 2015 RELIABILITY STUDY - RECOMMENDATIONS

CONSULTANT RECOMMENDATION			YEAR	COST (Booth Estimate)	RECOMMENDATION		STATUS	RMLD WORK PLAN
					ACCEPTED	ALTERNATE SOLUTION		
1	BOOTH	Replace cable trench covers at Sub 4 (should be expense, but most put large investments in capital)	2015-16	\$100,000	✓		completed	
2	BOOTH	Sub 5 bus duct from transformer to switchgear has reached the end of useful life and should be replaced with the switchgear replacement	2015-16	\$400,000		✓	completed	Bus D and E sections to the transformers completed on 11/12/16. Main Bus D and E sections to be reinsulated starting the week of 2/27/2017.
3	BOOTH	Replace fence at Sub 4 and fix grounding issues	2015-16	\$100,000	✓		completed	
4	BOOTH	Rebuild pole line along Lowell Street	2015-16	\$375,000	✓		completed	
5	BOOTH	Complete AMI Upgrade and RF Mesh Network	2015-16	\$350,000	✓		in progress	Five gateways installed. Relays installed. Additional meters in stock. Working on communicating issue with 1 deployed meter.
6	BOOTH	Implement GIS Upgrade Program	2015-16	\$350,000 - \$750,000	✓		in progress	GIS asset survey is in-progress
7	BOOTH	Implement Arc Flash Study Analysis	2015-16	\$30,000	✓		completed	
8	BOOTH	Develop construction standards	2015-16	in-house	✓		in progress	
9	BOOTH	Update Joint-Use Agreement with Verizon	2015-16	in-house	✓		in progress	
10	BOOTH	Replace bushings on Sub 4 transformer.	2015-16	\$150,000	✓		completed	
11	BOOTH	CT wiring at Sub 3 should be fixed. The CT circuits should only be bonded on grounding in exactly one spot	2015-16	O&M	✓		completed	CT's are grounded in only one location.
12	BOOTH	Sub 3 has NO under-frequency trips. Relay is not programmed to trip.	2015-16	O&M		✓	completed	Station 3 has UF capability. RMLD is in compliance with ISO's UF requirement.
13	BOOTH	Fence grounding is not up to code@ Station 4. Fabric and barbed wire should be grounded.	2015-16	O&M	✓		completed	
14	BOOTH	Earth/gravel around fence at Sub 5	2015-16	O&M	✓		completed	
15	BOOTH	Interface CIS with GIS platform	2015-16	in-house	✓		in progress	GIS Data collection is in-progress
16	BOOTH	Create Milsoft Windmil® model	2015-16	in-house	✓		in progress	Being done in conjunction with GIS collection. 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 design complete. Materials received. Construction in progress. Approximately 70% complete.
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	✓		completed	Design Complete. Material to arrive by 10/24/16. Construction 100% completed. Completion in early March 2017.
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. Construction to begin in mid March 2017.
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. Construction to begin in mid March 2017.
48	UPG	Station 3 Transformers: #5. Replace LTC main braking rollers with the new design that has a brass sleeve for the roller to ride on.			✓		completed	Scheduled for late November 2016 Rollers replaced on 12/2/2016.
49	UPG	Station 3 Transformers: #6. Repair LTC control displays for #TA and #TB			✓		completed	LTC controls repair and installed.
50	UPG	Station 3 Transformers: #7. Replace or repair the Trans-TB Hydran unit.			✓			
51	UPG	Station 3 Transformers: #8. Repair the Trans TB temperature differential unit which is in failure mode.			✓		completed	Unit replaced.
52	UPG	Station 3 15 kV Breakers #2: the close spring assembly needs to be replaced.			✓		in progress	
53	UPG	Station 3 15 kV Breakers: #3. DC control power fuses for trip, close, motor should be separated.			✓		in progress	Will be addressed during Station #3 upgrades Materials have been received. Construction to begin in Mid March 2017.
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 Materials have been received. Construction to begin in Mid March 2017.
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 Materials have been received. Construction to begin in Mid March 2017.
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 Materials have been received. Construction to begin in Mid March 2017.
57	UPG	Station 4 115 kV Breakers: #1 (GCB1). Replace the breaker.			✓		completed	
58	UPG	Station 4 Transformers: #1. Repair trans #110D cooling contactor for stage #2.						Will need to follow-up with UPG for more information.
59	UPG	Station 4 Transformers: #2. Replace the trans #110D main tank pressure relief device contact.			✓		completed	
60	UPG	Station 4 Transformers: #3. Replace the trans #110D main tank low oil gauge.			✓		completed	
61	UPG	Station 4 Transformers: #4. Repair the DC control power supply control cabling.			✓		completed	
62	UPG	Station 4 Transformers: #5. Replace the trans 110E main tank low oil and pressure relief device cables from the devices to the conduit bodies.			✓		completed	
63	UPG	Station 4 Transformers: #6. Replace the trans 110E cooling fan mounted top left.			✓		completed	
64	UPG	Station 4 Transformers: #7. Replace all four bushings of Trans #110E and #110D.			✓		completed	See Item #10 (Booth Recommendation)
65	UPG	Station 4 15kV Breakers: #2. check circuit 4W11 on a normal basis to insure that the heaters remain on to keep the breakers above ambient temperature so that no moisture condenses on the breaker insulation.			✓		completed	
66	UPG	Station 4 Breakers: #4. Replace the ground stab on 4W22.			✓		completed	
67	UPG	Station 5 Transformers: #1. Replace the trans #D main tank low oil and pressure relief divide output cable. Reconnect the LTC low oil level gauge wiring in the conduit body where the device cable terminates.					completed	
68	UPG	Station 5 15kV Breakers: #1. Take bus out of service and check alignment and correct if possible.			✓		completed	Bus D and E sections to the transformers completed on 11/12/16. Main Bus D and E sections to be reinsulated starting the week of 2/27/2017.

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.			✓		completed	Bus D and E sections to the transformers completed on 11/12/16. Main Bus D and E sections to be reinsulated starting the week of 2/27/2017.
70	UPG	Station 5 15kV Breakers: #3. Take bus out of service and check alignment and correct if possible.			✓		Completed	Bus D and E sections to the transformers completed on 11/12/16. Main Bus D and E sections to be reinsulated starting the week of 2/27/2017.
71	UPG	Station 5 15kV Breakers: #4. Take bus tie breaker out of service and check alignment and correct if possible.			✓		Completed	Bus D and E sections to the transformers completed on 11/12/16. Main Bus D and E sections to be reinsulated starting the week of 2/27/2017.

Note: Recommenations 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
MARCH & APRIL 2017
ATTACHMENT 2**

Integrated Resources

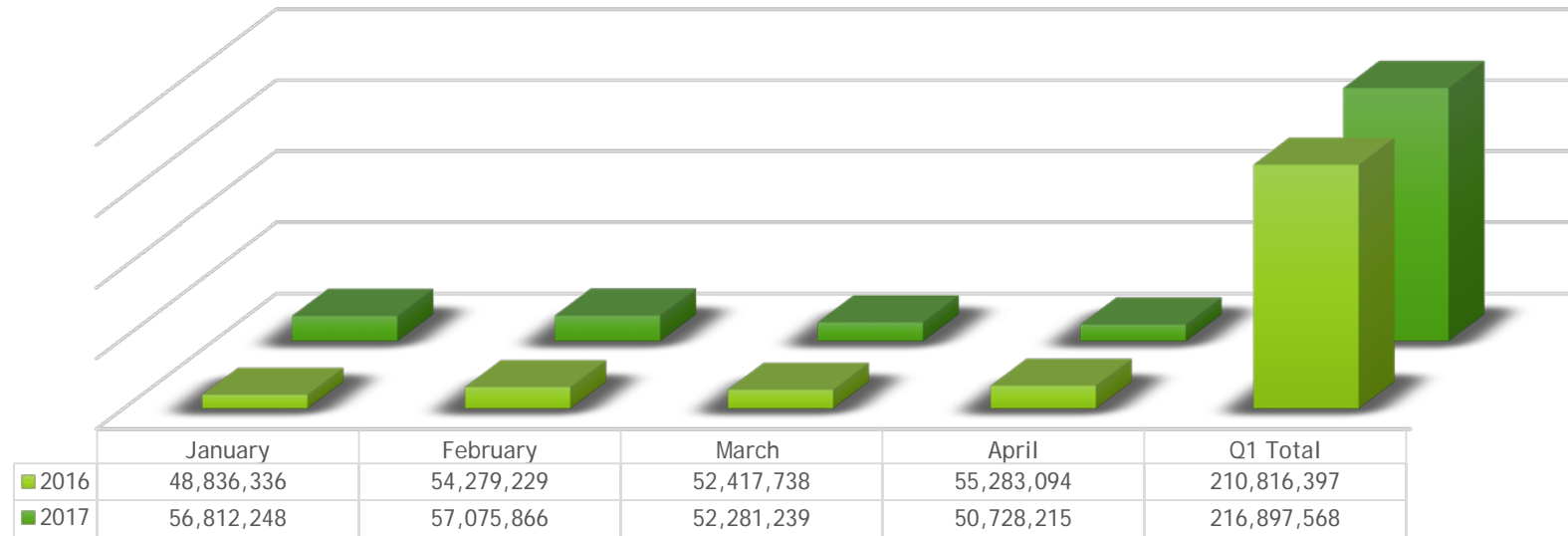
June 15, 2017

RMLD Board of Commissioners Meeting
Reporting for March/April

Jane Parenteau
Director of Integrated Resources

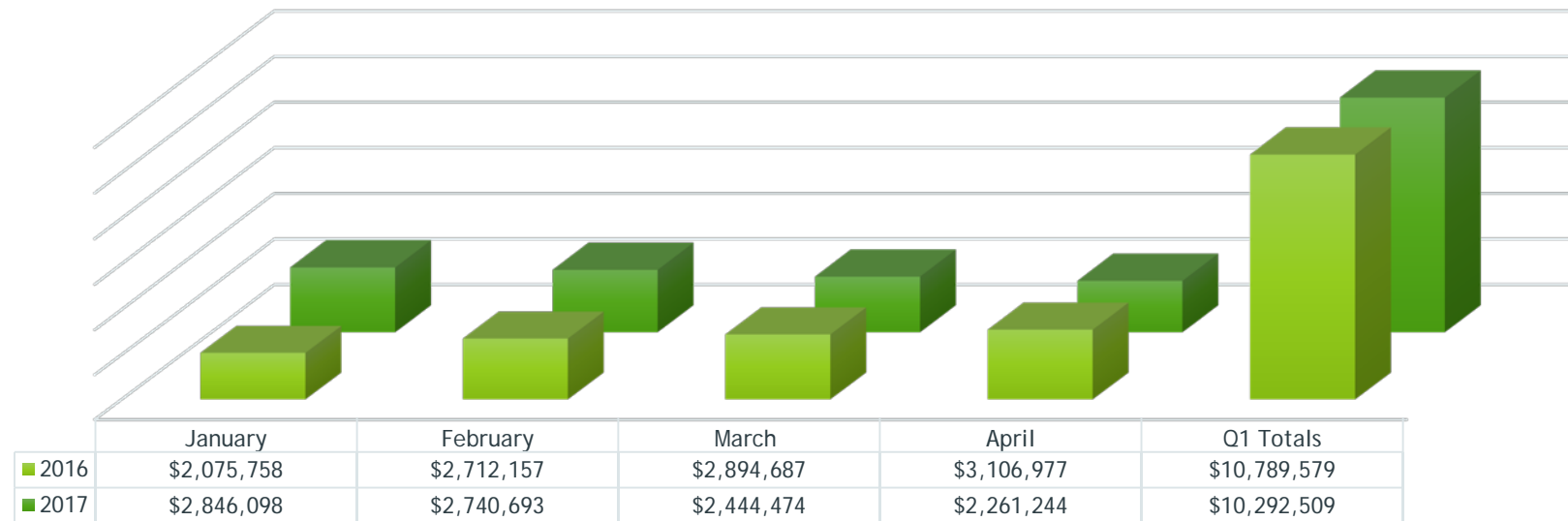
kWh Sales

1st Quarter 2016 vs. 2017



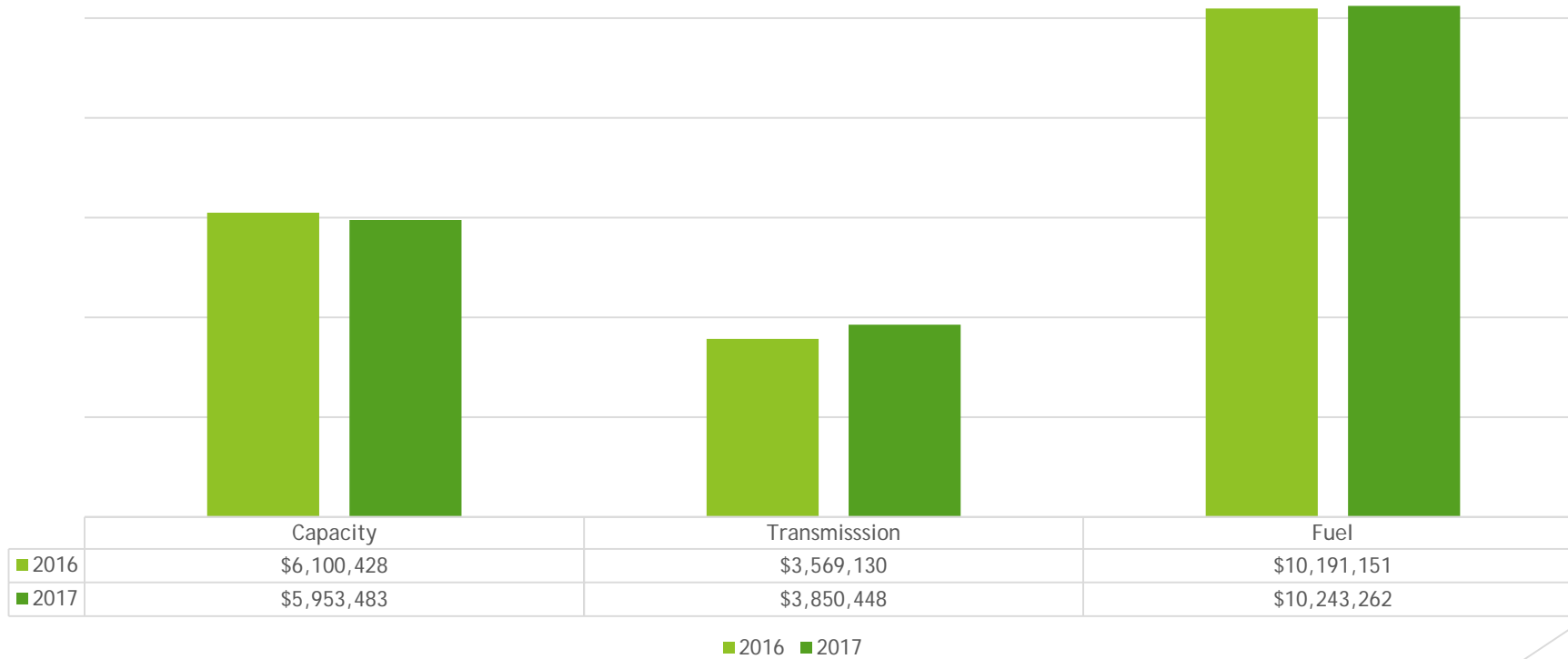
■ 2016 ■ 2017

Purchase Power, Capacity and Transmission (PPCT) Revenue 1st Quarter 2016 vs 2017



■ 2016 ■ 2017

Capacity, Transmission and Fuel Cost January-April 2016 vs. 2017

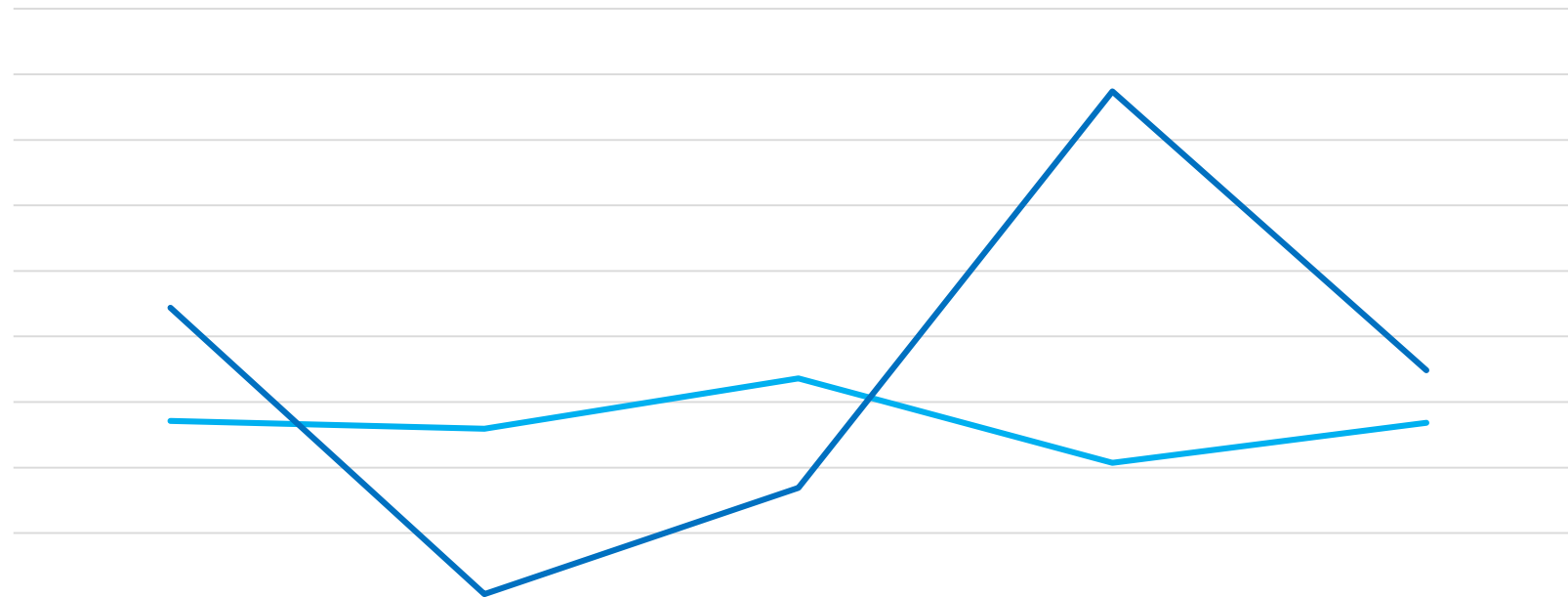


Precipitation by Inches

Reading, MA

2016 vs. 2017

1st Quarter



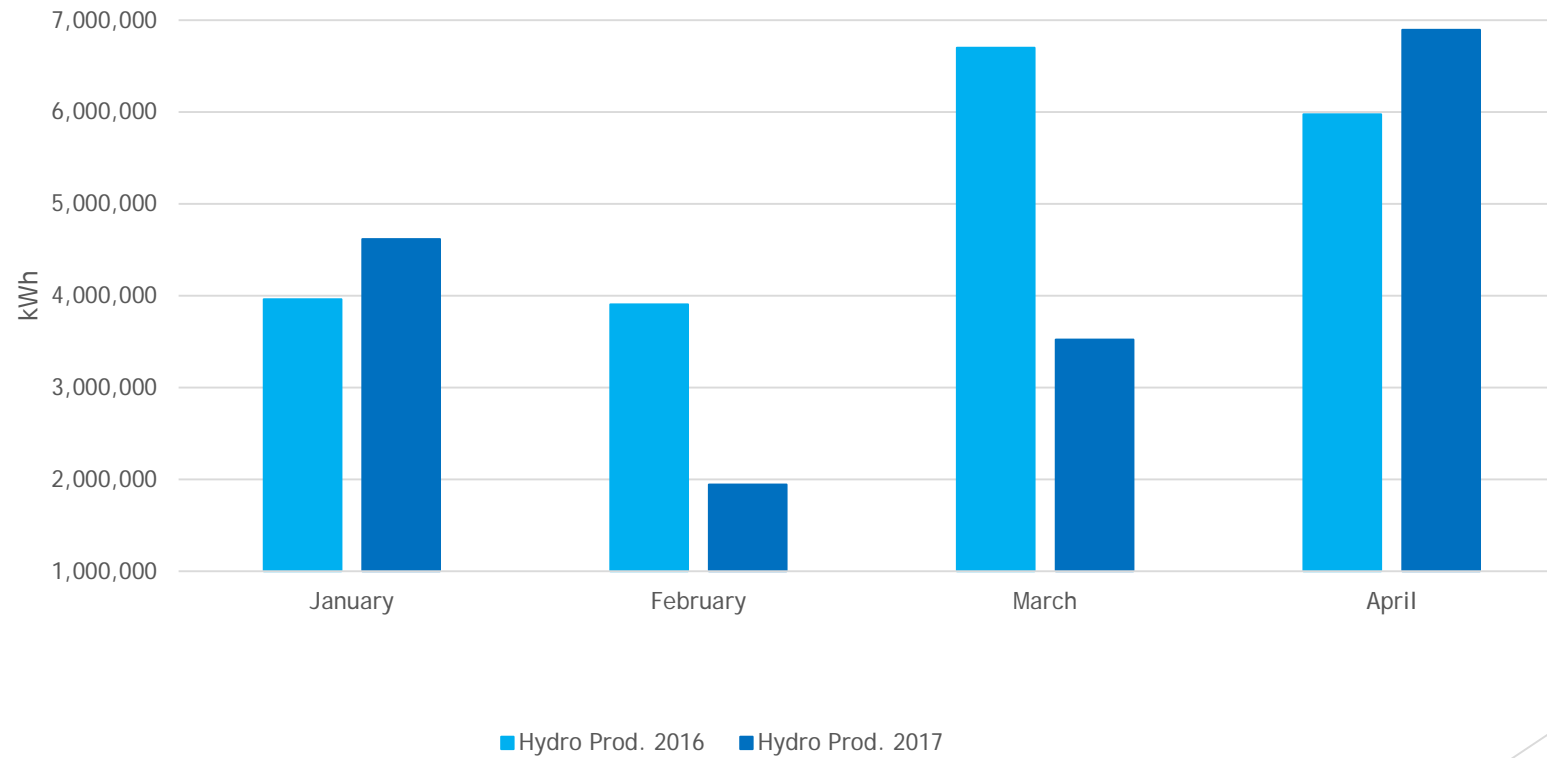
	January	February	March	April	Averages
2016	2.71	2.59	3.36	2.07	2.68
2017	4.44	0.07	1.69	7.74	3.49

— 2016 — 2017

Hydro Production

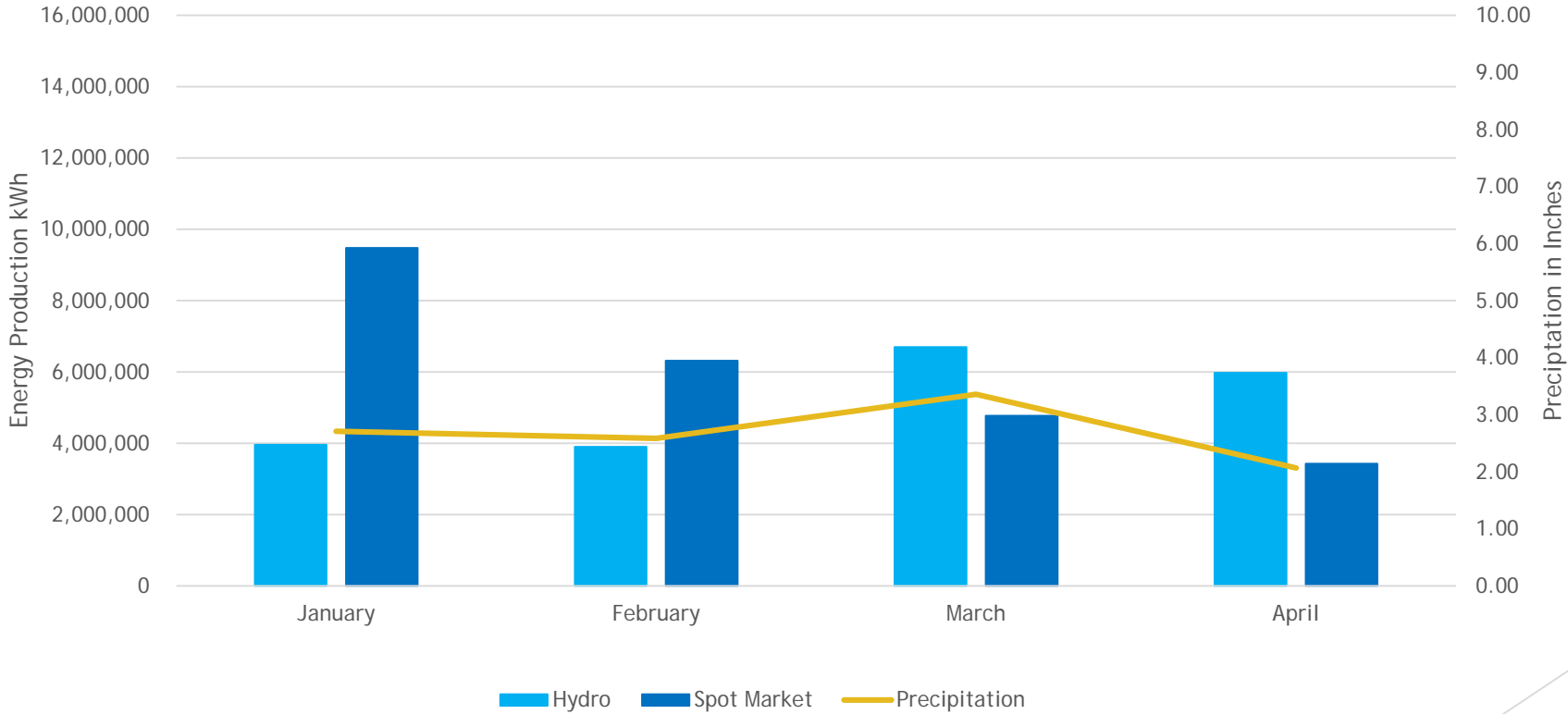
1st Quarter

2016 vs. 2017



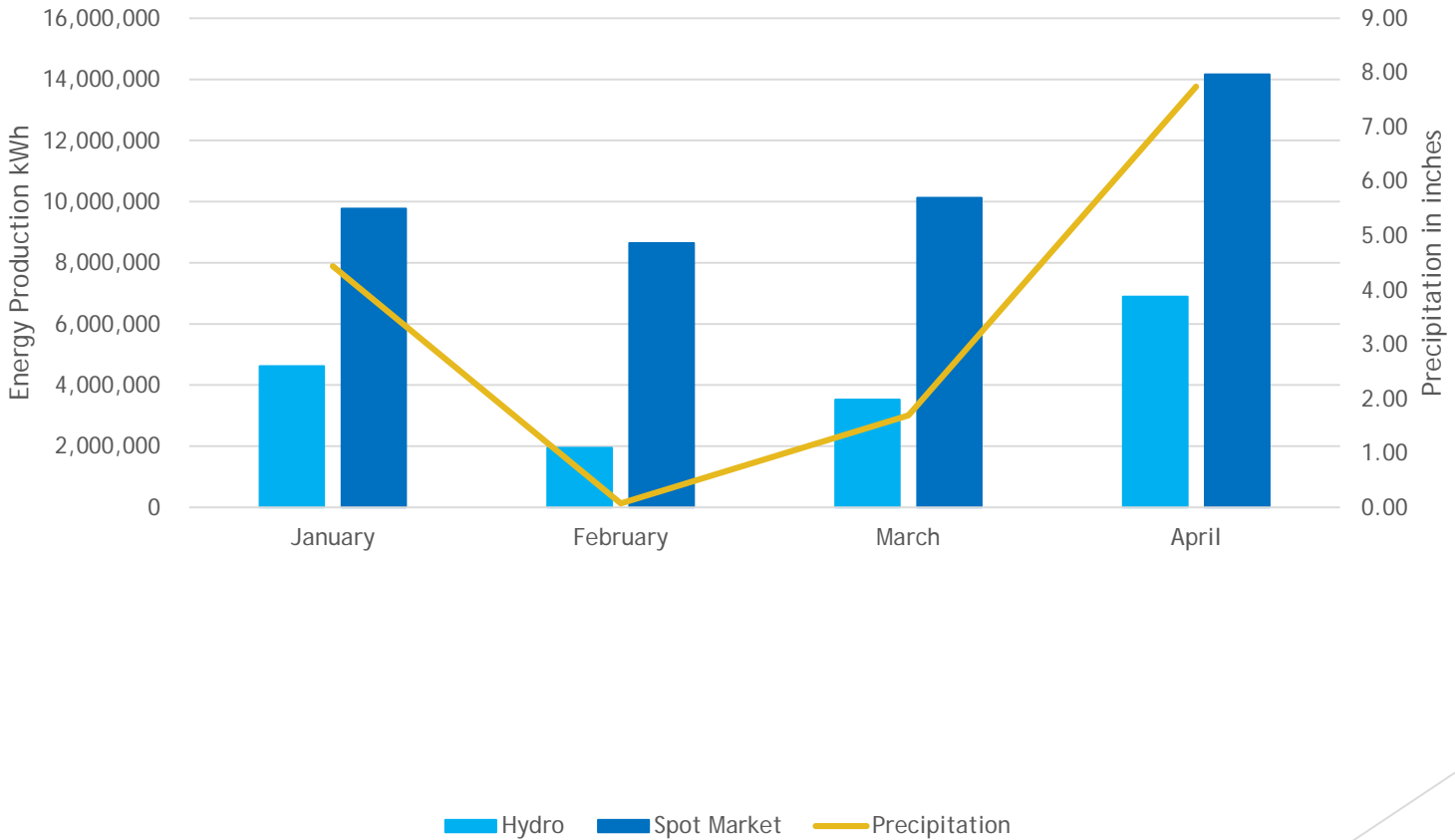
Precipitation Levels and Their Effects on Energy Production

1st Quarter 2016



Precipitation Levels and Their Effects on Energy Production

1st Quarter 2017



**PROPOSED RATE ADJUSTMENTS
ATTACHMENT 3**



Electric Rate Design Recommendations

A Presentation to the
Reading Municipal Light Department
June 15, 2017

Strategic Rate Design Objectives

- Reduce or eliminate subsidies between and within classes of customers
- Ensure that rates for large, high load factor customers can attract and retain such customers
- Make rates more reflective of the cost of providing service
- Provide price signals that encourage customers to reduce demand during peak periods and to increase usage during off-peak periods
- Phase-in changes over period of time to permit customers time to respond and adjust
- Protect distribution revenues from erosion due to customer-owned generation of electricity

RECOMMENDATION:

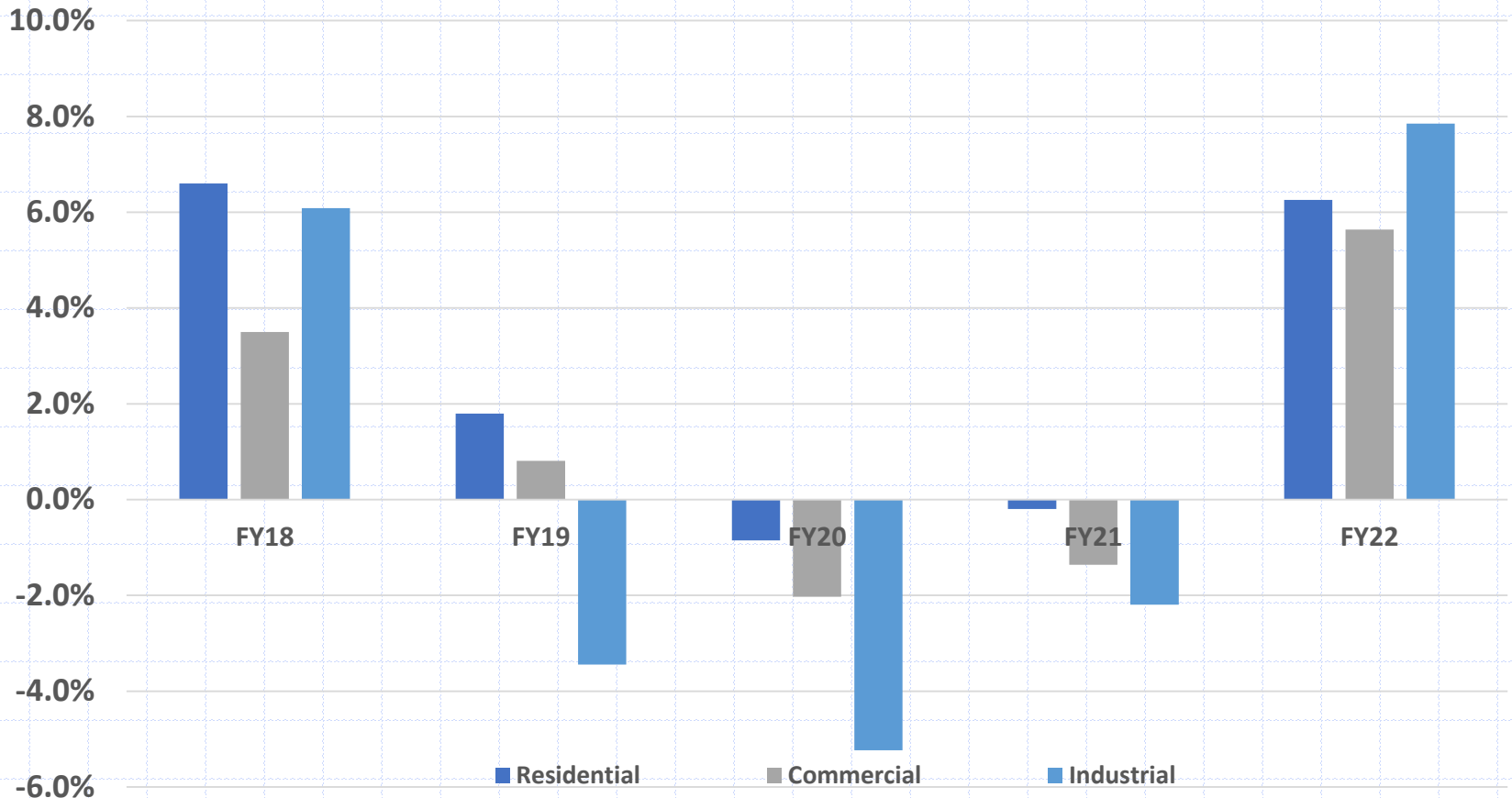
Phase-In Scenario 3 Over 5 Years

Instead of increases of between 5½ and 6½ percent, average bills would change by the following percentages in FY18:

	<u>Scenario 1 Uniform Increase</u>	<u>Scenario 3 Move to Uniform ROR</u>
• Residential	5.6%	6.6%
• Residential TOU	5.7%	7.6%
• School	6.5%	4.7%
• Commercial	5.7%	3.5%
• Industrial	6.0%	6.1%

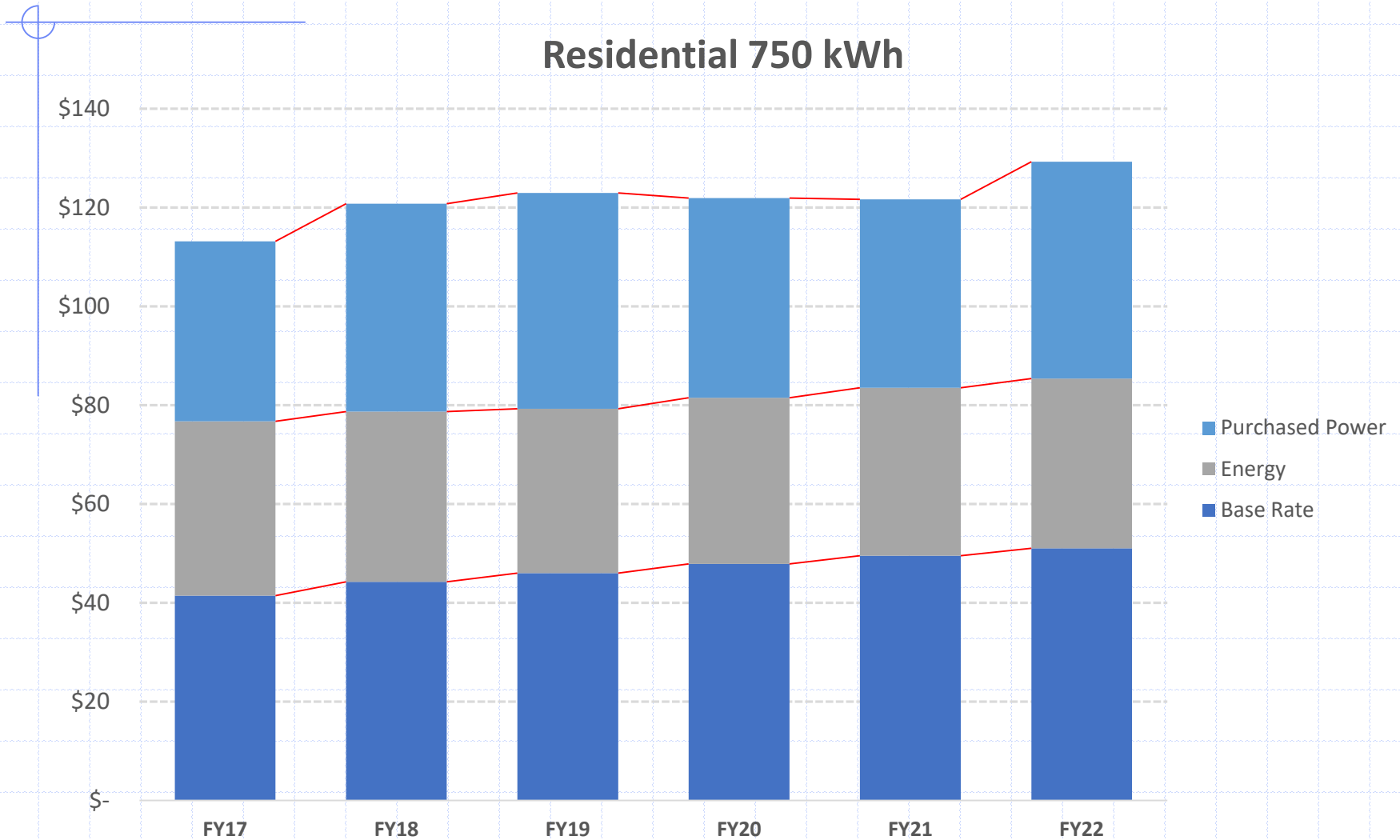
Phase-In of Scenario 3 Rate Changes

Average Customer Bill Impact



Phase-In of Scenario 3 Rate Changes

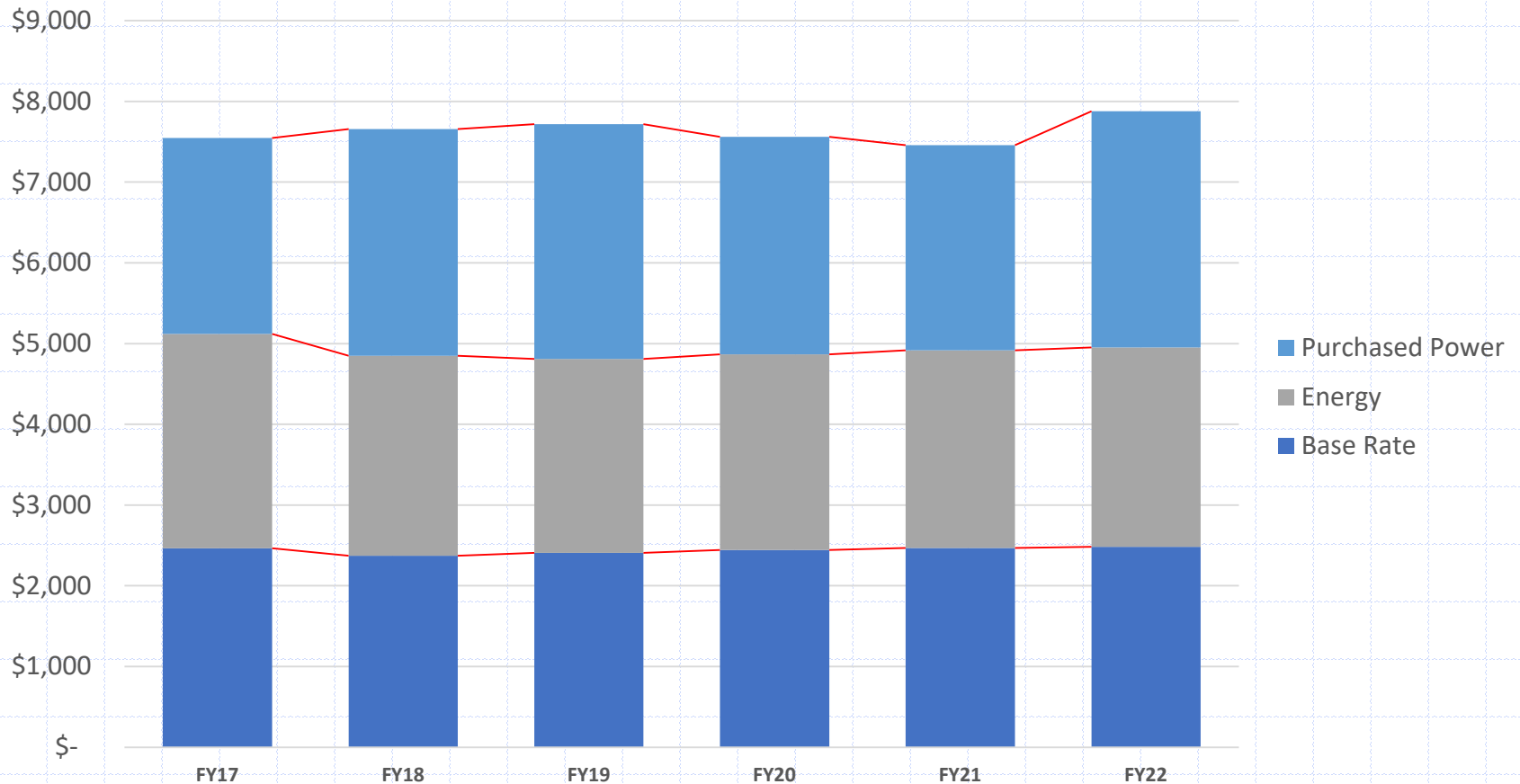
Average Customer Bill Impact



Phase-In of Scenario 3 Rate Changes

Average Customer Bill Impact

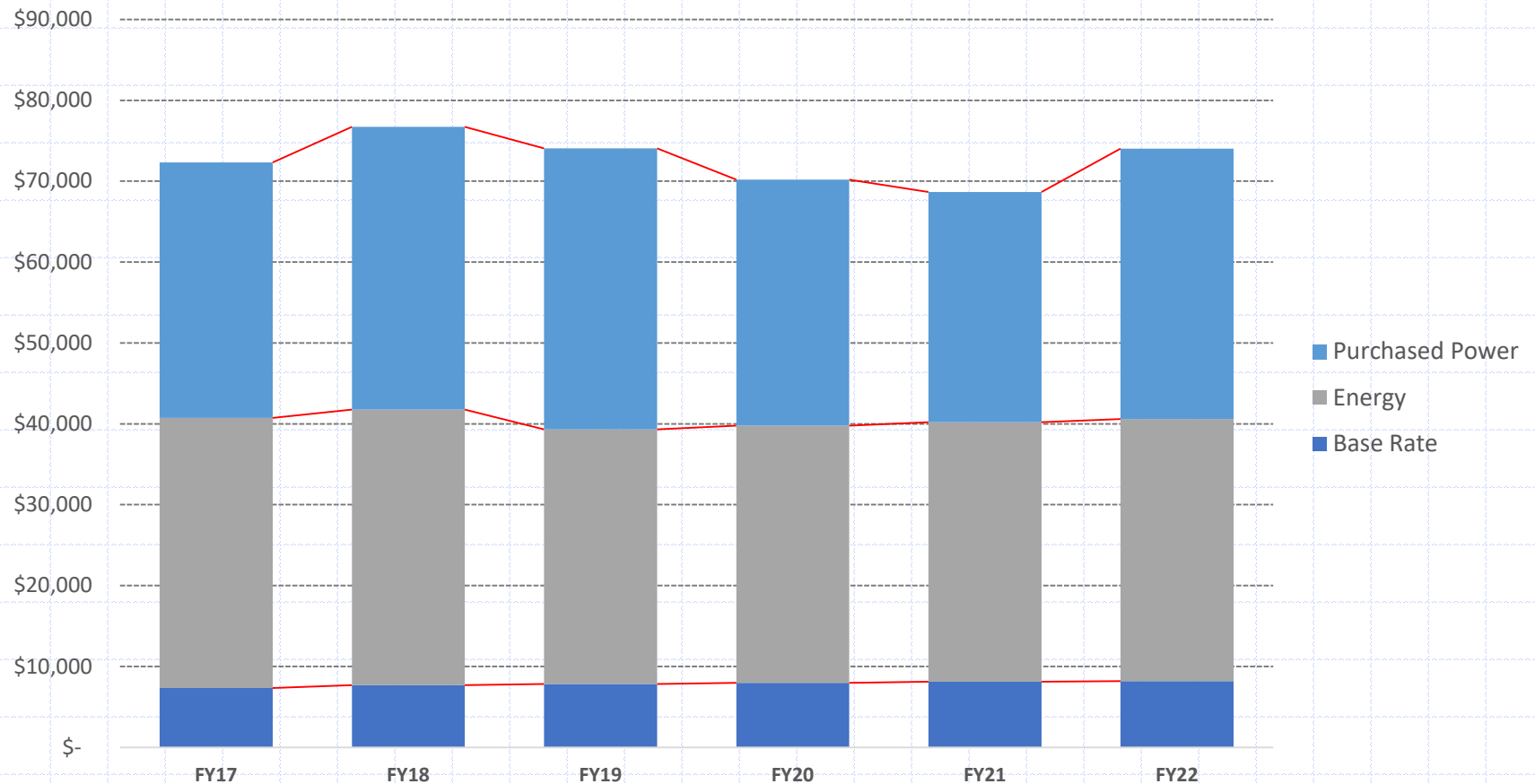
Medium Commercial



Phase-In of Scenario 3 Rate Changes

Average Customer Bill Impact

Medium Industrial



RECOMMENDATION:

Phase-In Purchased Power Demand Charge Over Three Years

For Industrial customers only implement a Purchased Power Capacity and Transmission demand charge on the following schedule:

- FY18 \$4.00/kW
- FY19 \$8.00/kW
- FY20 \$12.00/kW

In the first year only one customer would see an increase of more than 10%

RECOMMENDATION: Renewable Generation Rate

- Cap the total amount of Renewable Generation Subsidy at \$100,000 per year
 - Represents approximately 300 additional residential solar customers
 - Represents a subsidy cost to an average residential customer of \$0.11/month
- When the cap is reached implement one of the three options identified previously, depending on the cost and availability of metering and billing
- Immediately put in place a Backup and Standby rate to recover distribution revenue requirements from any customer using energy storage to offset most of all kWh purchased from RMLD

RECOMMENDATION:

Residential Time-of-Use Rate

- Phase-in the elimination of the time-of-use Distribution energy charge and replace with flat rate energy charge
- Phase-in an on-peak and off-peak Purchased Capacity and Transmission charge to recover most allocated costs during on-peak hours only
- Phase in an annual increase in the Distribution Charge over five years to produce a zero rate of return comparable to the base Residential rate
- Phase in the on-peak Purchased Capacity and Transmission charge over five years

RECOMMENDATION: Electric Vehicle Rate

- Replace the existing Pilot rate created in 2014 with a tariff filed with the DPU.
- Rate structure:

Distribution Charge	\$0.1111
Fuel Charge	as billed
Purchased Power Charge	as billed
- Rate calculation makes assumptions regarding the level of usage and should be re-evaluated after actual usage data is gathered
- Price is equivalent to about \$1.80/gallon of gasoline

Residential Schedule A Rate

Designation:

Residential A Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Individual residential customers for all domestic uses where service is taken through one meter. Incidental commercial use, not exceeding 20% of the total energy used on the same premises is permitted.

Character of service:

A.C. 60 cycles: single phase.

Customer Charge:

\$4.81 per month

Distribution Energy Charge:

\$.06301 per Kilowatt-hour for all Kilowatt-hours usage

Budget Billing:

The customers under this rate will have available to them a budget billing program under which the customer is required to pay a levelized amount to the Department each billing period during the calendar year. The specifics of this program are outlined in the Department's General Terms and Conditions.

Low Income Discount

The Customer Charge under this rate will be waived upon verification of a low-income customer's receipt of any means-tested public benefit, or verification of eligibility for the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 200 percent of the federal poverty level based on a household's gross income. In a program year in which maximum eligibility for LIHEAP exceeds 200 percent of the federal poverty level, a household that is income eligible under LIHEAP shall be eligible for the low-income electric discount. It is the responsibility of the customer to annually certify, by forms provided by the utility, the continued compliance with the foregoing qualifications.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Residential Schedule A Rate (cont'd)

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional 10% discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

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: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Residential Time-of-Use Schedule A2 Rate

Designation:

Residential Time-of-Use A2 Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Individual residential customers for all domestic uses where service is taken through one On-Peak and Off-Peak meter. Incidental commercial use, not exceeding 20% of the total energy used on the same premises is permitted.

Character of service:

A.C. 60 cycles: single phase.

Customer Charge:

\$7.44 per month.

Distribution Energy Charge:

\$.09450 per Kilowatt-hour for all Kilowatt-hours usage during the On-Peak hours.

\$.02188 per Kilowatt-hour for all Kilowatt-hours usage during the Off-peak hours.

Definition of Periods:

The On-Peak period is defined as the hours between 12:00 Noon and 7:00 P.M. Monday through Friday except holidays as listed under the "Granted Holidays" paragraph listed below. The Off-Peak period is defined as the hours between 7:00 P.M. and 12:00 Noon Monday through Friday and all hours Saturday, Sunday and granted holidays as listed below.

Controlled Water Heater Allowance:

When a customer regularly uses an electric water heater of a type approved by the Department, 333 kWh will be credited to usage during the Off-Peak period and will be billed at \$.00300 per kWh. All kWh used Off-Peak above 333 kWh will be charged at the regular Off-Peak rate. If less than 333 kWh are used Off-Peak then only that amount of kWh will be billed at \$.00300 per kWh. Water heater with two elements shall be interlocked to prevent simultaneous operation. Service to the water heater will be controlled by a Department owned time switch in an approved outdoor socket.

Term:

A customer electing to be billed under this rate must remain on this rate for a minimum of one year. At the end of one year on this rate a customer may elect to remain on this rate or be billed under the Residential A Rate.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Residential Time-of-Use Schedule A2 Rate (cont'd)

Budget Billing:

The customers under this rate will have available to them a budget billing program under which the customer is required to pay a levelized amount to the Department each billing period during the calendar year. The specifics of this program are outlined in the Department's General Terms and Conditions.

Low Income Discount

The Customer Charge under this rate will be waived upon verification of a low-income customer's receipt of any means-tested public benefit, or verification of eligibility for the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 200 percent of the federal poverty level based on a household's gross income. In a program year in which maximum eligibility for LIHEAP exceeds 200 percent of the federal poverty level, a household that is income eligible under LIHEAP shall be eligible for the low-income electric discount. It is the responsibility of the customer to annually certify, by forms provided by the utility, the continued compliance with the foregoing qualifications.

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

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

**MDPU # 270 supersedes
and cancels MDPU # 261**

Residential Time-of-Use Schedule A2 Rate (cont'd)

Granted Holidays

Under the Residential Time-of-Use Schedule A2 Rate the holidays granted for Off-Peak are: New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Columbus Day, Veteran's Day and Christmas Day.

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: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Commercial Schedule C Rate

Designation:

Commercial C Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Service under this rate is available to industrial or commercial customers who take all their requirements under this rate. All electricity furnished under this rate will be metered through one service unless it is convenient for the Department to do otherwise.

Character of service:

AC 60 cycles: single phase or three phase.

Customer Charge:

\$7.47 per month.

Distribution Demand Charge:

\$7.82 per Kilowatt for all demand usage.

Distribution Energy Charge:

\$.01659 per Kilowatt-hour for all Kilowatt-hours usage.

Budget Billing:

The customers under the C Rate may elect the Budget Billing program under which the customer is required to pay the levelized amount to the Department each billing period during the calendar year. This rate is not available to C Rate Customers electing the Contract Demand Rate, or the Non-Firm Demand Rate. The specifics of this program are outlined in the Department's General Terms and Conditions.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Commercial Schedule C Rate (cont'd)

Measurement of Billing Demand:

The billing demand shall be the highest of the fifteen minute kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer season or sixty percent of the maximum demand established during the winter season.

Definitions of Seasons:

The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Customer Transformer Ownership:

A customer requiring a minimal transformer capacity of over 2,000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

\$.12 per kilowatt of demand when the service is taken at 2,400/4,160 volts.

\$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

\$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Primary Metering Discount:

The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformer through which the service is furnished. In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill's consumption charges but in no case will such discount be allowed if the metering voltage is less than 2,400 voltage.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

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

**MDPU # 271 supersedes
and cancels MDPU # 262**

Commercial Schedule C Rate (cont'd)

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

General Terms:

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

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Industrial Time-of-Use Schedule I Rate

Designation:

Industrial Time-of-Use I Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Service under this rate is available to industrial or commercial customers who take all their requirements under this rate. All electricity furnished under this rate will be metered using an electronic meter capable of metering On-Peak and Off-Peak energy as well as kW demand.

Character of service:

A.C. 60 cycles: single phase or three phase.

Customer Charge:

\$37.49 per month.

Distribution Demand Charge:

\$9.37 per Kilowatt for all demand usage.

Definition of Periods:

The On-Peak period is defined as the hours between 12:00 Noon and 7:00 P.M., Monday through Friday except holidays as listed below. The Off-Peak period is defined as the hours between 7:00 P.M. and 12:00 Noon, Monday through Friday and all hours Saturday, Sunday and granted holidays as listed below.

Term:

A customer electing to be billed under this rate must remain on this rate for a minimum of one year. At the end of one year on this rate a customer may elect to remain on this rate or be billed under the Commercial C Rate.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Industrial Time-of-Use Schedule I Rate (cont'd)

Measurement of Billing Demand:

The Billing demand shall be the highest of the fifteen minute On Peak kilowatt demand established during the billing period, but not less than eighty percent of the maximum On Peak demand established during the preceding summer season or sixty percent of the maximum On Peak demand established during the winter season.

The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Customer Transformer Ownership:

A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

\$.12 per Kilowatt of demand when the service is taken at 2,400/4,160 volts.

\$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

\$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Primary Metering Discount:

The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformer through which the service is furnished. In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill's consumption charges but in no case will such discount be allowed if the metering voltage is less than 2,400 voltage.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Industrial Time-of-Use Schedule I Rate (cont'd)

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

Granted Holidays

Under the Industrial Time-of-Use Schedule I Rate the holidays granted for Off-Peak are; New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Columbus Day, Veteran's Day and Christmas Day.

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: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

School Schedule SCH Rate

Designation:

School SCH Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Applicable to public or private schools offering kindergarten, regular elementary, middle, and high school as approved by the Department, who take all their requirements under this rate. All electricity furnished under this rate will be metered through one service unless it is convenient for the Department to do otherwise.

Character of service:

AC 60 cycles: single phase or three phase.

Customer Charge:

\$6.89 per month.

Distribution Demand Charge:

\$7.20 per Kilowatt for all demand usage.

Distribution Energy Charge:

\$.01136 per Kilowatt-hour for all Kilowatt-hours usage.

Budget Billing:

The customers under the School Rate may elect the Budget Billing program under which the customer is required to pay levelized amount to the Department each billing period during the calendar year.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

School Schedule SCH Rate (cont'd)

Measurement of Billing Demand:

The billing demand shall be the highest of the fifteen minute Kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer season or sixty percent of the maximum demand established during the winter season.

Definitions of Seasons:

The summer season is defined as the months of June through September and the winter season is defined as the months of October through May.

Customer Transformer Ownership:

A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

\$.12 per kilowatt of demand when the service is taken at 2,400/4,160 volts.

\$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

\$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Metering:

The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformers through which the service is furnished.

In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill but in no case will such a discount be allowed if the metering voltage is less than 2,400 volts.

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Distribution Demand Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

General Terms:

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

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

**Residential Schedule RW
Controlled Water Heater Rate**

Designation:

Residential RW Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

Individual residential customers for all domestic uses where service is taken through one meter. Incidental commercial use, not exceeding 20% of the total energy used on the same premises is permitted.

Character of service:

A.C. 60 cycles: single phase.

Terms of Use:

When a customer regularly uses an electric water heater of a type approved by the Department, service to the water heater will be controlled by a Department owned timing device. Customer also needs a customer owned internet connection. Internal wiring will be the responsibility of the customer. Water heater with two elements shall be interlocked to prevent simultaneous operation.

Customer Charge:

\$4.82 per month.

Distribution Energy Charge:

\$.04832 per Kilowatt-hour for all Kilowatt-hours usage

Budget Billing:

The customers under this rate will have available to them a budget billing program under which the customer is required to pay a levelized amount to the Department each billing period during the calendar year. The specifics of this program are outlined in the Department's General Terms and Conditions.

Low Income Discount

The Customer Charge under this rate will be waived upon verification of a low-income customer's receipt of any means-tested public benefit, or verification of eligibility for the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 200 percent of the federal poverty level based on a household's gross income. In a program year in which maximum eligibility for LIHEAP exceeds 200 percent of the federal poverty level, a household that is income eligible under LIHEAP shall be eligible for the low-income electric discount. It is the responsibility of the customer to annually certify, by forms provided by the utility, the continued compliance with the foregoing qualifications.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

**Residential Schedule RW
Controlled Water Heater Rate (cont'd)**

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional 10% discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Energy Conservation Charge:

The bill for service hereunder may be increased or decreased as provided by the Energy Conservation Charge.

Fuel Adjustment:

The bill for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The bill for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge

Meter Reading and Billing:

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

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: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Backup and Standby Rate

Designation:

Backup and Standby Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

This rate shall be applied to all partial requirements general service Customers (the Customer). A partial requirements Customer is defined as one who normally generates all, or a portion of, the Customer's electrical power and energy requirements. All electricity supplied shall be for the exclusive use of the Customer and shall not be resold. Service taken under this rate shall be electrically separated from the Customer's generating facilities or provided with sufficient protective devices to prohibit such facilities from causing disturbances on the RMLD's system consistent with the RMLD's Terms and Conditions. The RMLD reserves the right to refuse service to facilities where the RMLD reasonably determines that the protection provided is inadequate.

All electricity supplied to the Customer by the RMLD shall be measured through one meter, except that where the RMLD deems it impractical to deliver electricity through one service, or where the RMLD has installed more than one meter, then the measurement of electricity may be by two or more meters. When the Customer's generating facilities are capable of operating in parallel with the RMLD's supply, the Customer shall furnish, at its expense, necessary facilities for metering equipment including a dedicated voice grade telephone circuit for remote reading whereby the RMLD can meter the output of the Customer's generating facilities.

Character of service:

Firm Backup Service

Firm Backup Service is intended to provide the Customer with a firm supply of electric power and energy when the Customer's generating facilities are not in operation or are operating at less than full rated capability or when the Customer's load is greater than the capability of its generating facilities. To obtain service under this schedule, the Customer must specify in writing the maximum firm back-up electric power demands (Firm Backup Contract Demand) that it plans to impose on the RMLD under this schedule. The amount of Firm Backup Contract Demand may be changed only by written notification to the RMLD at least six months prior to the effective date of such change. The RMLD reserves the right to refuse any increase in the Firm Backup Contract Demand if, in the sole judgment of the RMLD, such an increase would have an adverse impact on the reliability or cost of the provision of firm service to any of the RMLD's firm service customers.

Standby Service

Rate Filed: June 19, 2017

Effective: On Billings on or after July 1, 2017

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

Standby Service is intended to reserve capacity on the RMLD's transmission and distribution system for the delivery of Firm Backup Service. Standby Service will be taken and paid for regardless of whether Firm Backup Service is taken in any month.

Definitions

Firm Backup Contract Demand: the maximum firm backup electric power demand which the Customer shall impose on the RMLD as specified by the Customer.

Firm Backup Demand: the maximum metered billing demand occurring in the billing period or the Firm Backup Contract Demand, whichever is less.

Metered Energy: the Customer's actual electrical load without the application of the Customer's generation.

Billing Energy: the electrical load imposed on the RMLD's system.

Backup Energy: the sum of the kWh of Billing Energy for the period.

Metered Demand: the greatest actual electrical load during any 15 minute period without the application of the Customer's generation.

Billing Demand: the greatest 15 minute electrical load imposed on the RMLD's system during the billing period.

Applicable General Service Rate: the rate under which the customer would be eligible to receive firm service from the RMLD if the Customer did not generate any of its own electric power and energy requirements.

All demands refer to fifteen (15) minute kW demands.

Monthly Rates

Customer Charge: The customer charge in Applicable General Service Rate.

Demand Rates:

Standby Demand: The Distribution Demand Rate in the Applicable General Service Rate multiplied by the Firm Backup Contract Demand.

Firm Backup Demand: The Distribution Demand rate in the Applicable General Service Rate multiplied by the Firm Backup Demand.

Energy Rates:

Backup Energy: The energy rate, including the Energy Conservation Charge, Fuel Adjustment and Purchased Power Adjustment, in the Applicable General Service Rate per billing kWh.

Rate Filed: June 19, 2017

Effective: On Billings on or after July 1, 2017

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

Stranded Cost Charge	The Distribution Energy Charge in the Applicable General Service Rate multiplied by the Metered Energy
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The monthly charge shall be the sum of the Customer Charge, the Standby Demand Charge, the Firm Backup Demand Charge, the Backup Energy Charge and the Stranded Cost Charge.

Term:

Unless otherwise agreed in writing, service under this rate shall be for a period of not less than three years and thereafter may be discontinued only upon the RMLD's receipt of a 90-day written notice. Service is also subject to the provisions of the Rules and Regulations of the RMLD.

Measurement of Billing Demand:

The Billing demand shall be the highest of the fifteen minute kilowatt demand established during the billing period, but not less than eighty percent of the maximum demand established during the preceding summer season or sixty percent of the maximum demand established during the winter season.

Farm Discount:

Customers who meet the eligibility requirements set forth by the Massachusetts Department of Food and Agriculture for being engaged in the business of agriculture or farming, and upon certification to the RMLD by the Massachusetts Department of Food and Agriculture, will be eligible for an additional ten percent discount, prior to the RMLD prompt payment discount, on rates and charges applicable on their monthly billing statement.

Customer Transformer Ownership:

A customer requiring a minimal transformer capacity of over 2000 kW will be required to furnish its own transforming and protective equipment, including mat, vault, primary and secondary cables, conduits, etc., which must comply with the specifications of the Department. The following discounts apply when the above is complied with:

\$.12 per Kilowatt of demand when the service is taken at 2,400/4,160 volts.

\$.25 per Kilowatt of demand when the service is taken at 13,800 volts.

\$.375 per Kilowatt of demand when the service is taken at 34,500 volts.

Metering:

The Department may, at its option, meter at the customer's utilization voltage or on the high side of the transformer through which the service is furnished. In the latter case, or if the customer's utilization voltage requires no transformation, a discount of 1.8% will be applied to the bill but in no case will such discount be allowed if the metering voltage is less than 2,400 voltage

Meter Reading and Billing:

Rate Filed: June 19, 2017

Effective: On Billings on or after July 1, 2017

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

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

MDPU # 275

Bills under this schedule will be rendered monthly. A prompt payment discount of 15% will be allowed on the Customer Charge, Standby Demand Charge, Firm Backup Demand Charge, and Distribution Energy Charge, only if the entire bill is paid-in-full by the discount due date.

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: June 19, 2017
Effective: On Billings on or after July 1, 2017
Filed By: Coleen M. O'Brien, General Manager

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

**MDPU # 276 supersedes
and cancels MDPU # 236**

Purchase Power Capacity and Transmission Charge

Applicability:

The Purchase Power Capacity and Transmission Charge, or the annual average base power supply base costs, shall be applied to all customers receiving service under any rate schedule of the Department.

Power Cost Amount:

The Purchase Power Capacity and Transmission Charge amount shall be the total amount of all power and transmission charges incurred by the Department, exclusive of fuel, for electric service to all customers. Such cost shall be computed periodically on actual or estimated power billings and divided by the total kilowatt-hour sales to all customers for that month. The resultant cost shall be rounded to the nearest \$.00001/kilowatt-hour.

For customers receiving service under the Department's Industrial Time-of-Use I Rate (MDPU #272) the power cost amount will be expressed as a demand charge in \$/kW of demand. The demand charge will be calculated to recover the same revenue as the per-kilowatt-hour charge applied to all other customers.

Calculation of the Purchase Power Capacity and Transmission Charge:

The Purchase Power Capacity and Transmission Charge shall equal the power cost amount. The resultant charge shall be applied to all bills in the following month.

Other Charges and Credits:

By order of the Reading Municipal Light Board, the Purchase Power Capacity and Transmission Charge may reflect additional one-time or irregular credits resulting from power refunds, out of period adjustments or reduced power reserve needs.

Rate Filed: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

Electric Vehicle Supply Equipment Schedule EVSE Rate

Designation:

Electric Vehicle Charger (EVSE) Rate

Available in:

Reading, Lynnfield Center, North Reading, and Wilmington

Applicable to:

This rate is available to Customers who utilize Electric Vehicle Supply Equipment; installed and owned by RMLD.

Character of service:

AC 60 cycles: single phase or three phase.

Distribution Energy Charge:

\$.1111 per Kilowatt-hour for all Kilowatt-hours usage

Fuel Adjustment:

The rate for service hereunder may be increased or decreased as provided by the Standard Fuel Adjustment Clause.

Purchase Power Capacity and Transmission Charge:

The rate for service hereunder may be increased or decreased as provided by the Purchase Power Capacity and Transmission Charge.

Meter Reading and Billing:

Service under this schedule will be rendered immediately. Payment due at point of sale.

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: June 19, 2017

Effective: On Billings on or After July 1, 2017

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

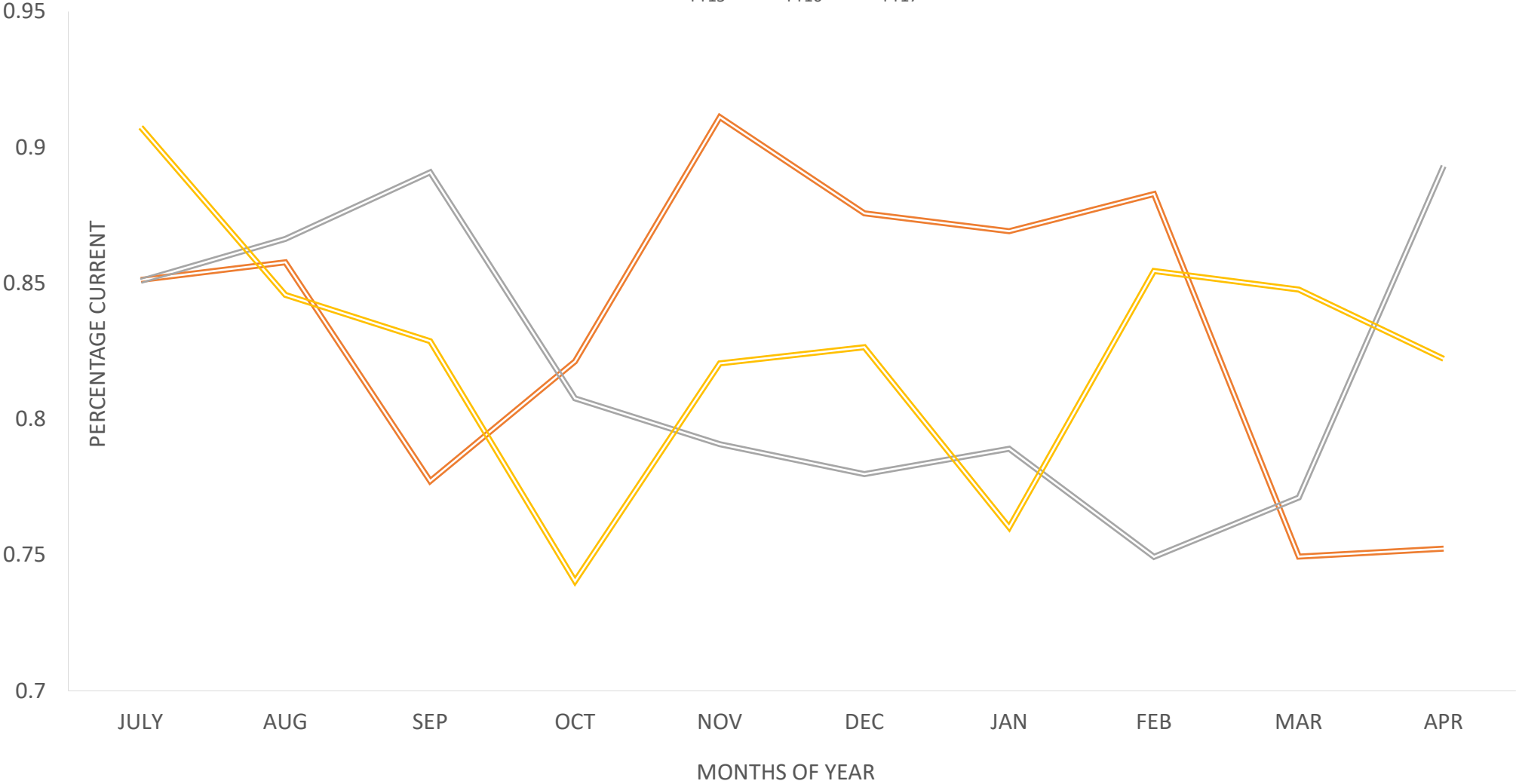
**FINANCIAL REPORT
MARCH & APRIL 2017
ATTACHMENT 4**



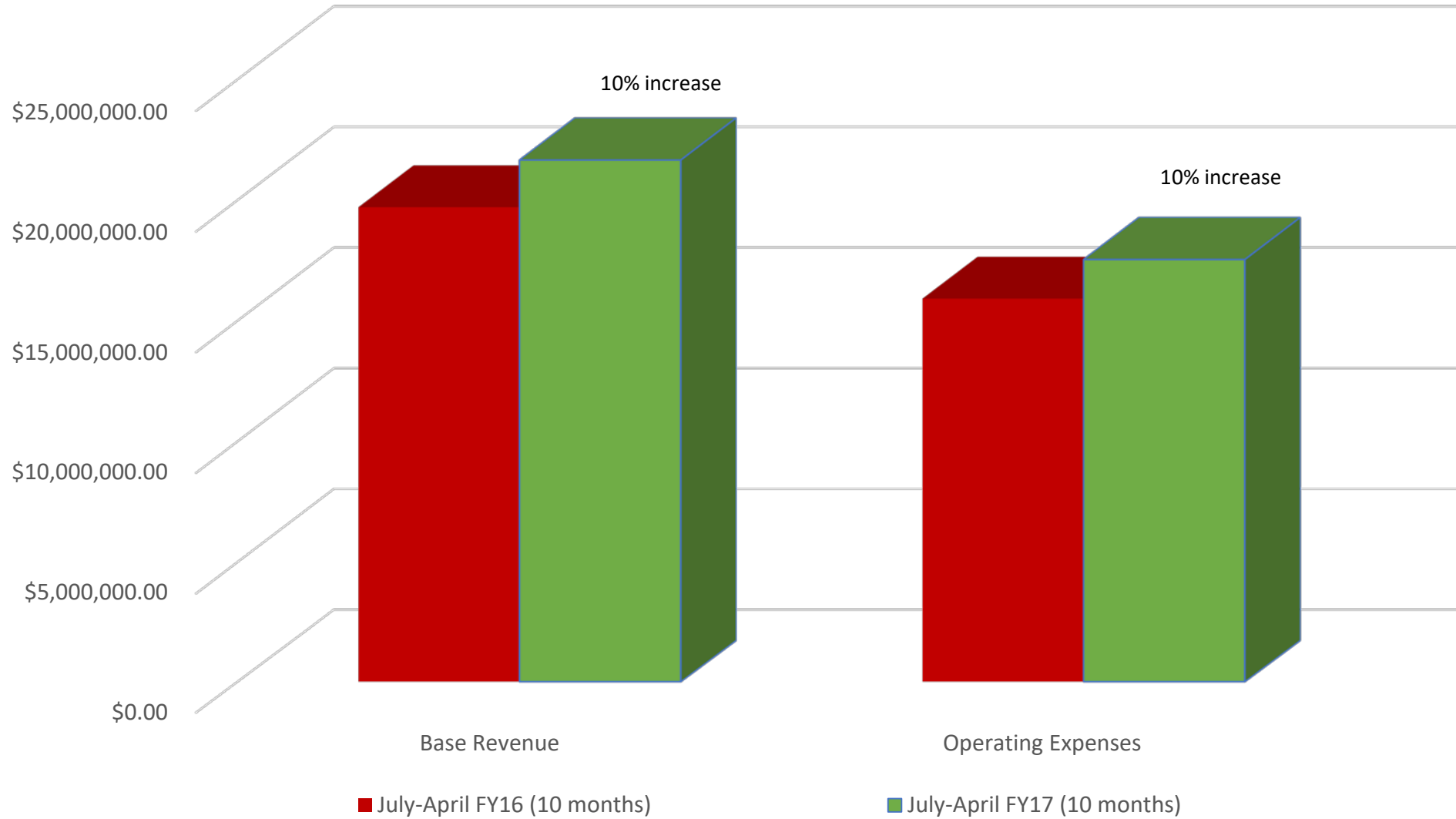
FINANCIAL REPORT
APRIL 30, 2017

A/R AGING BY MONTHS

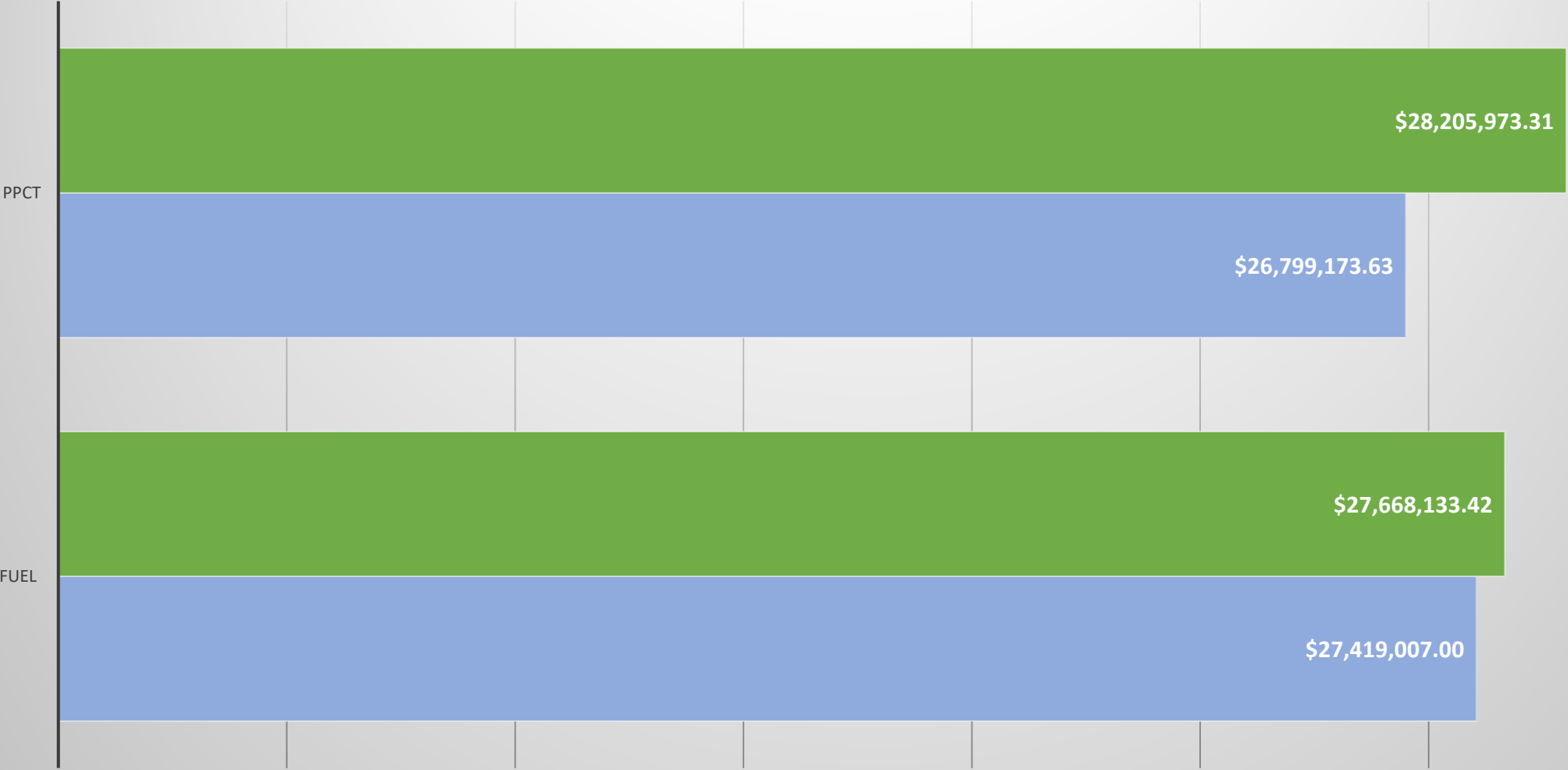
FY15 FY16 FY17



Base Revenue & Operating Expenses Comparison July-April FY16 and FY17

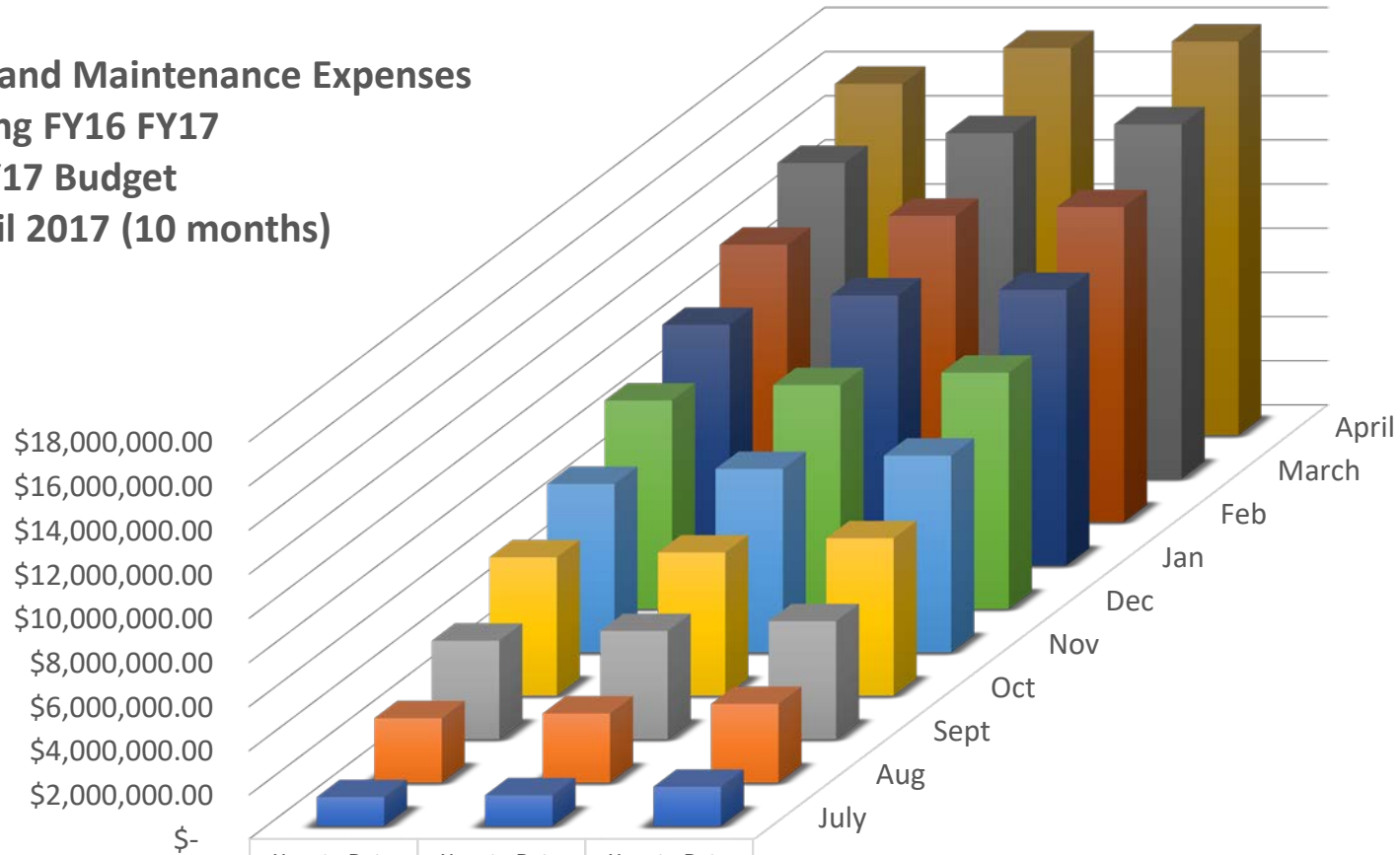


**PPCT and Fuel Revenue and Expenses
July 16-April 17 FY17 (10 months)**



■ Revenue ■ Expense

**Year to Date Operating and Maintenance Expenses
Comparing FY16 FY17
and FY17 Budget
July 2016 – April 2017 (10 months)**



	Year to Date FY16 Actual	Year to Date FY17 Actual	Year to Date Budget
July	\$1,315,415.23	\$1,399,966.01	\$1,783,203.00
Aug	\$2,918,703.69	\$3,134,666.17	\$3,566,406.00
Sept	\$4,461,345.01	\$4,904,753.21	\$5,349,609.00
Oct	\$6,272,430.27	\$6,493,213.21	\$7,132,812.00
Nov	\$7,627,630.82	\$8,309,938.88	\$8,916,015.00
Dec	\$9,441,533.29	\$10,144,029.30	\$10,699,218.00
Jan	\$10,901,861.33	\$12,232,069.66	\$12,482,421.00
Feb	\$12,563,605.41	\$13,874,351.50	\$14,265,624.00
March	\$14,297,906.28	\$15,643,132.30	\$16,048,827.00
April	\$15,915,181.84	\$17,537,887.48	\$17,832,030.00

**ENGINEERING & OPERATIONS REPORT
MARCH & APRIL 2017
ATTACHMENT 5**

READING MUNICIPAL LIGHT DEPARTMENT

FOR PERIOD ENDING MARCH 2017

PROJ	DESCRIPTION	TOWN	ACTUAL COST	YTD ADDITIONS	ANNUAL BUDGET	REMAINING BALANCE
CONSTRUCTION:						
106	Underground Facilities Upgrades (URD's, Manholes, etc)	ALL	31,801	296,716	149,965	(146,751)
107	13.8kV Upgrade (Step-down areas, etc.)	ALL	1,646	6,555	105,748	99,193
SUB-TOTAL			33,447	303,271	255,713	(47,558)
STATION UPGRADES:						
108	Station 4 (GAW) Relay Replacement Project	R	-	113,209	48,904	(64,305)
109	Station 4 35kV Potential Transformer Replacement	R	-	57	-	(57)
110	4W9 Getaway Replacement-Station 4	R	-	104,513	234,747	130,234
111	Substation Equipment Upgrade (all)	ALL	-	-	74,590	74,590
113	Station 4 (GAW) Battery Bank Upgrade	R	-	24,000	17,037	(6,963)
120	Station 4 - Relay/SCADA Integration for Bus A&B	R	26,964	51,225	70,308	19,083
130	Station 3 - Remote Terminal Unit (RTU) Replacement	NR	24,850	24,850	39,330	14,480
133	Station 3 - Relay Upgrades and SCADA Integration	NR	4,416	255,052	252,225	(2,827)
139	Station 5 - LTC Control Replacement	W	-	6,324	41,543	35,219
140	Substation Grounding Equipment Upgrade	ALL	-	-	20,671	20,671
SUB-TOTAL			56,230	579,231	799,355	220,124
NEW CUSTOMER SERVICES: 141-146						
New Service Installations (Commercial / Industrial)		ALL	6,325	86,451	139,570	53,119
SUB-TOTAL			6,325	86,451	139,570	53,119
ROUTINE CONSTRUCTION:			169,667	1,341,271	1,012,962	(328,309)
SPECIAL PROJECTS / CAPITAL PURCHASES:						
100	Distributed Gas Generation (Pilot FY16-17)	ALL	5,396	97,476	2,720,409	2,622,933
102	Padmount Switchgear Upgrade at Industrial Parks	W	-	2,286	194,518	192,232
103	Grid Modernization and Optimization	ALL	9,885	232,024	284,000	51,976
105	New Wilmington Sub-Station	W	-	-	250,000	250,000
112	AMI Mesh Network Expansion	ALL	-	125,394	220,021	94,627
115	Fault Indicators	ALL	-	1,340	25,000	23,660
116	Transformers and Capacitors	ALL	151,110	160,212	668,000	507,788
117	Meter Purchases	ALL	2,145	30,381	80,000	49,619
125	GIS	ALL	70,440	250,217	360,000	109,783
126	Communication Equipment (Fiber Optic)	ALL	-	7,064	69,173	62,109
131	LED Street Light Implementation	ALL	40,644	525,770	804,070	278,300
134	Substation Test Equipment	ALL	-	14,270	30,000	15,730
135	Analog Devices Cap Bank Upgrade	W	-	548	54,188	53,640
136	Voltage Data Recorders	ALL	-	-	25,000	25,000
SUB-TOTAL			279,619	1,446,981	5,784,379	4,337,398
OTHER CAPITAL PROJECTS:						
96	Control Center Modifications	ALL	-	-	100,000	100,000
97	HVAC Roof Units - Garage	R	-	44,484	-	(44,484)
98	Carpet Upgrade	R	-	10,950	71,653	60,703
99	Electric Vehicle Supply Equipment	ALL	(1,303)	-	10,000	10,000
104	RMLD Lighting (LED) Upgrade	-	-	-	25,000	25,000
118	Rolling Stock Replacement	ALL	-	53,083	310,000	256,917
119	Security Upgrades All Sites	ALL	-	34,684	5,000	(29,684)
121	HVAC System Upgrade - 230 Ash Street	R	8,000	527,550	500,000	(27,550)
127	Hardware Upgrades	ALL	9,389	75,668	112,065	36,397
128	Software and Licensing	ALL	8,750	61,376	230,519	169,144
129	Master Facilities Site Plan	R	-	-	50,000	50,000
SUB-TOTAL			24,837	807,794	1,414,237	606,443
TOTAL CAPITAL BUDGET			\$ 570,124.33	\$ 4,564,999	\$ 9,406,216	\$ 4,841,217

READING MUNICIPAL LIGHT DEPARTMENT
CAPITAL VARIANCE REPORT
FOR PERIOD ENDING APRIL 2017

PROJ	DESCRIPTION	TOWN	ACTUAL COST	YTD ADDITIONS	ANNUAL BUDGET	REMAINING BALANCE
CONSTRUCTION:						
106	Underground Facilities Upgrades (URD's, Manholes, etc)	ALL	1,905	298,621	149,965	(148,656)
107	13.8kV Upgrade (Step-down areas, etc.)	ALL	3,258	9,813	105,748	95,935
SUB-TOTAL			5,163	308,434	255,713	(52,721)
STATION UPGRADES:						
108	Station 4 (GAW) Relay Replacement Project	R	-	113,209	48,904	(64,305)
109	Station 4 35kV Potential Transformer Replacement	R	-	57	-	(57)
110	4W9 Getaway Replacement-Station 4	R	-	104,513	234,747	130,234
111	Substation Equipment Upgrade (all)	ALL	-	-	74,590	74,590
113	Station 4 (GAW) Battery Bank Upgrade	R	-	24,000	17,037	(6,963)
120	Station 4 - Relay/SCADA Integration for Bus A&B	R	-	51,225	70,308	19,083
130	Station 3 - Remote Terminal Unit (RTU) Replacement	NR	-	24,850	39,330	14,480
133	Station 3 - Relay Upgrades and SCADA Integration	NR	879	255,931	252,225	(3,706)
139	Station 5 - LTC Control Replacement	W	-	6,324	41,543	35,219
140	Substation Grounding Equipment Upgrade	ALL	-	-	20,671	20,671
SUB-TOTAL			879	580,109	799,355	219,246
NEW CUSTOMER SERVICES: 141-146						
New Service Installations (Commercial / Industrial)		ALL	7,513	93,964	139,570	45,606
SUB-TOTAL			7,513	93,964	139,570	45,606
ROUTINE CONSTRUCTION:		ALL	265,341	1,606,613	1,012,962	(593,651)
SPECIAL PROJECTS / CAPITAL PURCHASES:						
100	Distributed Gas Generation (Pilot FY16-17)	ALL	690,997	788,473	2,720,409	1,931,936
102	Padmount Switchgear Upgrade at Industrial Parks	W	-	2,286	194,518	192,232
103	Grid Modernization and Optimization	ALL	26,841	258,865	284,000	25,135
105	New Wilmington Sub-Station	W	-	-	250,000	250,000
112	AMI Mesh Network Expansion	ALL	-	125,394	220,021	94,627
115	Fault Indicators	ALL	-	1,340	25,000	23,660
116	Transformers and Capacitors	ALL	19,794	180,006	668,000	487,994
117	Meter Purchases	ALL	2,955	33,336	80,000	46,664
125	GIS	ALL	41,366	291,583	360,000	68,417
126	Communication Equipment (Fiber Optic)	ALL	410	7,474	69,173	61,699
131	LED Street Light Implementation	ALL	28,518	554,289	804,070	249,781
134	Substation Test Equipment	ALL	11,855	26,125	30,000	3,875
135	Analog Devices Cap Bank Upgrade	W	-	548	54,188	53,640
136	Voltage Data Recorders	ALL	-	-	25,000	25,000
SUB-TOTAL			822,738	2,269,719	5,784,379	3,514,660
OTHER CAPITAL PROJECTS:						
96	Control Center Modifications	ALL	-	-	100,000	100,000
97	HVAC Roof Units - Garage	R	-	44,484	-	(44,484)
98	Carpet Upgrade	R	-	10,950	71,653	60,703
99	Electric Vehicle Supply Equipment	ALL	-	-	10,000	10,000
104	RMLD Lighting (LED) Upgrade	-	-	-	25,000	25,000
118	Rolling Stock Replacement	ALL	-	53,083	310,000	256,917
119	Security Upgrades All Sites	ALL	-	34,684	5,000	(29,684)
121	HVAC System Upgrade - 230 Ash Street	R	77,186	604,736	500,000	(104,736)
127	Hardware Upgrades	ALL	9,298	84,966	112,065	27,099
128	Software and Licensing	ALL	15,840	77,216	230,519	153,304
129	Master Facilities Site Plan	R	-	-	50,000	50,000
SUB-TOTAL			102,325	910,119	1,414,237	504,118
TOTAL CAPITAL BUDGET			\$ 1,203,958	\$ 5,768,957	\$ 9,406,216	\$ 3,637,259



Engineering & Operations Report

RMLD Board of Commissioners Meeting

June 15, 2017

March and April 2017 Reporting Period

Hamid Jaffari, Director of Engineering & Operations

Capital Improvement Projects

Construction Projects:		% Complete Status	MAR	APR	YTD
100	Distributed Gas Generator Pilot	20%	\$5,396	\$690,997	\$788,473
106	Underground Facilities Upgrades (URDs, Manholes, etc.) <ul style="list-style-type: none"> Crestwood Road, North Reading Robin Road, North Reading 	On-going	\$31,801	\$1,905	\$298,621
107	13.8kV Upgrade (Step-down Areas, etc.) <ul style="list-style-type: none"> Main Street, Lynnfield Main Street Reading Summit Tower, Reading 	On-going	\$1,646	\$3,258	\$9,813
120	Station 4: Relay/SCADA Integration for Bus A&B	100%	\$26,964		\$51,225
130	Station 3: Remote Terminal Unit (RTU) Replacement	40%	\$24,850		\$24,850
133	Station 3: Relay Upgrades and SCADA Integration	70%	\$4,416	\$879	\$255,931
	Service Installations – Residential and Commercial: This item includes new or upgraded overhead and underground services.	On-going	\$6,325	\$7,513	\$93,964
103	Grid Modernization and Optimization	On-going	\$9,885	\$26,841	\$258,865
125	GIS	75%	\$70,440	\$41,366	\$291,583
131	LED Street Light Conversion	65%	\$40,644	\$28,518	\$554,289

Routine Construction

	MAR	APR	YTD
Pole Setting/Transfers	\$52,374	\$29,720	\$332,507
Overhead/Underground	\$48,746	\$15,348	\$339,546
Projects Assigned as Required <ul style="list-style-type: none"> • Station - 115kV Reclosing Automation, R • Voltage Regulators, LC • Pumping Stations (West Street and Batchelder Road), R • 234 Ballardvale Street – Keolis, W • AT&T Appl W15-2 (Industrial/West), W 	\$25,769	\$174,488	\$354,111
Pole Damage/Knockdowns - Some Reimbursable <ul style="list-style-type: none"> • Work was done to repair or replace six (6) poles 	\$5,932	\$4,135	\$94,404
Station Group	\$12,078	\$6,247	\$184,674
Hazmat/Oil Spills <ul style="list-style-type: none"> • Concord Street, NR 	\$1,240	-	\$7,037
Porcelain Cutout Replacement Program	-	-	-
Lighting (Street Light Connections)	\$4,341	\$2,413	\$26,263
Storm Trouble	\$13,957	-	\$45,812
Underground Subdivisions (new construction) <ul style="list-style-type: none"> • Dogwood Lane, North Reading 	\$1,102		\$46,931
Animal Guard Installation	\$108		\$1,162
Miscellaneous Capital Costs	\$4,020	\$32,990	\$174,169
TOTAL:	<u>\$169,667</u>	<u>\$265,341</u>	<u>\$1,606,613</u>

Routine Maintenance

► Transformer Replacement (through April 2017)

Pad mount 26.17% Overhead 17.09%

► Pole Inspection (as of 5/26/17)

231 poles have been replaced 130 of 231 transfers have been completed

► Quarterly Inspection of Feeders (through May 25, 2017)

Inspected Circuits (Jan-Mar): 3W5, 3W6, 3W7, 3W8, 3W13, 3W14, 3W15, 3W18, 4W4, 4W5, 4W6, 4W7, 4W9, 4W23, 4W24, 5W4, 5W5, 5W8, 5W9, 4P9, 4P2

Inspected Circuits (Apr-Jun): 4W10, 4W12, 4W13

► Manhole Inspection (through April 2017)

961 of 1,237 manholes have been inspected.

► Porcelain Cutout Replacements (through April 2017)

91% complete 253 remaining to be replaced

► Tree Trimming

March: 147 spans trimmed April: 144 spans trimmed YTD: 1,122 spans trimmed

► Substation Maintenance

Infrared Scanning – March and April complete - no hot spots found

Double Poles

➤ Ownership: 16,000 (approximately)

50% RMLD

50% Verizon

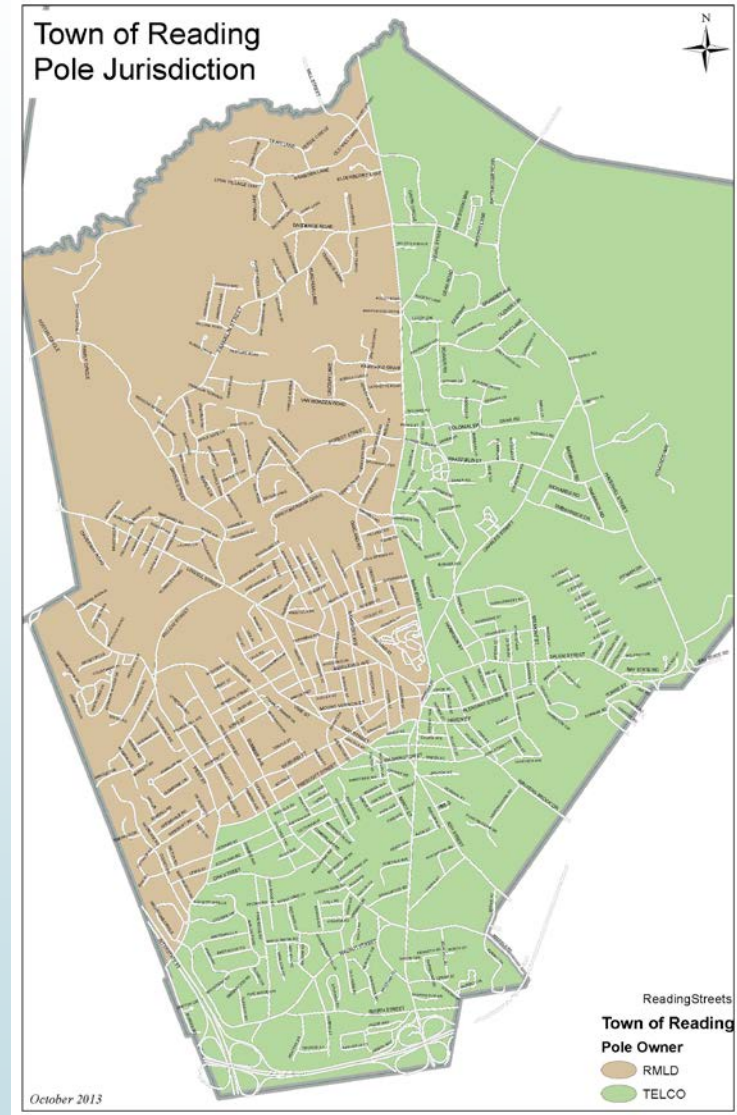
➤ Custodial:

Reading – split (see map) →

North Reading – RMLD

Lynnfield – Verizon

Wilmington - Verizon



NJUNS

"Next to Go" as of June 5, 2017

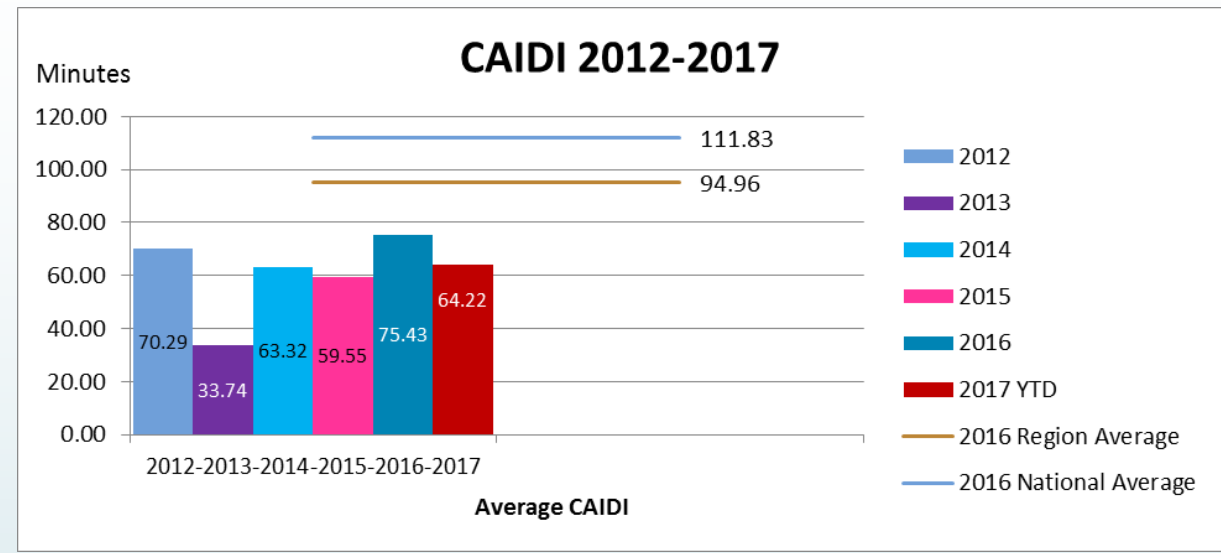
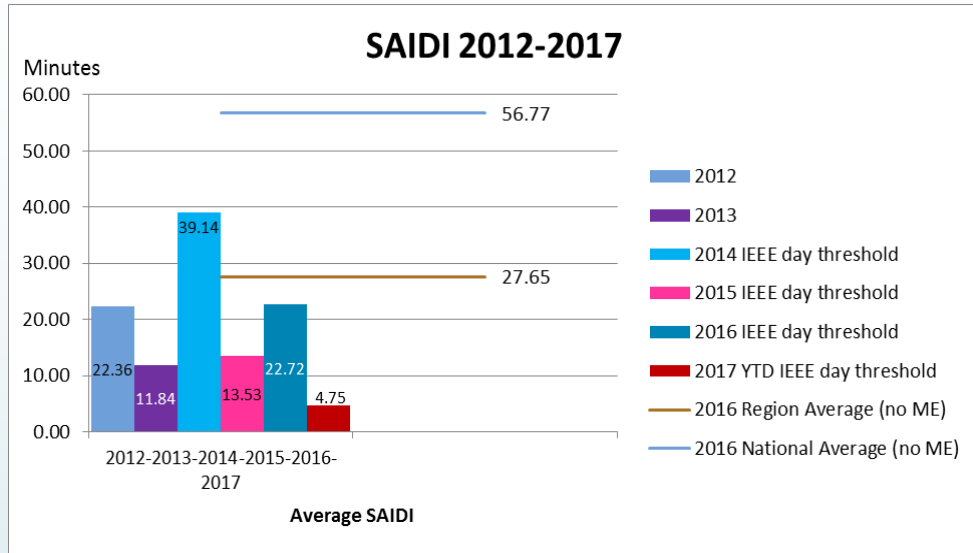
LYNNFIELD	
NTG Member and JobType	Count of Ticket Number
[-] LFLDFD	3
[-] Lynnfield Fire Department	
TRANSFER	3
[-] RMLD	3
[-] Reading Municipal Light Department	
TRANSFER	3
[-] VZNESEA	10
[-] Verizon	
TRANSFER	5
PULL POLE	5
[+] (blank)	
Grand Total	16

READING	
NTG Member and JobType	Count of Ticket Number
[-] LTFMA	1
[-] Lighttower Fiber Networks	
TRANSFER	1
[-] NP3PMA	9
[-] Non-participating 3rd Party Attacher	
- Massachusetts	
TRANSFER	9
[-] RDNGFD	8
[-] Reading Fire Department	
TRANSFER	8
[-] RMLD	92
[-] Reading Municipal Light Department	
TRANSFER	34
PULL POLE	58
[-] VZNESEA	79
[-] Verizon	
TRANSFER	75
PULL POLE	4
[+] (blank)	
Grand Total	189

NORTH READING	
NTG Member and JobType	Count of Ticket
[-] NGMA	1
[-] National Grid	
TRANSFER	1
[-] NP3PMA	1
[-] Non-participating 3rd Party	
Attacher - Massachusetts	
TRANSFER	1
[-] NRDFD	44
[-] North Reading Fire Department	
TRANSFER	44
[-] RMLD	120
[-] Reading Municipal Light Department	
TRANSFER	13
PULL POLE	107
[-] VZNEEDR	24
[-] Verizon	
TRANSFER	16
PULL POLE	8
[+] (blank)	
Grand Total	190

WILMINGTON	
NTG Member and JobType	Count of Ticket Number
[-] CMCTNR	1
[-] Comcast	
TRANSFER	1
[-] NP3PMA	7
[-] Non-participating 3rd Party	
Attacher - Massachusetts	
TRANSFER	7
[-] NPFAMA	4
[-] Non-participating Fire	
Alarms - Massachusetts	
TRANSFER	4
[-] RMLD	32
[-] Reading Municipal Light Department	
TRANSFER	28
PULL POLE	4
[-] VZBMA	1
[-] Verizon Business	
TRANSFER	1
[-] VZNEEDR	79
[-] Verizon	
TRANSFER	66
PULL POLE	13
[-] WLMFIB	3
[-] Town of Wilmington	
TRANSFER	3
[-] WMGNFD	84
[-] Wilmington Fire Department	
TRANSFER	84
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Grand Total	211

RMLD Reliability Indices



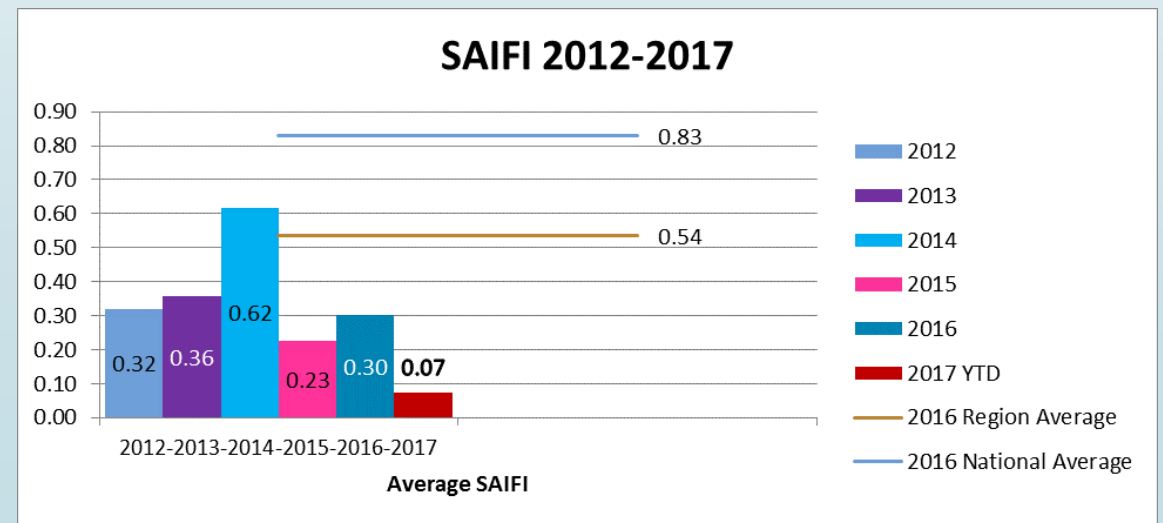
$$SAIDI \text{ (Minutes)} = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

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

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

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

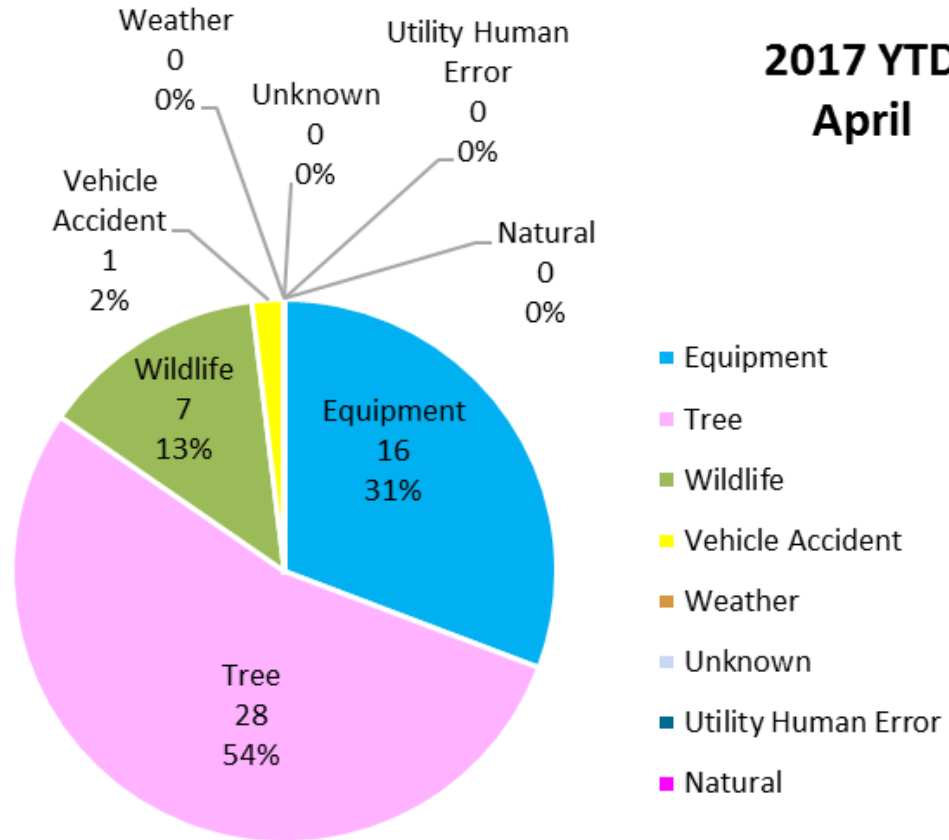
Note: Regional and national averages have been updated for 2016.



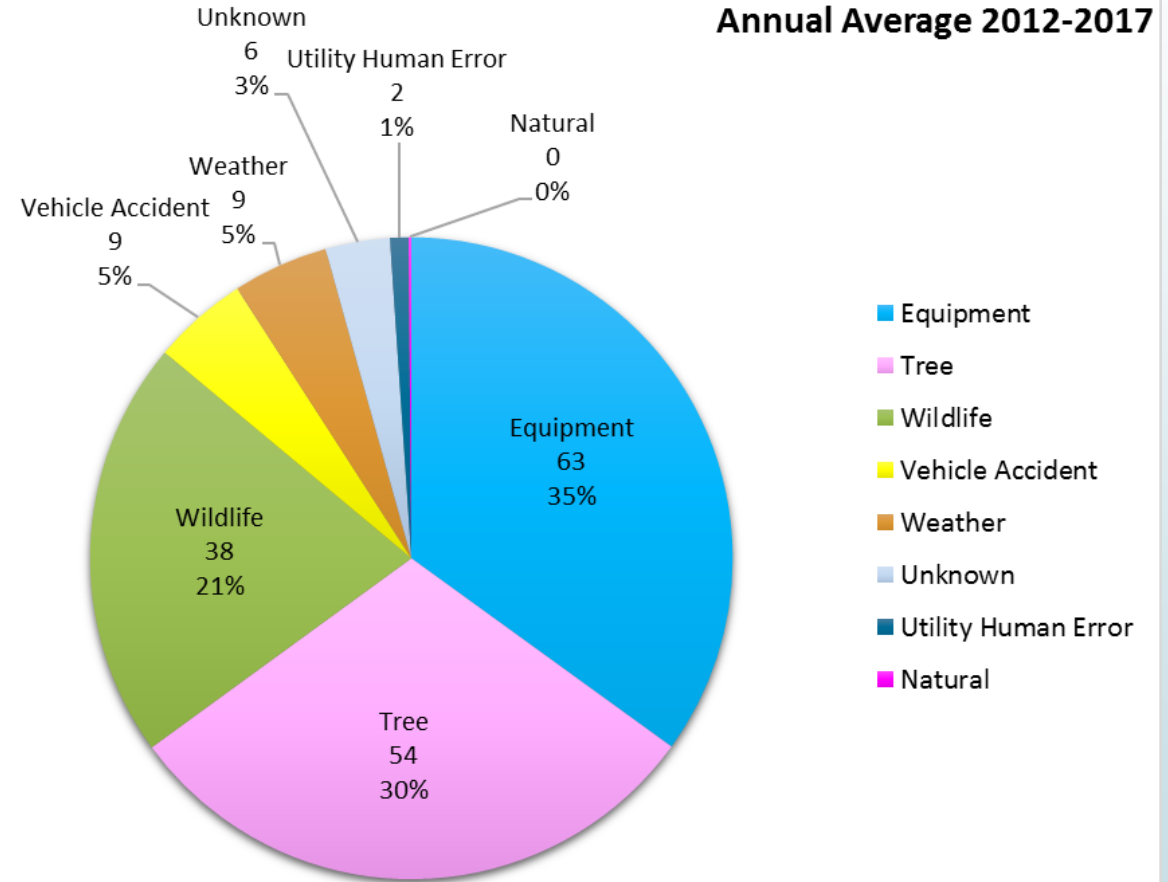
Outages Causes

Outages Causes YTD (from eReliability website)

**2017 YTD
April**



Annual Average 2012-2017



Questions ?



**BOARD MATERIAL AVAILABLE
BUT NOT DISCUSSED**

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

May-17

	RESIDENTIAL 750 kWh's	RESIDENTIAL-TOU 1500 kWh's 75/25 Split	RES. HOT WATER 1000 kWh's	COMMERCIAL 7,300 kWh's 25.000 kW Demand	SMALL COMMERCIAL 1,080 kWh's 10.000 kW Demand	SCHOOL RATE 35000 kWh's 130.5 kW Demand	INDUSTRIAL - TOU 109,500 kWh's 250.000 kW Demand 80/20 Split
READING MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$108.08	\$184.68	\$131.14	\$978.03	\$194.89	\$4,539.50	\$723,561.98
PER KWH CHARGE	\$0.14410	\$0.12312	\$0.13114	\$0.13398	\$0.18045	\$0.12970	\$0.10518
NATIONAL GRID							
TOTAL BILL	\$151.90	\$358.79	\$188.23	\$1,363.20	\$210.20	\$5,412.22	\$1,603,701.44
PER KWH CHARGE	\$0.20253	\$0.23919	\$0.18823	\$0.18674	\$0.19463	\$0.15463	\$0.23311
% DIFFERENCE	40.55%	94.28%	43.53%	39.38%	7.86%	19.23%	121.64%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$143.50	\$253.51	\$189.19	\$1,233.41	\$203.03	\$6,692.17	\$936,202.98
PER KWH CHARGE	\$0.19133	\$0.16901	\$0.18919	\$0.16896	\$0.18799	\$0.19120	\$0.13608
% DIFFERENCE	32.77%	37.27%	44.27%	26.11%	4.18%	47.42%	29.39%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$88.38	\$172.43	\$117.07	\$952.31	\$151.07	\$4,709.23	\$638,286.46
PER KWH CHARGE	\$0.11784	\$0.11495	\$0.11707	\$0.13045	\$0.13988	\$0.13455	\$0.09278
% DIFFERENCE	-18.23%	-6.63%	-10.73%	-2.63%	-22.48%	3.74%	-11.79%
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	-8.64%	9.20%	1.23%	-1.89%	-13.57%	4.92%	11.56%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$115.49	\$213.42	\$144.38	\$1,093.29	\$175.48	\$5,123.08	\$852,765.30
PER KWH CHARGE	\$0.15398	\$0.14228	\$0.14438	\$0.14977	\$0.16249	\$0.14637	\$0.12396
% DIFFERENCE	6.85%	15.56%	10.10%	11.79%	-9.96%	12.86%	17.86%

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

June-17

	RESIDENTIAL 750 kWh's	RESIDENTIAL-TOU 1500 kWh's 75/25 Split	RES. HOT WATER 1000 kWh's	COMMERCIAL 7,300 kWh's 25.000 kW Demand	SMALL COMMERCIAL 1,080 kWh's 10.000 kW Demand	SCHOOL RATE 35000 kWh's 130.5 kW Demand	INDUSTRIAL - TOU 109,500 kWh's 250.000 kW Demand 80/20 Split
READING MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$110.19	\$188.91	\$133.96	\$992.11	\$196.97	\$4,607.05	\$736,600.61
PER KWH CHARGE	\$0.14692	\$0.12594	\$0.13396	\$0.13591	\$0.18238	\$0.13163	\$0.10707
NATIONAL GRID							
TOTAL BILL	\$151.90	\$358.79	\$188.23	\$1,454.38	\$223.69	\$5,412.22	\$975,136.26
PER KWH CHARGE	\$0.20253	\$0.23919	\$0.18823	\$0.19923	\$0.20712	\$0.15463	\$0.14174
% DIFFERENCE	37.85%	89.93%	40.51%	46.59%	13.56%	17.48%	32.38%
EVERSOURCE(NSTAR)							
TOTAL BILL	\$143.50	\$253.51	\$189.19	\$1,233.41	\$203.03	\$6,692.17	\$1,037,846.34
PER KWH CHARGE	\$0.19133	\$0.16901	\$0.18919	\$0.16896	\$0.18799	\$0.19120	\$0.15086
% DIFFERENCE	30.23%	34.20%	41.23%	24.32%	3.08%	45.26%	40.90%
PEABODY MUNICIPAL LIGHT PLANT							
TOTAL BILL	\$88.38	\$172.43	\$117.07	\$952.31	\$151.07	\$4,709.23	\$638,286.46
PER KWH CHARGE	\$0.11784	\$0.11495	\$0.11707	\$0.13045	\$0.13988	\$0.13455	\$0.09278
% DIFFERENCE	-19.80%	-8.72%	-12.61%	-4.01%	-23.30%	2.22%	-13.35%
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	-10.40%	6.75%	-0.91%	-3.29%	-14.49%	3.38%	9.58%
WAKEFIELD MUNICIPAL LIGHT DEPT.							
TOTAL BILL	\$115.49	\$213.42	\$144.38	\$1,093.29	\$175.48	\$5,123.08	\$852,765.30
PER KWH CHARGE	\$0.15398	\$0.14228	\$0.14438	\$0.14977	\$0.16249	\$0.14637	\$0.12396
% DIFFERENCE	4.80%	12.98%	7.78%	10.20%	-10.91%	11.20%	15.77%

From: [Tracy Schultz](#)
To: [RMLD Board Members Group](#)
Subject: AP Warrants and Payroll
Date: Thursday, June 08, 2017 7:38:00 AM

Good morning,

There were no questions on the May 12, May 26, and June 2, 2017 AP Warrants. Mr. Hennessy had a question on the May 19 AP-the tree trimming contractor charges for labor and per span removed.

There were no questions on the May 15 Payroll. Mr. O'Rourke had an inquiry about the May 29, 2017 Payroll: it was a tuition reimbursement payment to an employee.

This message will be included in the packet for next Thursday's Board Meeting.

Tracy Schultz
Executive Assistant
Reading Municipal Light Department
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