

RMLD



Reading Municipal Light Department
RELIABLE POWER FOR GENERATIONS

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AGENDA

REGULAR SESSION

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

WEDNESDAY, APRIL 9, 2014

6:30 PM

at

230 Ash Street

Reading, MA 01867

Winfred Spurr/Audio Visual Room

- 1. CALL MEETING TO ORDER – J. Norton, Chairman**
- 2. PRESENTATION OF METER LAMP – J. Norton, Chairman**
- 3. FY15 CAPITAL BUDGET – C. O'Brien, General Manager**
- 4. ELECTION OF SECRETARY – J. Norton, Chairman**
- 5. COVERAGE FOR BOARD OF COMMISSIONERS MEETINGS – J. Norton, Chairman**
- 6. NEXT MEETING – J. Norton, Chairman**
- 7. ADJOURNMENT – J. Norton, Chairman**

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

READING MUNICIPAL LIGHT DEPARTMENT



FY 2015 CAPITAL BUDGET

MARCH 28, 2014

Coleen O'Brien
General Manager

FY15 CAPITAL BUDGET

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Reading Municipal Light Department
SYSTEM PROFILE
(based on CY 2013)

SERVICE TERRITORY	51 square miles serving Reading, North Reading, Wilmington and part of Lynnfield
TOTAL OPERATING REVENUES	\$78,928,607
NUMBER OF CUSTOMERS	29,599
ANNUAL PEAK LOAD	167,759 kW on July 19, 2013
ANNUAL SALES	696,522,779 kWh
PLANT VALUE	\$128,824,441 (Gross) \$69,875,363 (Net)
SUPPLY VOLTAGE	115 kV
SUPPLY CAPACITY	<i>Station 4:</i> (3) 60 MVA Transformers (2) 40 MVA Transformers 260 MVA Connected, 200 MVA Firm <i>Station 3:</i> (2) 60 MVA Transformers 120 MVA Connected, 60 MVA Firm
DISTRIBUTION SYSTEM VOLTAGE	13,800 volt wye 4,160 volt wye
OVERHEAD PRIMARY LINES	All 335 miles
UNDERGROUND PRIMARY LINES	All 135 miles
DISTRIBUTION TRANSFORMERS	3,729 – 253.37 MVA Capacity
DISTRIBUTION SUBSTATIONS	(3) 380 MVA Capacity
UTILITY POLES	17,225 poles <i>Ownership:</i> 65% Verizon, 35% RMLD <i>Ownership By Town:</i> North Reading – RMLD Lynnfield – Verizon Reading <ul style="list-style-type: none"> • east of Main Street – Verizon • west of Main Street, east of West Street, south of Prescott Street – Verizon • west of West Street – RMLD • west of Main Street, north of Prescott Street – RMLD Wilmington <ul style="list-style-type: none"> • all poles with 35 kV sub-transmission circuits, and Concord Street – RMLD • all other locations in Wilmington – Verizon
APPLICATION SOFTWARE	
Billing and Accounting	Great Plains/Cogsdale
General PC	Windows 2012, 2008, SQL, Office 2013, 2008, 2012 Exchange 2010, Windows 7, 8, 8.1 Sharepoint Itron
FORECASTING	Metrix ND (Daily Forecasting – Energy Services)
ENGINEERING ANALYSIS	Milsoft (in process)

READING MUNICIPAL LIGHT DEPARTMENT
Capital Improvements FY14-19

Rows Shaded (beige) Represent
Completed Projects

		PROJECT NAME	FY14 BUDGET	FY14 YTD Actual (2/2014)	FY14 EST.	FY15 PLAN EST.	FY16	FY17	FY18	FY19	BRIEF DESCRIPTION
TOWN	PG #	PROJECT #									
F A	4	121	HVAC System Upgrade - 230 Ash Street	275		50	399	250			Replace (2) boilers; (2) chillers, (3) air handling units, (2) building automation systems addressing air filtration and efficiency.
F A	6	129	Master Facilities Site Plan	150		50	50	2,000	2,000		Study will include consideration of solar generation on-site and best use of all facilities including leased.
F A	n/a	124	Rehabilitation of Station 1 - 226 Ash Street	520				500	2,000		Proceed based on findings of Master Facilities Plan. Offset by potential sale of 230 Ash.
F A	n/a	120	Build Covered Storage	150							Rolled into project 129.
F A	9	TBD	Oil Containment Facility Construction			80	80				Comprehensive study of all sites and temporary measures; oil water separator, environmental compliance.
F A	11	TBD	Security Upgrades All Sites			61	61	25	25	25	Access control, alarm monitoring, video and perimeter monitoring along the fence lines.
F A	14	118	Rolling Stock Replacement (vehicles, trailers fork trucks)	470	245	470	434	439	523	560	Scheduled vehicle replacement.
M A	19	TBD	Great Plains/Cogsdale Update				350	50			Data conversion and upgrade to including software, hardware, training, consulting, and project management.
M A	22	127	Hardware Upgrades	181	93	98	102	122	122	200	Vmware ESX1 servers, upgrade EMC SAN storage, GIS server.
M A	24	128	Software and Licensing	180	50	73	122	146	146	146	Custom programming OM/UAN/GIS/GPS, Veeam One cluster license, Sharepoint and 80 CAL's
S W	27	101	SW9 Reconductoring - Balladvale Area, Wilmington	169	32	169	253	196			Upgrade 7,000' of circuit to 795 spacer for capacity feeding Balladvale area (Target).
S L	29	104	Upgrading of Old Lynnfield Center URDS (Cook's Farm)	411		174	217				Upgrade for reliability and to meet construction standards.
S R	31	105	4W5-4W6 Tie	97	10	35	70				Install 1,500' of circuit 556 spacer in order to shift distribution load feeding Addison Wesley and South Main St and complete extension to Summer Street.
S R	33	108	Relay Replacement - Station 4 (Gaw)	117			50	67			Replace existing electromechanical protective relay systems on the 15kV feeder breakers. The new relays will be capable of providing more information back to SCADA and store vast amounts of data for down loading and evaluation.
S NR	35	130	Remote Terminal Unit (RTU) Replacement - Station 3	84			85				Upgrade to add functionality of the existing SEL relays. RTU will be IP addressable and will include Ethernet connection.
S A	37	122	Engineering Analysis Software & Data Conversion	37	18	25	55				Milsoft Engineering modeling integration with GIS.
S A	39	125	GIS	0		50	150				Current GIS model requires data integrity and quality inspection. Comprehensive data collection.
S R	42	TBD	Force Account West Street, Reading				224				Reconstruction of West Street, R. (State project). Estimated July 2014 start date. Partial state reimbursement (capital/expense).
S W	44	TBD	Pole Line Upgrade - Lowell Street, Wilmington				173				Upgrade (20) poles to proper strength, create proper clearance between utilities and transfer. Benefit to long-term reliability.
S A	46	TBD	Distribution Protection & Automation				69	30	30	30	Install reclosers on feeders for fault isolation and installing capacitor controls for various cap banks on the system.
S A	48	TBD	SCADA System Upgrades - Hardware				63				Upgrade Survalent system to a new version supporting new technology.
S A	50	131	LED Street Light Pilot Area - All Towns			10	37	1,200	1,200	1,200	Pilot to be done in FY15. Potential FY15 Grant.
S A	52	TBD	Outage Management Software & Integration				85				
S A	54	TBD	Predictive Asset Management Program				80	80	30	30	Asset management system to track distribution and substation assets in a preventative manner.
S A	56	TBD	Substation Test Equipment				121	50	50		Purchase of test equipment for substation and metering.
S A	58	TBD	Arc Flash Study				35				
S A	60	TBD	Organizational/Reliability Study				100	100			
S A	63	116	Transformers & Capacitors	284		456	444	300	300	300	Purchase of units for proposed projects and stock.
S A	65	126	Communication Equipment (Fiber Optic)	100	7	20	30	25	25	25	Materials to accommodate expanded use of fiber optic network.
S A	67	117	Meters Purchases (including "500 Club")	345	184	268	127				Purchase Meters for stock. 500 Club meter upgrade is being investigated.
S A	69	106	URD Upgrades - All Towns	210	22	210	319	213	213	213	Replace primary and neutral cables and pad-mount transformers as needed in various aging URDs. Improved reliability.
S A	71	107	Step-down Area Upgrades - All Towns	233		179	203	250	250	250	Convert areas to 13.8kV, remove antiquated equipment and step-downs to lower losses and improve system efficiency.
S A	73	112	New Service Installations (Commercial/Industrial)	56	27	42	57	50	50	50	Install new and upgraded commercial three-phase electrical services as requested.
S A	73	113	New Service Installations (Residential)	200	151	256	260	250	250	250	Install new and upgraded residential services as requested.
S A	77	114	Routine Construction	1,014	1,017	1,576	947	1,000	1,000	1,000	Non-project capital including labor, pole sets, transfers, UG, police details, and OT.
F A		123	New Radio System	100	95	99					New digital radio system to provide better coverage and added features.
S L		103	Upgrading Old Lynnfield Center URDS (Trog Hawley)	141	71	71					Upgrade for reliability and capacity and to meet construction standards.
S L		801	Essex Street Reconductoring.		59	59					7,200' of 335 spacer cable and (3) transformers. Improved reliability
S NR		110	Station 3 - Replacement of Service Cutouts	30		30					Replace potted porcelain cutouts which are prone to failure.

READING MUNICIPAL LIGHT DEPARTMENT
Capital Improvements FY14-19
\$ Shown in thousands

		PROJECT NAME	FY14 BUDGET	FY14 YTD Actual (2/2014)	FY14 EST.	FY15 PLAN EST.	FY16	FY17	FY18	FY19	BRIEF DESCRIPTION
S	R	111 Station 4 Getaway Replacement - 4W13	245	138	158						Replace 1,700 circuit feet of UG cable on 4W13 w/750 cu for increased capacity and reliability.
S	R	109 Station 4 (Gaw) 35kv Potential Transformer Replacement	40		40						Replace six 30+ year old potential transformers.
S	W	115 Station 5 - Getaway Replacements 5W9 and 5W10	95		95						Underground cables are original to substation (early 1980's). Upgrade feeders for load and reliability reasons, and create a spare feeder on Bus E.
S	W	802 West Street - 4W13 OH Reconductoring		162	165						Upgrade 3,500 circuit feet of 336 spacer cable with 795 spacer cable for increased reliability and capacity.
S	W	810 Station 5 RTU Replacement			33						Purchase pre-wired RTU enclosure to replace exiting RTU enclosure which is unsupported and does not have enough points.
F	R	T8D Station 4 (Gaw) Back-up Generator					103				Purchase and install an emergency generator for Gaw Station 4.
S	R	T8D 4W9 Getaway Replacement - Station 4					239				Upgrade 2,850 circuit feet of UG cable on Causeway Road and Lowell Street, R, with 750 mcm cu for increased reliability and capacity.
S	R	T8D 4W4 Getaway Replacement - Station 4					341				Upgrade 3,700 circuit feet of UG cable on West Street, R and West St, W to 750 mcm cu for increased reliability and capacity
S	W	102 4W4 Reconductoring - Wilmington	166				170				Upgrade 5,500 circuit feet of 336 spacer cable on Industrial Way with 795 spacer cable for increased reliability and capacity.
S	W	T8D 5W5 Reconductoring - Wildwood to Upton Drive					214	214		214	Upgrade 25,000 circuit feet of 336 spacer cable on Wildwood, Woburn, and Andover Streets to 795 spacer cable.
S	R	T8D 4W5 Getaway Replacement - Station 4						234			Upgrade 1,700 circuit feet of UG cable on West Street, R to 750 mcm cu for increased reliability and capacity.
S	R	T8D 4W6 Getaway Replacement - Station 4							243		Upgrade 1,850 circuit feet of UG cable on West Street, R to 750 mcm cu for increased reliability and capacity.
TOTAL			6,102	2,382	5,041	5,850	8,410	8,571	4,671	3,079	

TABLE 1: PLANT VALUES & DEPRECIATION EXPENSE

Plant in Service (Beginning)	127,254	130,995	135,544	142,654	149,925	153,296
Additions	5,041	5,850	8,410	8,571	4,671	3,079
Adjustments (Property Retirement)	<u>-1,300</u>	<u>-1,300</u>	<u>-1,300</u>	<u>-1,300</u>	<u>-1,300</u>	<u>-1,300</u>
Plant in Service (Ending)	130,995	135,544	142,654	149,925	153,296	155,075
Less Land and Land Rights	-1,266	-1,266	-1,266	-1,266	-1,266	-1,266
Depreciable Plant in Service	129,729	134,278	141,388	148,659	152,030	153,809
Accumulated Reserve For Depreciation	<u>-60,839</u>	<u>-64,731</u>	<u>-70,102</u>	<u>-77,171</u>	<u>-81,631</u>	<u>-86,192</u>
Net Plant in Service	<u>70,156</u>	<u>70,813</u>	<u>72,552</u>	<u>72,753</u>	<u>71,665</u>	<u>68,883</u>
Maximum allowed Return on Net Plant (%)	8%	8%	8%	8%	8%	8%
Maximum allowed Return on Net Plant (\$)	5,612	5,665	5,804	5,820	5,733	5,511
Estimated Return on Net Plant (%)	4.6%	5.9%	5.2%	4.2%	7.1%	6.5%
Estimated Return on Net Plant (\$)	3,227	4,178	3,773	3,056	5,088	4,477

TABLE 2: DEPRECIATION FUND BALANCES

Beginning Balance	4,233	4,014	3,381	1,376	889	1,686
Interest Earned*	42	40	34	14	9	17
Depreciation Expense (3-5%)	3,780	3,892	5,371	7,069	4,460	4,561
Bond Proceeds and Other Fund Sources	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
Prior Year Adjustment	9,055	9,231	9,786	9,459	6,357	7,264
Capital Improvements	-5,041	-5,850	-8,410	-8,571	-4,671	-3,079
Principal Payment	<u>4,014</u>	<u>3,381</u>	<u>1,376</u>	<u>889</u>	<u>1,686</u>	<u>4,185</u>
Ending Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

TABLE 3: BOND PROCEEDS & OTHER FUND SOURCES

* Interest Rate on Fund Balances:

Mass DOT (Highway): West Street

FACILITIES MANAGEMENT

<i>Continuing Projects:</i>		Page #	Project #
⌘	HVAC System Upgrade	4	121
⌘	Master Facilities Site Plan	6	129
	Rehabilitation of Station 1 – Pending Master Facilities Site Plan		124
	Building Covered Storage – Pending Master Facilities Site Plan		120
<i>New Projects for FY15:</i>			
⌘	Oil Containment Facility Construction	9	TBD
⌘	Security Upgrades – All Sites	11	TBD
<i>Annual Projects:</i>			
⌘	Rolling Inventory	14	118

CAPITAL PROJECT SUMMARY

Project Name: HVAC System Upgrade – 230 Ash Street

Project Schedule: FY14-16

Project Manager: David Polson
Facilities Manager

Reason for Expenditure:

Upgrade the HVAC system at 230 Ash Street.

Brief Description/Scope:

Replace two (2) boilers, two (2) chillers, three (3) air handling units, two (2) building automation systems; address building envelope and air infiltration. Improve the overall energy efficiency of the building.

FY 2015 – Replace boilers, chillers and ABS – Estimated Cost \$400,000

FY 2016 – Replace Air Handling units and remaining ABS – Estimated cost \$250,000

Barriers:

Final design and equipment lead time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

Scope of work remains the same.

Status Update From Prior Fiscal Year:

FY14 Estimated spending \$50,000 for project preparation, engineering and design costs.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: HVAC System Upgrade - 230 Ash Street

SCHEDULE: FY14-16

PROJECT #: 121

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Replace boilers, chillers and ABS.				\$39,079		\$360,000	\$399,079
14.25 weeks Facilities Labor	Unit Cost			\$2,742		per week	
	Unit Cost						
	Unit Cost						
	Unit Cost						
	Unit Cost						

Total RMLD Crew Weeks
Total U/G Crew Weeks

TOTAL \$39,079 \$360,000

FY15 ESTIMATED COST: \$399,079

Estimated: FY14 \$50,000
Estimated: FY16 \$250,000

ESTIMATED TOTAL PROJECT COST: \$699,079

CAPITAL PROJECT SUMMARY

Project Name: Master Facilities Site Plan

Project Schedule: FY14-17

Project Manager: David Polson
Facilities Manager

Reason for Expenditure:

The Master Facilities Site Plan will continue into FY15 finalizing options and creating bid documents to begin addressing building use and storage allocation requirements. The final plan will also include the photovoltaic recommendations as part of the Facilities Master Plan.

Brief Description/Scope:

Complete the assessment of the office space, Station 1, garage and leased warehouse space. Finalize recommendations and create a long-term strategic plan based on current and future needs working collaboratively with other Town agencies.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

Status Update From Prior Fiscal Year:

FY14 The study will be influenced by the Organizational Study and additional collaboration with the Town. Facilities Master Site Plan RFP will be sent out at the end of March 2014.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Master Facilities Site Plan

SCHEDULE: FY14-17

PROJECT #: 129

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Hire consultant to perform Master Site Plan for Ash Street Campus.						\$38,000	\$38,000
Unit Cost							
Facilities Department Labor:				\$12,341			\$12,341
4.5 week (s)				\$2,742	per week		
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Police Details (if applicable)							
Unit Cost							
TOTAL				\$12,341			

FY15 ESTIMATED COST: \$50,341

Estimated: FY14 \$50,000

ESTIMATED PROJECT COST: \$100,341

FACILITIES MANAGEMENT

NEW PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Oil Containment Facility Construction

Project Schedule: FY14-15

Project Manager: David Polson
Facilities Manager

Reason for Expenditure:

Perform a study and take temporary measures related to oil containment at Station 3 and the Ash Street Campus

Brief Description/Scope:

RMLD stores new and used oil filled equipment in multiple locations. This project provides engineering and design services, centralizes the location of the equipment and provides temporary containment measures. There will be two containment areas, one at the Ash Street Campus and a second at Station 3. Permanent concrete containment areas will be installed in FY15.

Barriers:

Engineering, Design & Permitting

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Oil Containment Facility Construction

SCHEDULE: FY2014-15

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Conduct a study and take temporary measures for the containment of oil filled equipment at the Ash Street Campus and Station 3.						\$80,000	\$80,000
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							

TOTAL \$80,000

FY15 ESTIMATED COST: \$80,000

Estimated: FY14 **\$80,000**

ESTIMATED TOTAL PROJECT COST: \$160,000

CAPITAL PROJECT SUMMARY

Project Name: Security Upgrades – All Sites

Project Schedule: FY15-19

Project Manager: David Polson
Facilities Manager

Reason for Expenditure:

Security enhancements at our substations and other owned and leased facilities.

Brief Description/Scope:

Scope of work includes upgrades and modification of our cameras, access control points, entry point alarms, and perimeter fencing.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Security Upgrades - All Sites

SCHEDULE: FY15-19

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Upgrades and modifications to cameras, access control points, entry point alarms and perimeter fencing.				\$10,970		\$50,000	\$60,970
4 weeks Facilities Labor	Unit Cost			\$2,742		per week	
	Unit Cost						
	Unit Cost						
	Unit Cost						

TOTAL \$10,970 \$50,000

FY15 ESTIMATED COST: \$60,970

Estimated:	FY16	\$25,000
	FY17	\$25,000
	FY18	\$25,000
	FY19	\$25,000

ESTIMATED PROJECT COST: \$160,970

FACILITIES MANAGEMENT

ANNUAL PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Rolling Stock Replacement (vehicles, trailers and fork trucks)

Project Schedule: Annual

Project Manager: David Polson
Facilities Manager

Reason for Expenditure:

Replace vehicles based on an 8-10 year cycle to reduce maintenance costs and improve reliability. Vehicles removed from the fleet will be disposed of under RMLD Policy No. 2 "Surplus Material."

Brief Description/Scope:

In FY 2015 four (4) new vehicles will be purchased and six (6) vehicles/trailers will be retired.

Barriers:

Lead time for line trucks is +/- 300 days once the order is placed. Bid process and award must be completed early to ensure delivery within Fiscal Year 2015.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

Status Update From Prior Fiscal Year:

TABLE 1: ROLLING STOCK CAPITAL OUTLAY

Vehicle ID #	Year	Last Mileage Date	Current Mileage	Average Annual Maintenance Costs	Department	Vehicle Type	2014	2015	Comment
2	2005	12/24/13	29,848	\$960.35	Pool	Toyota Prius		<u>Surplus</u>	
3	New Vehicle - Sub Maintenance				Tech Services	Box Truck		\$150,000.00	
4	2005	1/14/14	78,000	\$1,607.87	Meter	Ford F-150		<u>Surplus</u>	
7	2007	10/31/13	104,663	\$1,913.33	Customer Service	Ford Escape will be surplusd when new vehicle is received		\$26,000.00	
9	2003	12/19/13	196,939	\$15,545.05	Line	Inter - 40'Bucket	<u>Surplus</u>		
10	2014	2/1/14	0	\$0.00	Line	Inter - 40'Bucket	\$183,244.00		
11	1999	12/30/13	63,427	\$14,618.05	Line	Ford - 55'Bucket	<u>Surplus</u>		
13	2008	1/21/14	91,638	\$2,038.16	Line GF	Ford Escape will be surplusd when new vehicle is received		\$26,000.00	
14	1998	12/4/13	62,081	\$11,413.72	Line	Inter - 45'Digdrk		\$231,750.00	
30	1999	10/17/13	73,993	\$1,322.65	Line	Ford Van	<u>Surplus</u>		NR
30	2014	2/1/14	0	\$0.00	Stations	Ford - F- 150	\$29,965.00		
31	2014	2/1/14	0	\$0.00	Engineering	Ford - F -150	\$30,397.00		
35	2002	9/16/13	123,495	\$3,076.35	Line	Ford F-150	<u>Surplus</u>		NR
44	2001	12/11/13	49,041	\$16,315.01	Line	Sterling - 55'Bucket	<u>Surplus</u>		
44	2014	2/1/14	0	\$0.00	Line	Intern 55' MH	\$198,000.00		
48	2000	12/2/13	49,128	\$11,558.78	Line	Chevy - 40'Bucket		<u>Surplus</u>	
T5	1979	n/a		Insp	Line	Nevlen Cable	<u>Surplus</u>		Scrap
T6	1979	n/a		Insp	Line	Nevlen Cable		<u>Surplus</u>	
T10	1984	n/a		Insp	Line	Nevlen Cargo	<u>Surplus</u>		Scrap
T11	1984	n/a		Insp	Line	Nevlen Cargo	<u>Surplus</u>		Scrap
							<u>\$441,606.00</u>	<u>\$433,750.00</u>	

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Rolling Stock Replacement

SCHEDULE: FY15

PROJECT #: 118

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Purchase (1) Box Truck						\$150,000	\$150,000
	Unit Cost	\$150,000 per vehicle					
Purchase (2) small SUVs						\$52,000	\$52,000
	Unit Cost	\$26,000 per vehicle					
Purchase (1) 45' Digger Derrick						\$231,750	\$231,750
	Unit Cost	\$231,750 per vehicle					
	Unit Cost						
	Unit Cost						
	Unit Cost						
Police Details (if applicable)							
	Unit Cost						

TOTAL \$433,750

TOTAL PROJECT COST: **\$433,750**

MIS

Continuing Projects:		Page #	Project #
None			n/a
New Projects for FY15:			
⌘	Great Plains/Cogsdale Update	19	TBD
Annual Projects:			
⌘	Hardware Upgrades	22	127
⌘	Software Upgrades	24	128

MIS

NEW PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Great Plains/Cogsdale Upgrade

Project Schedule: FY15-16

Project Manager: Mark Uvanni
MIS Manager

Reason for Expenditure:

We are currently using Great Plains/Cogsdale Version 10 as our financial management and customer service management (CSM) software. Version 10 will no longer be supported by the end of 2014 (calendar) or shortly thereafter. We will be doing a 'data conversion' upgrade to Great Plains/Cogsdale 2013. The costs include software, hardware, training, consulting, custom programming and project management. System will provide new work order system capability and integration with Engineering and customer data-bases for improved customer service and system reliability.

Brief Description/Scope:

Upgrade will be a 'data conversion' update to Version 2013 (most current stable build). It will update current CSM and financial systems to the newest version. Project will encompass software, hardware, consulting (CDM), training, custom programming, and project management (RMLD and CDM)

Barriers:

Successful interfacing of various adjunct systems.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Great Plains/Cogsdale Upgrade

SCHEDULE: FY15-16

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Great Plains/Cogsdale Update to 2013						\$200,000	\$200,000
Unit Cost							
CDM Project Mangement and Consulting - GP/Cogsdale Update						\$150,000	\$150,000
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							

TOTAL \$350,000

FY15 ESTIMATED COST: \$350,000

Estimated: FY16 **\$50,000**

ESTIMATED TOTAL PROJECT COST: \$400,000

MIS

ANNUAL PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Hardware Upgrades

Project Schedule: Annual

Project Manager: Mark Uvanni, MIS
Manager

Reason for Expenditure:

This is an amount annually reserved for failed and/or obsolete computer and related equipment. This budget item is also used for unforeseen purchases which may be necessary.

Brief Description/Scope:

General hardware purchases plus the following specific projects.

- Vmware ESXI Servers plus contract labor
- Upgrade EMC SAN Storage
- New GIS Server

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Hardware Upgrades **SCHEDULE:** FY15

PROJECT #: 127

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
a) General hardware purchases and installation.				\$7,000		\$50,000	\$57,000
2.41 weeks MIS Administration							
	Unit Cost			\$2,907		per week	
b) Vmware ESXI Servers plus Contract Labor						\$21,000	\$21,000
	Unit Cost						
c) Upgrade EMC SAN Storage				\$2,500		\$11,000	\$13,500
0.86 weeks MIS Administration							
	Unit Cost			\$2,907			
d) New GIS Server				\$2,500		\$7,500	\$10,000
0.86 weeks MIS Administration							
	Unit Cost			\$2,907		per week	
	Unit Cost						
	Unit Cost						
	Unit Cost						
TOTAL				\$9,500		\$89,500	

TOTAL PROJECT COST: **\$101,500**

CAPITAL PROJECT SUMMARY

Project Name: Software and Licensing

Project Schedule: Annual

Project Manager: Mark Uvanni, MIS
Manager

Reason for Expenditure:

Each year RMLD must renew existing software licenses and purchase new software, either to update existing users or for new users. Additionally, new software may be added at the request of various operating units. This item includes these ad hoc purchases as well as more specific items (outlined below) which are anticipated at this time.

Brief Description/Scope:

In addition to the standard software and licensing purchases described above, we anticipated the following:

- Custom programming/development for OM/UAN/GIS/GPS
- Veeam One – an additional cluster license
- Sharepoint on-site standard and 80 CAL's

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Software and Licensing

SCHEDULE: FY15

PROJECT #: 128

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
a) General software purchases. 2.06 week(s) MIS Administration				\$6,000		\$40,000	\$46,000
	Unit Cost			\$2,907		per week	
b) Custom programming/development OM/UAN/GIS/GPS						\$50,000	\$50,000
	Unit Cost						
c) Veeam One - additional VM Cluster License				\$1,000		\$7,500	\$8,500
0.344 week(s) MIS Administration							
	Unit Cost			\$2,907		per week	
d) SharePoint On-Site Standard and 80 CAL's				\$2,500		\$15,000	\$17,500
0.86 week(s) MIS Administration							
	Unit Cost			\$2,907		per week	
	Unit Cost						
	Unit Cost						
	Unit Cost						
TOTAL				\$9,500		\$112,500	

TOTAL PROJECT COST: **\$122,000**

SYSTEM

Continuing Projects Update:

	Page #	Project #
⌘ 5W9 OH Reconductoring – Balladvale Area	27	101
⌘ Upgrade Old Lynnfield Center URDs (Cook's Farm)	29	104
⌘ 4W5-4W6 Tie	31	105
⌘ Relay Replacement – Station 4 (Gaw)	33	108
⌘ Remote Terminal Unit (RTU) Replacement - Station 3	35	130
⌘ Engineering Analysis Software and Data Conversion	37	122
⌘ GIS	39	125

New Projects for FY15:

⌘ Force Account (Mass DOT) West Street, Reading	42	TBD
⌘ Pole Line Upgrade – Lowell Street, W	44	TBD
⌘ Distribution Protection & Automation	46	TBD
⌘ SCADA System Upgrade	48	TBD
⌘ LED Street Light Conversion	50	131
⌘ Outage Management Software & Integration	52	TBD
⌘ Predictive Asset Management System	54	TBD
⌘ Substation Test Equipment	56	TBD
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⌘ Organizational Study/Reliability Study	60	TBD

Annual Projects:

⌘ Transformers, Capacitors & Reclosers	63	116
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CAPITAL PROJECT SUMMARY

Project Name: 5W9 Reconductoring – Balladvale Area, Wilmington

Project Schedule: FY14-16 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

5W9 is a 336 spacer cable circuit that feeds Ballardvale Street and Research Drive in Wilmington. This feeder construction dates back to the 1980s. This circuit has seen heavy loading during the summer peaks and is experiencing load growth. This load growth includes the new Target Store and associated retail mall as well as some proposed projects on Research Drive. The project will add to the long-term reliability of the area and contingency planning by increasing the feeder capacity.

Brief Description/Scope:

Reconductor existing 336 spacer cable with 795 spacer cable, upgrade brackets as needed, and re-use existing messenger cable.

Barriers:

This is a Verizon set area. Also, we will need a flagman to reconductor over the railroad tracks on Middlesex Ave in North Wilmington.

Change in Scope of Work from Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:

FY14 The framing for Wildwood Street was started in January. The primary cable for this project is now in stock. We may have two crews work on this project to get the FY14 scheduled work completed before June 1.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: 5W9 Reconductoring - Balladvale Area, W.

SCHEDULE: FY2014-16

PROJECT #: 101

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Install 25,200 feet of 795 spacer cable (8,400 circuit feet). Re-use existing messenger.	8.0	\$93,693	\$14,720			\$65,000	\$173,413
Unit Cost		\$11,712	\$1,840				
Reframe approximately 60 poles with new brackets, miscellaneous sleeves, hardware and connectors.	3.0	\$35,135	\$5,520			\$10,000	\$50,655
Unit Cost		\$11,712	\$1,840		per week		
Unit Cost							
Unit Cost							
Engineering Labor: 1 week(s)				3,629			\$3,629
Unit Cost				\$3,629	per week		
Police Details (if applicable) 10.0 week(s)				\$24,807			\$24,807
Unit Cost				\$2,481	per week		
Total RMLD Crew Weeks	11.0						
Total U/G Crew Weeks							
TOTAL		\$128,827	\$20,240	\$28,437		\$75,000	

FY15 ESTIMATED COST: \$252,504

Estimated: FY14 \$169,494
Estimated: FY16 \$196,483

ESTIMATED TOTAL PROJECT COST: \$618,481

CAPITAL PROJECT SUMMARY

Project Name: Upgrading of Old Lynnfield Center URDs (Cook's Farm)

Project Schedule: FY14-15 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

This is one of the original Lynnfield underground subdivisions and is over 40 years old. This area does not conform to the Department's current construction standards. When this system was installed, the design called for fiber duct, 2,400 volt primary cable, and no manholes. With this type of design, an underground cable failure could result in a significant outage for some customers.

Brief Description/Scope:

The first phase of this project was the Townsend and Needham Road Subdivision (FY12). The second phase is Russell Road, Trog Hawley and Charing Cross (FY13), and the third phase will be Cooks Farm, Cortland Lane, and Tophet Road (FY14). This project would require building a new underground distribution system within the public way. This involves the installation of manholes, conduits, transformers, underground primary and secondary cable, pull boxes, etc. The transformers would be replaced in the same location. The Department would intercept the customer's existing service and place a pull box on the property. If the customer wants to upgrade their service at the same time, they would be responsible from the pull box to the house. In FY14 the Department will begin Cooks Farm Lane, Cortland Lane, and Trophet Road. Engineering will petition the Town for permission to install the underground electric facilities and meet with the customers affected by this construction to explain the project and scope of work.

This project will require procuring an excavation contractor and may require the complete repaving of the subdivision.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

FY14 This project will start in FY14 and continue into FY15. This was the same case for the previous two subdivisions. The construction season for this type of project runs from mid-April to mid-October.

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Upgrading Old Lynnfield Center URDs (Cook's Farm)

SCHEDULE: FY14-15

PROJECT #: 104

ITEM	CREW WEEKS 4-Man	CREW LABOR COST	CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Complete Installation of: 6,000 feet of U/G conduit 5,400 feet of U/G 1/0 primary 1,800 feet of U/G 4/0 secondary 11 manholes, 9 transformers, etc.	8.0	\$93,693	\$14,720				\$108,413
	Unit Cost	\$11,712	\$1,840			per week	
	2-Man						
Underground Contractor: Complete one mile of trench	12.0			\$68,717	\$480		\$69,197
	Unit Cost			\$5,726	\$40	per week	
	Unit Cost						
	Unit Cost						
Engineering labor				\$14,517			\$14,517
4.0 weeks	Unit Cost			\$3,629			
	Unit Cost						
Police Details (if applicable)				\$24,807			\$24,807
10.0 weeks	Unit Cost			\$2,481		per week	

Total RMLD Crew Weeks 8.0
Total U/G Crew Weeks 12.0

TOTAL	20.0	\$93,693	\$14,720	\$108,041	\$480	\$0
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FY15 ESTIMATED COST: \$216,934

Estimated: FY14 \$174,000

ESTIMATED TOTAL PROJECT COST: \$390,934

CAPITAL PROJECT SUMMARY

Project Name: 4W5-4W6 Tie

Project Schedule: FY14-15 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

With the development of the Addison Wesley Property and South Main Street, there is a need to shift a portion of the 4W6 distribution onto another circuit. Circuit 4W5 was extended down Oak Street from West Street many years ago in anticipation of the development of South Main Street. This project would complete the circuit extension down Oak Street to Summer Street. This project will add to the long-term reliability of the area and switching contingencies.

Brief Description/Scope:

Install approximately 1,500 circuit of 556 spacer and messenger, conductor 1,500 feet of secondary cable. Verizon to replace six (6) poles and the RMLD will install two (2) laminated poles.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

FY14 Laminated poles will be set by RMLD in FY14. Waiting for Verizon to replace other poles.

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: 4W5 - 4W6 Tie

SCHEDULE: FY2014-15

PROJECT #: 105

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Install 4,500 feet of 556 1,500 feet of 0.052 messenger	2	\$23,423	\$3,680			\$10,875	\$37,978
Unit Cost		\$11,712	\$1,840		See box at left.		
Install 1,500 feet 4/0 secondary cable	1	\$11,712	\$1,840			\$3,000	\$16,552
Unit Cost		\$11,712	\$1,840		See box at left.		
15 Miscellaneous pole line hardware and materials.						\$3,000	\$3,000
Unit Cost					\$200 per pole		
Replace poles - Verizon set and change 6 - 45' poles						\$2,400	\$2,400
Unit Cost					\$400 per pole		
Engineering 0.4 week				\$1,452			\$1,452
Unit Cost				\$3,629	per week		
Police Details (if applicable) 3.6 weeks				\$8,931			\$8,931
Unit Cost				\$2,481	per week		

Total RMLD Crew Weeks 3.0

Total U/G Crew Weeks

TOTAL	\$35,135	\$5,520	\$10,382	\$19,275
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FY15 ESTIMATED COST: \$70,312

Estimated: FY14 \$35,000

ESTIMATED TOTAL PROJECT COST: \$105,312

CAPITAL PROJECT SUMMARY

Project Name: Relay Replacement - Station 4 (Gaw)

Project Schedule: FY15-16 **Project Manager:** Nick D'Alleva
Technical Services Manager

Reason for Expenditure:

Replace the existing electro-mechanical protective relay systems on the 15kV feeder breakers at the Gaw Substation. These relays will be able to provide more information back to the SCADA; they also store vast amounts of data for down-loading and evaluating.

Brief Description/Scope:

Replace relays and rewire feeder cubicle for installation of this equipment previously purchased. Test and commission new relays.

Barriers:

None anticipated at this time

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
none

Status Update From Prior Fiscal Year:

This project is a carry-over from FY14.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Relay Replacement - Station 4 (Gaw)

SCHEDULE: FY15-16

PROJECT #: 108

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Miscellaneous materials including wire, test blocks, terminals, panels, etc.						\$1,114	\$1,114
Unit Cost							
Senior Techs (2)				\$25,812			\$25,812
10.0 weeks (5 weeks each)				\$2,581		per week	
Unit Cost							
Technical Services Manager				\$14,107			\$14,107
3.8 weeks				\$3,671		per week	
Unit Cost							
Engineering Consultant Design and inter-connection, and as built plans						\$6,405	\$6,405
Unit Cost						See box at left.	
Electrical Testing Contractor testing and commissioning						\$2,562	\$2,562
Unit Cost						See box at left.	
Unit Cost							
Police Details (if applicable)							
Unit Cost							

Total RMLD Crew Weeks

Total U/G Crew Weeks

TOTAL

\$39,919

\$10,081

FY15 ESTIMATED COST: \$50,000

Estimated FY16 **\$67,000**

ESTIMATED TOTAL PROJECT COST: \$117,000

CAPITAL PROJECT SUMMARY

Project Name: Remote Terminal Unit (RTU) Replacement – Station 3

Project Schedule: FY15

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

The existing RTU was installed in 2000 and uses a legacy TeleGyr 8979 protocol. This was done so that it would work with the old TeleGyr SCADA system. The existing RTU is not IP addressable, nor does it have an Ethernet connection. The RTU needs to be upgraded to add the functionality of the existing SEL relays at Station 3. A new RTU will give the Department the ability to communicate with the SEL relays, similar to what is being done at Station 4.

Brief Description/Scope:

Bid and purchase a pre-wired RTU enclosure, with required technical support, that will replace the existing RTU enclosure at Station 3. Contract with SEL for technical assistance and any required hardware for the interconnection. Station Supervisor and Senior Technicians will re-wire and terminate control wiring within the new RTU cabinet. Engineering will program and configure SCADA for new comm-line and RTU

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:

FY14 This project was carried over from FY14.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: RTU Replacement - Station 3

SCHEDULE: FY15

PROJECT #: 130

	CREW	RMLD CREW	RMLD CREW	OTHER	OTHER	MATERIAL	
ITEM	WEEKS	LABOR	VEHICLE	LABOR	VEHICLE	& MISC	TOTAL
	4-Man	COSTS	COSTS				
Purchase RTU and pre-wired enclosure and miscellaneous equipment.						\$5,000	\$55,000
Substation Senior Tech Labor: Mount and rewire SCADA points from interposition cabinet to new RTU. 3 week(s)				7,743			\$7,743
	Unit Cost			2,581			
Technical Services Manager Labor: 3 week(s)				11,012			\$11,012
	Unit Cost			3,671			
Engineering Labor: Crete new DNP com-line and program SCAD master. 3 week(s)				10,888			\$10,888
	Unit Cost			3,629		per week	
Total RMLD Crew Weeks							
Total U/G Crew Weeks							
TOTAL				\$29,643		\$55,000	
<div>FY15 ESTIMATED COST: \$84,643</div>							

CAPITAL PROJECT SUMMARY

Project Name: Engineering Analysis Software & Data Conversion

Project Schedule: FY14-15 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

This software purchase and data conversion will allow the Engineering department to perform engineering analysis on the distribution system. Internally, the department would be able to perform fault current calculations, arc flash calculations, load flow and voltage drop calculations, load balancing, voltage regulator settings, etc. This new software would work with the existing coordination software that the Engineering department uses.

Brief Description/Scope:

Take the existing databases and newly collected as-built data, and core ESRI data for the GIS project and have it converted for use in the electric model by the Milsoft and Windmill software provider. Purchase the software necessary to perform the engineering analysis and to update map/land-base data. Purchase of server for software and databases.

Barriers:

GIS as-built data completion.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:

FY14 RMLD needs to work with contractor to gather data for the ESRI model before Milsoft completes final data conversion.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Engineering Analysis Software & Data Conversion

SCHEDULE: FY14-15

PROJECT #: 122

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Distribution System						\$55,000	\$55,000
	Unit Cost						
	Unit Cost						
	Unit Cost						
	Unit Cost						
Police Details (if applicable) week(s)	Unit Cost					per week	

Total RMLD Crew Weeks
Total U/G Crew Weeks

TOTAL \$55,000

FY15 ESTIMATED COST: \$55,000

Estimated: FY14 **\$25,000**

ESTIMATED PROJECT COST: \$80,000

CAPITAL PROJECT SUMMARY

Project Name: GIS

Project Schedule: FY14-15 **Project Manager:** Hamid Jaffari, Director of Engineering and Operations

Reason for Expenditure:

GIS and GPS technology is used by electric companies to locate and map all of its assets in a geographically accurate format. This will facilitate system modeling, including contingency and reliability planning, developing system protection and coordination studies, creating maps, developing maintenance programs. This will enable us to make sound operational decisions by having data attributes in an engineering accurate scale of units. The RMLD GIS database does not reflect an as-built condition of the electric system with the data that has been inputted. Over 60 % of data has never been entered and no attribute list per system property unit has been developed. Critical electrical data that is necessary to build a valid engineering model is missing because the GIS database has not been fully updated since its creation. The goal of the GIS project is to evaluate the RMLD GIS database integrity and its data accuracy system wide, collect more field data, and bring the ESRI database up-to-date. RMLD is creating a template of desired GIS attributes to include the Milsoft WindMilMap required attributes for engineering analysis. RMLD does not have enough resources to collect pole by pole data throughout its service territory as this is a tedious and time consuming task. Staff augmentation using an outside data collector will be performed along with a data integration effort.

Brief Description/Scope:

Staff augmentation for comprehensive data collection to produce GIS as-built.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: GIS

SCHEDULE: FY14-15

PROJECT #: 130

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Staff Augmentation for comprehensive field data collection.						\$150,000	\$150,000
	Unit Cost						
	Unit Cost						
	Unit Cost						
	Unit Cost						
Police Details (if applicable) week(s)							
	Unit Cost						

TOTAL \$150,000

FY15 ESTIMATED COST: \$150,000

Estimated FY14 \$50,000

ESTIMATED PROJECT COST: \$200,000

SYSTEM

NEW PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Force Account – West Street, Reading

Project Schedule: FY15 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

MassDOT is reconstructing West Street, in Reading, from the Woburn town line to the intersection of Summer Avenue. The reconstruction includes the widening of the roadway, the installation of traffic signals and the resurfacing of the road. This work will require the RMLD to relocate poles, transfer construction, lower and raise manhole covers, and relocate conduits.

Brief Description/Scope:

Replace approximately 38 poles and 15 anchors, frame and transfer primaries, secondaries, transformers, services and street lights on 42 poles, relocate primary conduits and cables feeding Westcroft Circle, and lower and raise manhole frames and covers. All work except for the lowering and raising of the manhole frames and covers is reimbursable.

Barriers:

Verizon is responsible to replace 4 of the poles. The RMLD will need to petition the Town of Reading for any of the pole and conduit relocations. The MassDOT has approved these relocations, but they must be formally presented and approved by the Town.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: FA (MassDOT) West Street, R

SCHEDULE: FY15

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Install approximately 38 poles and 15 anchors on West Street between South Street and Summer Avenue.	4.5	\$52,702	\$8,280			\$23,000	\$83,982
Unit Cost		\$11,712	\$1,840		See box at left		
Frame 42 poles for spacer cable circuit, primary laterals and secondary cable and transfer.	5.5	\$64,414	\$10,120			\$7,500	\$82,034
Unit Cost		\$11,712	\$1,840				
Relocate primary conduits and cables feeding Westcroft Circle to new pole (working with Underground Crew).	1	\$11,712	\$1,840				\$13,552
Unit Cost		\$11,712	\$1,840		per pole		
Underground Contractor: See above.	2-Man 1	\$5,726	\$40				\$5,766
		\$5,726	\$40				
Engineering Labor:				\$10,888			\$10,888
3.0 weeks				\$3,629	per week		
Police Details (if applicable)				\$27,288			\$27,288
11.0 weeks				\$2,481	per week		
Total RMLD Crew Weeks	11.0						
Total U/G Crew Weeks	1.0						
TOTAL		\$134,554	\$20,280	\$38,176		\$30,500	

TOTAL PROJECT COST: **\$223,510**

CAPITAL PROJECT SUMMARY

Project Name: Pole Line Upgrade – Lowell Street, Wilmington

Project Schedule: FY15

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

This section of Lowell Street currently has three (3) spacer cable circuits and two (2) aerial cable circuits. These poles are under-sized, under-classed, and over 30 years old. This project will upgrade the poles to the proper strength and height class, create the proper clearance between utilities, and benefit the long-term reliability of the system.

Brief Description/Scope:

Replace approximately twenty poles with 55'-1 poles along a section of Lowell Street in Wilmington, between West Street and Woburn Street. Frame poles with new hardware and transfer the three (3) spacer cable circuits, the two (2) aerial cable circuits, two (2) gang operated switches, four (4) primary laterals, secondaries, services, and street lights.

Barriers:

This is a Verizon set area, but they will not set 55' poles. Therefore, RMLD will set poles.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Pole Line Upgrade - Lowell Street, W

SCHEDULE: FY15

PROJECT #: TBD

ITEM	CREW WEEKS	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
4-Man							
5.0		\$58,558	\$9,200			\$12,000	\$79,758
Install approximately twenty (20) 55' -1 poles on Lowell Street between West Street and Woburn Street. Transfer three (3) spacer cable circuits and two (2) aerial cable circuits.							
Unit Cost		\$11,712	\$1,840			per week	
4.0		\$46,846	\$7,360			\$7,300	\$61,506
Frame 20 poles for three (3) spacer cable circuits and two (2) aerial circuits with new brackets and hardware.							
Unit Cost		\$11,712	\$1,840			per week	
Unit Cost		\$11,712	\$1,840				
Unit Cost							
Engineering Labor: 2 week(s)				7,259			\$7,259
Unit Cost				3,629		per week	
Police Details (if applicable) 10.0 week(s)				\$24,807			\$24,807
Unit Cost				\$2,481		per week	
Total RMLD Crew Weeks	9.0						
Total U/G Crew Weeks							
TOTAL		\$105,404	\$16,560	\$32,066		\$19,300	
FY15 ESTIMATED COST:							\$173,330

CAPITAL PROJECT SUMMARY

Project Name: Distribution Protection & Automation

Project Schedule: FY15-19 **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

Increase distribution line protection.

Brief Description/Scope:

Install 13.8kV feeder reclosers on 13.8kV feeders to increase feeder protection along the primary distribution feeders serving all four (4) communities.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Distribution Protection and Automation

SCHEDULE: FY15-19

PROJECT #: TBD

ITEM	CREW WEEKS	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Purchase and Install: (2) Reclosers with SCADA ready controls.	4-Man 1.0	\$11,712	\$1,840			\$51,000	\$64,552
	Unit Cost	\$11,712	\$1,840			\$25,500 each	
							\$0
	Unit Cost						
							\$0
	Unit Cost						
							\$0
	Unit Cost						
Engineering Labor: 0.6 week(s)				\$2,178			\$2,178
	Unit Cost			\$3,629		per week	
Police Details (if applicable) 1.0 week(s)				\$2,481			\$2,481
	Unit Cost			\$2,481		per week	

Total RMLD Crew Weeks 1.0
Total U/G Crew Weeks

TOTAL	\$11,712	\$1,840	\$4,658	\$0	\$51,000
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FY15 ESTIMATED COST: \$69,210

Estimated	FY16	\$30,000
	FY17	\$30,000
	FY18	\$30,000
	FY19	\$30,000

ESTIMATED PROJECT COST: \$189,210

CAPITAL PROJECT SUMMARY

Project Name: SCADA System Upgrades - Hardware

Project Schedule: FY15

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

SCADA Servers are original to the SCADA installation in 2000. Servers are running on Microsoft Server 2000 and need to be upgraded to the most current version.

Brief Description/Scope:

Purchase two new servers, one work station, two 16 port Ethernet switches, four 32" monitors and related hardware and cabling. Survalent to provide on-site technical assistance, as required.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: SCADA Upgrade

SCHEDULE: FY15

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Purchase two (2) 16I-port terminal servers and related hardware.						\$20,000	\$20,000
						\$10,000 per server	
On-site technical assistance.						\$10,000	\$10,000
	Unit Cost						
Purchase additional work-station and four (4) monitors (32")						\$7,500	\$7,500
	Unit Cost						
Purchase OMS System software and technical services for system integration (on-site and remote).						\$15,000	\$15,000
	Unit Cost						
Engineering Labor:				\$10,888			\$10,888
3 Weeks	Unit Cost			\$3,629		per week	
	Unit Cost						
	Unit Cost						
TOTAL				\$10,888		\$52,500	
FY15 ESTIMATED COST:							\$63,388

CAPITAL PROJECT SUMMARY

Project Name: LED Street Light Pilot Area – All Towns

Project Schedule: FY15

Project Manager: Brian Smith, Engineering
Project Manager

Reason for Expenditure:

Street light technology has advanced greatly over the years and has moved towards the installation and use of the more energy efficient and longer lasting LED replacements. This project will allow us to evaluate the performance of, monitor the energy usage of and get feedback on the lighting provided by this newer technology. With this information we can determine if this is the path that the RMLD will choose for street lighting in the future

Brief Description/Scope:

Purchase and install approximately 80 LED street lights, 20 per town, in the pilot area that is chosen. The replacements will be a direct replacement with an LED fixture that has approximately the same lumen output as the original fixture.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: LED Street Light Pilot SCHEDULE: FY15
PROJECT #: 131

ITEM	CREW WEEKS 2-Man	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Pilot Program:	1	\$5,856	\$920			\$24,400	\$31,176
Install light fixtures. 80 LED Light Fixtures and Photocells	Unit Cost	\$5,856	\$920			\$305 per unit	
Purchase Meters and Sockets 4 units (meter and socket)	Unit Cost					\$600	\$600
						\$150 per meter	
Meter Tech Labor: Install Meters and Sockets 1 week(s)	Unit Cost	\$2,519					\$2,519
		\$2,519				per week	
	Unit Cost						
	Unit Cost						
Police Details: 1 week(s)	Unit Cost			\$2,481			\$2,481
				\$2,481			
	Unit Cost						
	Unit Cost						
TOTAL		\$8,375	\$920	\$2,481		\$25,000	
Total RMLD Crew Weeks	1.00					FY15 ESTIMATED COST:	\$36,775
Total U/G Crew Weeks							

CAPITAL PROJECT SUMMARY

Project Name: Outage Management Software & Integration

Project Schedule: FY15

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

To create a live, real time Outage Management System (OMS). Once integrated, this will give the RMLD a real time OMS system that will import network connectivity from ESRI and Milsoft, customer information from Cogsdale, and outage data from the Itron Fixed Network.

Brief Description/Scope:

Survallent Technologies, the RMLD's SCADA manufacturer will provide the Survalent SmartOMS software for the dual redundant servers, the System Configuration Status interface, the MultiSpeak GIS Batch interface for ESRI and WindMil, the MultiSpeak CIS interface for Cogsdale, the MultiSpeak AMR interface for the Itron Fixed Network, and the OMS Outage Portal. Survalent to also provide one week of remote training for the programming and maintenance of SCADA Master System and OMS, one week on-site installation, commissioning, and assistance. Also includes the first year of support for the OMS.

Barriers:

Standard MultiSpeak interfaces are included. Survalent will evaluate and quote custom interfaces as required. New SCADA servers and the WindMil projects must be completed prior to this project.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Outage Management Software & Integrator

SCHEDULE: FY15

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Software Purchase						\$60,000	\$60,000
Custom Programming						\$10,000	\$10,000
	Unit Cost						
	Unit Cost						
	Unit Cost						
Engineering Labor				\$14,517			\$14,517
4 week(s)	Unit Cost			\$3,629	per week		
Police Details (if applicable) week(s)							
	Unit Cost						

TOTAL \$14,517 \$70,000

FY15 ESTIMATED COST: \$84,517

CAPITAL PROJECT SUMMARY

Project Name: Predictive Asset Management Program

Project Schedule: FY15-19 **Project Manager:** Nick D'Alleva
Technical Services Manager

Reason for Expenditure:

This project is necessary to either purchase or design an Asset Management System that will track and trend the condition of RMLD's distribution and substation equipment.

Brief Description/Scope:

The RMLD will be exploring a predictive asset management program that can track the maintenance of distribution and substation equipment. The system will also allow RMLD to address maintenance issues that might arise in similar types of equipment.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Predictive Asset Management

SCHEDULE: FY15-19

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Purchase and/or design of predictive asset management system.						\$80,000.00	\$80,000.00
	Unit Cost						
	Unit Cost						
	Unit Cost						
	Unit Cost						

TOTAL \$80,000

FY15 ESTIMATED COST: \$80,000

Estimated	FY16	\$80,000
Estimated	FY17	\$30,000
Estimated	FY18	\$30,000
Estimated	FY19	\$30,000

ESTIMATED PROJECT COST: \$250,000

CAPITAL PROJECT SUMMARY

Project Name: Substation Test Equipment

Project Schedule: FY15-18 **Project Manager:** Nick D'Alleva
Technical Services Manager

Reason for Expenditure:

This project is necessary to purchase several pieces of test equipment to be used by the Technical Services department.

Brief Description/Scope:

The RMLD is formulating a distribution and substation preventative maintenance program. In order to perform many of the electrical tests, additional test equipment will need to be purchased.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Substation Test Equipment

SCHEDULE: FY15-18

PROJECT #: TBD

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER /EHICLI	NEW MATERIAL & MISC	TOTAL
Purchase of various test equipment.						\$121,000	\$121,000
	Unit Cost						
							\$0
	Unit Cost						
							\$0
	Unit Cost						
							\$0
	Unit Cost						
							\$0
	Unit Cost						

TOTAL 0.0 0 \$0 \$0 \$0 \$121,000

FY15 ESTIMATED COST: \$121,000

FY16 \$50,000
FY17 \$50,000
FY18 \$50,000

ESTIMATED PROJECT COST: \$271,000

CAPITAL PROJECT SUMMARY

Project Name: Arc Flash Study

Project Schedule: FY15

Project Manager: Hamid Jaffari, Director of Engineering and Operations

Reason for Expenditure:

Arc Flash is the result of a rapid release of energy due to an arcing fault between a phase bus bar and another phase bus bar, neutral or a ground. During an arc fault the air is ionized and becomes conductive. Arc faults are generally limited to systems where the bus voltage is in excess of 120 volts. The purpose of this study is to bring RMLD into compliance with NEC and NFPA70E Arc Flash requirements.

The NEC only requires that Arc Flash labels be displayed to warn of potential electric Arc Flash hazards. A detailed study of the RMLD system is required to determine the NEC required Arc Flash labels and suggestions to reduce Arc Flash energy.

NFPA70E, 2004, article 130.3 states, "A flash hazard analysis **shall** be done in order to protect personnel from the possibility of being injured by an arc flash." This option requires the employer to provide either an independent outside source or a qualified internal source to perform this analysis in accordance with the calculations defined by the NFPA70E or IEEE 1584. This option defines what level of PPE is required to protect RMLD employees when working near or energized devices.

Brief Description/Scope:

Qualified outside energy consultant to perform detailed report in accordance with NFPA70E.

Barriers:

GIS and Milsoft modeling complete.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Arc Flash Study

SCHEDULE: FY15

PROJECT #: TBD

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Consultant to perform study.						\$35,000	\$35,000
	Unit Cost						
	Unit Cost						
	Unit Cost						
	Unit Cost						
Police Details (if applicable) week(s)							
	Unit Cost						

TOTAL \$35,000

FY15 ESTIMATED COST: **\$35,000**

CAPITAL PROJECT SUMMARY

Project Name: Organizational/Reliability Study

Project Schedule: FY15-16 **Project Managers:** Coleen O'Brien, General Manager
Hamid Jaffari, Director of E&O

Reason for Expenditure:

The purpose of this study is to prepare a guideline for RMLD to provide excellent customer service including competitively priced electricity as a result of diligence in the areas of power supply risk management, system reliability and flexibility, and overall business efficiency.

This project includes both an Electric System Reliability Study and Organizational Study. The Organizational Study includes an assessment of the current organizational set up and recommending the required system facilities, engineering and operational functions, safety, and energy efficiency measures as they relate to current and future trending industry practices and standards. The reliability study includes an evaluation of RMLD distribution system to:

- 1) prepare a long and short range system planning study to provide adequate substation and feeder capacity for anticipated load growth, and
- 2) provide a roadmap to improve system reliability, introduce reasonable system distribution automation, and improve operating flexibility by incorporating system expansion plans with overall system rehabilitation and operation objectives.

Brief Description/Scope:

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Organizational & Reliability Study

SCHEDULE: FY15-16

FY15 SCOPE:

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC	TOTAL
Consultant to conduct study.						\$100,000	\$100,000
	Unit Cost						
	Unit Cost						
	Unit Cost			\$3,670.75			
	Unit Cost						
Police Details (if applicable) week(s)	Unit Cost					\$2,480.75 per week	

Total RMLD Crew Weeks
Total U/G Crew Weeks

TOTAL \$100,000

FY15 ESTIMATED COST: \$100,000

FY16 \$100,000

ESTIMATED PROJECT COST: \$200,000

SYSTEM

ANNUAL PROJECTS

CAPITAL PROJECT SUMMARY

Project Name: Transformers & Capacitors

Project Schedule: Annual

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

A major quantity of standard units is necessary for proposed projects and stock on an ongoing basis.

Brief Description/Scope:

- | | | |
|----|--|--------------------|
| a) | Three-phase padmount transformers (commercial services) | Quantity: 8 units |
| b) | Single-phase padmount transformers for proposed subdivisions and stock. | Quantity: 70 units |
| c) | Three-phase polemount transformers for proposed commercial projects and stock | Quantity: 10 units |
| d) | Single-phase polemount transformers for proposed residential services and stock. | Quantity: 60 units |
| e) | Submersible transformers for stock. | Quantity: 4 units |
| f) | 1200 kVar capacitor banks. | Quantity: 4 units |

Barriers:

None anticipated at this time

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Transformers and Capacitors

SCHEDULE: FY15

PROJECT #: 116

ITEM	CREW WEEKS	CREW LABOR COST	CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
a) Three-phase padmount transformers for proposed commercial services and stock 8 units						\$96,000	\$96,000
	Unit Cost	\$12,000 per unit					
b) Single-phase padmount transformers for proposed subdivisions and stock 70 units						\$154,000	\$154,000
	Unit Cost	\$2,200 per unit					
c) Three-phase polemount transformers for proposed commercial services and stock 10 units						\$60,000	\$60,000
	Unit Cost	\$6,000 per unit					
d) Single phase polemount transformers for proposed residential services and stock 60 units						\$84,000	\$84,000
	Unit Cost	\$1,400 per unit					
e) Submersible transformers for stock 4 units						\$20,000	\$20,000
	Unit Cost	\$5,000					
f) 1200 kVar capacitor banks 4 units						\$30,000	\$30,000
	Unit Cost	\$7,500					

TOTAL \$444,000

TOTAL PROJECT COST **\$444,000**

CAPITAL PROJECT SUMMARY

Project Name: Communication Equipment (for Fiber Optic)

Project Schedule: Annual **Project Manager:** Peter Price, Chief Engineer

Reason for Expenditure:

As the RMLD expands its use of the fiber optic network to establish communication with metering equipment, recloser controls, capacitor bank controls and other distribution equipment, the Department will create fiber nodes at various locations along the fiber optic network. Each node will require an enclosure, a fiber optic interface, a power supply, cabling, fiber optic cable, and the termination of the fiber optic cable.

Brief Description/Scope:

Purchase materials and procure fiber optic cable splicers as needed.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Communication Equipment (Fiber)

SCHEDULE: FY15

PROJECT #: 126

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Fiber node materials to include the enclosure, patch panel, power supply and Ethernet switch.						\$15,000	\$15,000
3.0 units		Unit Cost				\$5,000	
Contract labor and materials for splicing fiber.						\$15,000	\$15,000
3.0 units		Unit Cost				\$5,000	
		Unit Cost					
		Unit Cost					
		Unit Cost					
		Unit Cost					

TOTAL #REF! \$30,000

TOTAL PROJECT COST: **\$30,000**

CAPITAL PROJECT SUMMARY

Project Name: Meter Purchases (including 500 Club)

Project Schedule: Annual

Project Manager: Nick D'Alleva, Technical Services Manager

Reason for Expenditure:

Purchase of meters and metering equipment for new construction, upgrades, and failures.

Additionally, the existing "500 Club" commercial meters which are manually read meters will be replaced. The proposal is to replace the existing meters with meters that can be read remotely with the fixed network system.

Brief Description/Scope:

100 residential time-of-use (TOU) meters – AMR and miscellaneous hardware will be purchases for stock.

The RMLD will begin changing out all "500 Club" commercial meters. In the same fashion as the commercial upgrade, the data will be transmitted to the RMLD via the fiber optic system which encircles the territory. The new data will provide reads at the desktop and additional consumption information.

This fixed network offers the ability to remotely:

- a. Perform all reads from the office;
- b. Amend the frequency of reads to maintain the read cycle;
- c. Monitor and discuss customer usage from a monthly, daily, or hourly perspective.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

FY14 "500 Club" commercial upgrade is a carry-over.

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Meters

SCHEDULE: FY15

PROJECT #: 117

ITEM	CREW WEEKS	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
For Stock: Residential TOU ERT Meters AMR 100 units						\$20,000	\$20,000
Unit Cost						\$200 each	
Locking sealing rings, seals and meter switches						\$10,000	\$10,000
For 500 Club: Meters and miscellaneous supplies. 100 units						\$55,000	\$55,000
Unit Cost						\$550 each	
Technical Services Manager: Labor 1 week(s)				\$3,671			\$3,671
Unit Cost				\$3,671		per week	
Station Techs: Labor 4 week(s) Regular Time 2 week(s) Over Time				\$15,334			\$15,334
Unit Cost				\$2,555.75		per week	
Network/System Administration: Labor 6.5 week(s)				\$18,895			\$18,895
Unit Cost				\$2,907		per week	
Engineering: Labor 1 week(s)				\$3,629			\$3,629
Unit Cost				\$3,629		per week	

TOTAL

\$41,530

\$85,000

TOTAL PROJECT COST: **\$126,530**

CAPITAL PROJECT SUMMARY

Project Name: URD Upgrades – All Towns

Project Schedule: Annual

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

There are 244 +/- underground residential subdivisions in the RMLD service territory, of which, 65 +/- are over 25 years old. These subdivisions are in need of new primary cable and transformers. Some of the URDs are in step-down areas and need to be upgraded before they can be converted to 7,979 volts. Also, most of the existing transformers are live-front units. The new pad mount transformers will be dead-front units which will improve reliability by eliminating the possibility of animal contacts within the pad transformer

Brief Description/Scope:

Replace primary and neutral cables, and pad-mounted transformers as needed in the various URDs. Replace precast transformer pads with fiberglass box pads as needed for elevation requirements

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: URD Upgrades - All Towns

SCHEDULE: FY2015

PROJECT #: 106

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Install approximately 50 padmount transformers. (Transformers are included in Annual Transformer Purchase)	10.0	\$117,116	\$18,400				\$135,516
Unit Cost		\$11,712	\$1,840				
Install approximately 7,000 feet of 1/0 Al UG cable and 7,000 feet of #2 CU neutral.	3.0	\$35,135	\$5,520			\$20,000	\$60,655
Unit Cost		\$11,712	\$1,840			\$2,000	
Materials: splices, elbows, terminations, connectors, box pads, tape, etc.						\$30,000	\$30,000
Unit Cost							
Unit Cost							
Underground Contractor: 13 week(s)				\$74,443	\$520		\$74,963
Unit Cost				\$5,726	\$40		
Engineering Labor: 5 week(s)				18,146			\$18,146
Unit Cost				\$3,629		per week	
Police Details (if applicable) week(s)							
Unit Cost						per week	

Total RMLD Crew Weeks 13.0
Total U/G Crew Weeks 13.0

TOTAL	\$152,250	\$23,920	\$92,590	\$520	\$50,000
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FY15 ESTIMATED COST: \$319,280

CAPITAL PROJECT SUMMARY

Project Name: Step-down Area Upgrades – All Towns

Project Schedule: Annual

Project Manager: Peter Price, Chief Engineer

Reason for Expenditure:

There are 32 +/- step-down areas in the RMLD service territory. These are areas on the RMLD distribution system that were originally fed from 4kV distribution circuits. When the RMLD began moving load over to the 13.8kV distribution circuits, most areas were converted and some areas were re-fed with pole-mounted step-down transformers. Most of the distribution system in these areas are 30+ years old and in need of upgrades before they can be converted.

Brief Description/Scope:

Replace poles, primary cable, secondary cable, and overhead transformers, as needed, in the various step-down areas. Convert areas to 13.8kV and remove step-down transformers.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)

n/a

Status Update From Prior Fiscal Year:

n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Step-down Area Upgrades - All Towns

SCHEDULE: FY15

PROJECT #: 107

ITEM	CREW WEEKS 4-Man	RMLD CREW LABOR COSTS	RMLD CREW VEHICLE COSTS	OTHER LABOR	OTHER VEHICLE	MATERIAL & MISC.	TOTAL
Install 7,000' of 1/0 primary.	3.0	\$35,135	\$5,520			\$7,000	\$47,655
Unit Cost		\$11,712	\$1,840				
Install 7,000' of 4/0 - 3/C sec cable	5.0	\$58,558	\$9,200			\$14,000	\$81,758
Unit Cost		\$11,712	\$1,840				
Replace 15 transformers.	2.0	\$23,423.14	\$3,680			\$21,000	\$48,103
Unit Cost		\$11,712	\$1,840			\$1,400 per transformer	
Miscellaneous Hardware \$200 per pole for approximately 65 poles.						\$13,000	\$13,000
Unit Cost						\$200 per pole	
Underground Contractor: week(s)							
Unit Cost							
Engineering Labor: 2 week(s)				7,259			\$7,259
Unit Cost				3,629		per week	
Police Details (if applicable) 2.0 week(s)				\$4,961			\$4,961
Unit Cost				\$2,481		per week	

Total RMLD Crew Weeks 10.0
Total U/G Crew Weeks

TOTAL	\$117,116	\$18,400	\$12,220	\$55,000
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FY15 ESTIMATED COST: \$202,736

CAPITAL PROJECT SUMMARY

Project Name: Service Installations (Commercial and Residential)

Project Schedule: Annual

Project Manager: n/a

Reason for Expenditure:

To install new and upgraded services for both residential and commercial/industrial customers in the service territory.

Brief Description/Scope:

- **Service Installations – Commercial/Industrial Customers:** This item includes new service connections, upgrades, and service replacements for commercial and industrial customers. This represents the time and materials associated with the replacement of an existing or installation of a new overhead service drop and the connection of an underground service, etc. This does not include the time and materials associated with pole replacements/installations, transformer replacements/installations, primary or secondary cable replacements/installations, etc. These aspects of a project are captured under Routine Construction.
- **Service Installations – Residential Customers:** This item includes new or upgraded overhead and underground services.

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Service Installations-Commercial/Industrial

SCHEDULE: FY15

PROJECT #: 112

ITEM	CREW WEEKS 4-Man	CREW LABOR COST	CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Installation of new commercial/ industrial service connections.	3	35,135	5,520			15,893	\$56,548
Unit Cost		\$11,712	\$1,840		See box at left.		
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Police Details (if applicable) A							
Unit Cost							

Total RMLD Crew Weeks 3.0
Total U/G Crew Weeks

TOTAL	3.0	\$35,135	\$5,520	\$15,893
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TOTAL PROJECT COST **\$56,548**

FISCAL 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Service Installations - Residential Customers

SCHEDULE: FY15

PROJECT #: 113

ITEM	CREW WEEKS 2-Man	RMLD CREW LABOR COST	RMLD CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
Install new and upgraded service connections at approximately 360 units (approx 75-100 feet per installation).	30	\$175,674	\$27,600			\$56,250	\$259,524
Unit Cost		\$5,855.79	\$920			per week	
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							
Unit Cost							

Total RMLD Crew Weeks 30.0 2-man crews
Total U/G Crew Weeks

TOTAL	30.0	175,674	\$27,600	\$56,250
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TOTAL PROJECT COST **\$259,524**

CAPITAL PROJECT SUMMARY

Project Name: Routine Construction

Project Schedule: Annual

Project Manager: n/a

Reason for Expenditure:

Routine Construction covers capital projects that develop during the year involving items shown below.

Brief Description/Scope:

- Capital Construction – transformer installation, overhead and underground system upgrades, miscellaneous projects, pole damage, etc.
- Street Lights – new equipment installation
- Pole setting/transfers
- Engineering labor
- General Line Foreman Labor
- Underground capital construction
- Police details associated with Routine Capital work
- Overtime associated with Routine Capital work

Barriers:

None anticipated at this time.

Change in Scope of Work From Prior Fiscal Year: Increase (Decrease)
n/a

Status Update From Prior Fiscal Year:
n/a

FISCAL YEAR 2015 CAPITAL BUDGET COST SHEET

CAPITAL PROJECT NAME: Routine Construction

SCHEDULE: FY15

PROJECT #: 113

ITEM	CREW WEEKS	CREW LABOR COST	CREW VEHICLE COST	OTHER LABOR	OTHER VEHICLE	NEW MATERIAL & MISC	TOTAL
a) Capital Construction	4-Man 15	\$175,674	\$27,600			\$50,000	\$253,274
	Unit Cost	\$11,712	\$1,840			per week	
b) Street Light Installations <i>Included with LED Pilot for FY15</i>	2-man 3.6	\$21,081	\$3,312				\$24,393
	Unit Cost	\$5,856	\$920			per week	
c) Pole Setting/Transfers	4-Man 12	\$140,539	\$22,080			\$35,000	\$197,619
	Unit Cost	\$11,712	\$1,840			per week	
d) Engineering Labor 8.0 weeks				\$29,034			\$29,034
	Unit Cost			\$3,629		per week	
e) General Line Foreman Labor 26.0 weeks				\$85,615			\$85,615
	Unit Cost			\$3,293		per week	
f) U/G Construction	2-Man 6	\$34,358	\$240			\$75,000	\$109,598
	Unit Cost	\$5,726	\$40			per week	
g) Police Details 20.0 weeks				\$49,615			\$49,615
	Unit Cost			\$2,481		per week	
h) Overtime	4-Man 15	\$170,546	\$27,600				\$198,146
	Unit Cost	\$11,369.74	\$1,840			per week	
Total RMLD Crew Weeks	4 -Man 27.0		2-Man 3.6				
Total U/G Crew Weeks	6.0						
TOTAL	33.0	\$542,198	\$80,832	\$164,264		\$160,000	

TOTAL PROJECT COST **\$947,294**