



AGENDA

REGULAR SESSION

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

Wednesday, June 20, 2018

6:30 pm

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

1. Call Meeting to Order – G. Hooper, Chair
2. Approval of Minutes – G. Hooper, Chair
Suggested Motion: Move that the Citizens' Advisory Board approve the Minutes of the April 11, 2018, and April 18, 2018, meetings as written.
3. New OSHA Requirements – C. O'Brien, General Manager
4. Electric Vehicle Pilot Program – B. Thivierge, Resource Specialist, Integrated Resources Division
5. Redesigned RMLD Website – J. Mulvaney, Communications Manager
6. Next Meeting – G. Hooper, Chair
7. Adjournment – G. Hooper, Chair

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

ATTACHMENT 1

Agenda Item 2: Approval of Minutes



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2018-04-11

Time: 6:30 PM

Building: Lynnfield Town Hall

Location: Selectemen's Meeting Room

Address: 55 Summer Street, Lynnfield, MA

Session: Open Session

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

George Hooper, Chair (Wilmington); Jason Small, Vice Chair (North Reading); Dennis Kelley, Secretary (Wilmington); Neil Cohen (Reading); Vivek Soni (Lynnfield)

Members - Not Present:

Others Present:

David Hennessy, Board of Commissioners
Coleen O'Brien, Hamid Jaffari, Jane Parenteau, Kathleen Rybak

Minutes Respectfully Submitted By: Dennis Kelley, Secretary

Topics of Discussion:

1. Call Meeting to Order – G. Hooper, Chair

Chair Hooper called the meeting of the Citizens' Advisory Board to order at 6:30 PM and noted that the meeting was being audio recorded.

2. FY19 Capital Budget Review – C. O'Brien, General Manager
Materials: FY19 Budget; Fiscal Year 2019 Capital Budget Presentation Slides

Mr. Jaffari stated that he would be summarizing the Capital Budget as outlined in the presentation slides. Mr. Soni asked about the strategy for long-term capital planning. Mr. Jaffari noted that in 2015 Booth and Associates did a Reliability Study that identified a number of issues system-wide. This study is the basis for capital improvements planning.

Projects Completed or Scheduled to be Completed in FY18 (slide 2): Mr. Jaffari provided a progress update for the projects that are scheduled to be completed by June 30th. Mr. Soni noted that some of the FY18 estimates are over the budgeted amount and asked how that overage is handled. Mr. Jaffari stated that some projects from FY17 were not completed (or paid) by the end of FY17 and carried into FY18 (i.e., the Distributed Generation project), and some projects reflect increased costs (labor, unforeseen issues). Additional detail of the projects' variances will be included as part of the presentation.

Projects Continuing in FY19 (slide 3): These projects started in previous years and continue in FY19 or beyond (as noted on the slide). Mr. Jaffari provided a brief status update on each of the projects:

- *Woburn Street Pole Line Upgrade* will address capacity issues. Work will be scheduled in spring/summer and will span FY18/19.

- *115kV Transmission Pole Upgrade* to the lines feeding Substation 3, which are aged. One upgrade has been completed, and the other will be completed in the fall (FY19).
- *35kV UG Cable Upgrade* of the aged and worn lines from Station 5 to Station 4 that feed transformers at those sites. We've seen more fault on these lines, so this must be completed.
- *Pad-mount Switchgear Upgrade at Industrial Parks* is a six-year plan to upgrade old switchgears. RMLD will spend approximately \$450k per year. A portion of the overage in FY18 is for switchgears ordered in FY17, but which did not arrive until FY18.
- *Grid Modernization and Optimization* is a 15-year plan to automate RMLD's infrastructure using automated switches and current technology to enhance RMLD's capability for operating the system and manage outages.
- *New Wilmington Substation* is budgeted at \$267k in FY18, and \$151k in FY19, with major spending on this project in FY20-21. Spending will go down FY22-23 as we begin the getaways out of the substation to get to the distribution feeders. Negotiations continue for the purchase of land in FY18; environmental testing, permitting, etc., will begin FY19. This project is necessary to replace Station 5, which is antiquated. Mr. Jaffari noted that Station 5, which underwent recent upgrades, will run until the new substation is operational and will then be used as a switching station to manage the capacity in the area. The getaway upgrades planned for FY19 will accommodate this future use. The total cost of the substation is approximately \$11.2 with \$7.5-8m budgeted for transformers and switchgears, and the remaining for construction and getaways needed to push the load toward Ballardvale Street to Upton Drive to support the load on Upton Drive.
- *Miscellaneous* includes some upgrades at Ash Street, the EVSE, and a reserve amount for the battery storage project at Station 3. Chair Hooper questioned the spending at the Ash Street campus given the uncertainty of the economic development plan for the area. Ms. O'Brien noted that she has put the Master Facilities Site Plan on hold. Building upgrades completed to date include paint, carpet, and the HVAC unit. Chair Hooper ask (relative to the engineering for the lighting project at Ash Street) if RMLD staff would be able to provide this service (through IRD). Ms. Parenteau noted that IRD does energy audits (for customers) working with outside vendors. IRD works with customers to calculate savings. Mr. Kelley noted in his experience, for general office space many firms will do the design for free; \$8k seems high. Ms. O'Brien noted that the project calls for a redesign of the lighting system at the entire Ash Street campus as well as the substations. Ms. O'Brien agreed to follow-up with more detail on this item. Mr. Kelley suggested purchasing, if appropriate, within the guidelines of 25A, which may provide some cost benefit.

New Projects for FY19 (slide 4): Mr. Jaffari provided an overview of new projects for FY19.

- *Ballardvale Street Pole Line Upgrade* is a two-year project to tie into the area of the new substation from Ballardvale to Routes 125 and 62.
- *Station 4 Getaway Projects* (4W5, 4W6, and 4W16) will upgrade getaways from 500 to 750; both age and loading conditions warrant doing these projects.
- *MassDOT Project at Main and Hopkins* is a placeholder pending additional detail from the State on this project.
- *Power/Lab and Tool Equipment* is a new item in FY19, which will be a recurring item for capital purchases such as test equipment, meters, and other necessary equipment or tools for the Line department and Technical Services.

Annually Budgeted/Recurring Projects (slide 5): Mr. Jaffari provided an update on these on-going projects/purchases for which a budgeted amount is allocated annually. Of note are the following:

- *AMI Mesh Network Expansion* allows for upgrades over the next 10-15 years to accommodate two-way communication between RMLD systems (SCADA, outage management and Cogsdale) and customer meters. A fully-fixed network will enhance customer communication and data collection and analysis (i.e., end of the line voltage,

etc.). This involves installing additional relays and repeaters, upgrades to existing Itron meters (replacing ERT modules), and the installation of new meters as necessary system-wide. This allows RMLD to make the best use of the existing meters and enable two-way communication through the fixed network.

- *Pole Replacement Program* replaces condemned or failed poles identified as part of the on-going annual Pole Inspection Program.
- *Secondary Main Replacement Program* and the *Stepdown Areas Upgrades* go hand in hand. In FY19, two antiquated stepdown areas will be upgraded (prioritized based on age), replacing stepdown transformers, the main line, the secondary lines, as well as all the connections to the houses. Work will be charged against both of these projects.
- *Underground Facilities Upgrades* will replace antiquated underground equipment (transformers, etc.) targeting three areas in FY19.

Mr. Jaffari noted that with the updated GIS we are better able to capture information regarding the age and condition of the equipment as well as reliability issues, which allows us to prioritize projects and areas. We anticipated an average cost for projects, but they might run over with unforeseen issues, which speaks to some of the overages.

Summary (slide 6): Mr. Jaffari reviewed the FY18 recap. RMLD is seeking approval of the FY19 Capital Budget in the amount of \$7,570k.

Mr. Soni noted that in FY17 there was money that was not spent and asked how that gets managed; does the money come over. Ms. O'Brien stated that the money remains in the depreciation fund. It is not a line-item budget.

Mr. Hennessy asked if inflation was being built into future cost estimates. Mr. Jaffari noted that we usually consult vendors to see what they are forecasting – whether it's a 1% or 2% escalation – we consider that. Costs are going up.

3. Update on the Payments to the Town of Reading – G. Hooper, Chair

Chair Hooper, who sits on the Subcommittee for the Payment to the Town of Reading, reported that a study will be conducted to see how the payment structure impacts the RMLD and what the future holds. The current payment is based on the CPI, which may not be sustainable. The Town payment will remain status quo pending the results of the study.

Ms. O'Brien reported that the study will be a holistic, financial approach to determine the overall impact of the decrease in sales. There is a convergence of the forecasted decrease in kilowatt hour sales and the increase in expenses, which includes the payment to the Town; we have been looking at this as part of our strategic planning. RMLD is currently solid financially, but we want to look at finances at least 5-10 years out. We have to be balanced so that we can keep rates competitive, be able to meet all of the infrastructure upgrades, and then also be able to support our community. The study will look at all of these components because they are all connected. Chair Hooper noted that the study should be completed in approximately six months.

4. Adjournment – C. Hooper, Chair

Mr. Kelley made a motion to adjourn the Citizens' Advisory Board meeting, seconded by Mr. Small. Hearing no further discussion **motion carried 5:0:0** (5 in favor, 0 opposed, 0 absent).

The Citizens' Advisory Board Meeting adjourned at 7:39 pm.

As approved on _____



READING MUNICIPAL LIGHT DEPARTMENT

FISCAL YEAR 2019 CAPITAL BUDGET

CITIZENS' ADVISORY BOARD PRESENTATION

APRIL 11, 2018

REVIEW OF PROJECTS COMPLETED OR SCHEDULED TO BE COMPLETED IN FY18

	FY18 ESTIMATE	TOTAL COST ESTIMATE*	PROJECT SCHEDULE
✓ Distributed Gas Generation	\$581k	\$2,613k	FY16-18
✓ GIS	\$380k	\$790k	FY16-18
✓ LED Street Light Implementation-All Towns	\$940k	\$2,193k	FY16-18
✓ 4W9 Getaway Replacement	\$132k	\$268k	FY17-18
✓ Various Upgrades at Station 3 Reactors, Remote Terminal Unit, Relay Upgrades and SCADA Integration	\$373k	\$784k	FY17-18
✓ Miscellaneous Projects Control Center Modifications, Remote SCADA Room, and Power Washer and Vacuum	\$195k	\$195k	FY18

*Total Project Cost Estimate = Prior Years Actual Spending Plus FY18 Estimated Spending

 BOOTH RECOMMENDATION

PROJECTS CONTINUING IN FY19

	FY18 ESTIMATE	FY19 ESTIMATE	PROJECT SCHEDULE
➤ Woburn Street Wilmington – Pole Line Upgrade	\$213k	\$213k	FY18-19
➤ 115kV Transmission Pole Upgrade	\$145k	\$223k	FY18-19
➤ 35kV Underground Cable Upgrade	\$207k	\$252k	FY18-20
➤ Pad-mount Switchgear Upgrade (Industrial Parks)	\$500k	\$436k	6-YEAR PLAN
➤ Grid Modernization & Optimization	\$381k	\$676k	15-YEAR PLAN
➤ New Wilmington Substation	\$267k	\$151k	FY17-23
➤ Miscellaneous	\$155k	\$340k	FY18
LED Lighting at 230 Ash Street, Parking Lot Upgrade at 230 Ash Street, EVSE, Battery Storage			

 BOOTH RECOMMENDATION



NEW PROJECTS FOR FY19

FY19 ESTIMATE

❖ Ballardvale Street, W – Pole Line Upgrade	\$225k	two-year project
❖ 4W5 Getaway Replacement, W	\$152k	one-year project
❖ 4W6 Getaway Replacement, W	\$157k	one-year project
❖ 4W16 Getaway Replacement, W	\$206k	one-year project
❖ Mass DOT Project: Main & Hopkins, R	\$225k	one-year project
❖ Power/Lab and Tool Equipment	\$76k	recurring

 BOOTH RECOMMENDATION

ANNUALLY BUDGETED/RECURRING PROJECTS

	FY18 ESTIMATE	FY19 ESTIMATE
▪ Miscellaneous Computer Hardware/Software Upgrades	\$186k	\$550k
▪ Rolling Stock Replacement	\$229k	\$275k
▪ Building, Office and Security Upgrades	\$215k	\$60k
▪ AMI Mesh Network Expansion	\$120k	\$121k
▪ Communications Equipment	\$100k	\$49k
▪ Pole Replacement Program	\$209k	\$263k
▪ Secondary and Main Replacement Program	\$222k	\$344K
▪ 13.8kV Upgrades (Step-down Areas, etc.)	\$71k	\$331k
▪ Underground Facilities Upgrades	\$345k	\$332k
▪ Service Connections (Residential and Commercial)	\$150k	\$142k
▪ Routine Construction	\$1,044k	\$1,078k
▪ Miscellaneous Purchases (Meters and Metering Equipment, Transformers, and Substation Equipment)	\$651k	\$693k



BOOTH RECOMMENDATION



SUMMARY

FY18 RECAP

Budgeted

\$7,686k

Estimated Spending

\$8,009k

Variance

(\$323k)

FY19 PLANNED

Estimated Spending

\$7,570k



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2018-04-18

Time: 6:30 PM

Building: Reading Municipal Light Building

Location: Winfred Spurr Audio Visual Room

Address: 230 Ash Street

Session: Open Session

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

George Hooper, Chair (Wilmington); Jason Small, Vice Chair (North Reading); Neil Cohen (Reading)

Members - Not Present:

Dennis Kelley, Secretary (Wilmington); Vivek Soni (Lynnfield)

Others Present:

David Talbot, Board of Commissioners
Coleen O'Brien, Hamid Jaffari, Wendy Markiewicz, Jane Parenteau, Kathleen Rybak

Minutes Respectfully Submitted By: George Hooper, Chair

Topics of Discussion:

1. Call Meeting to Order – G. Hooper, Chair
Chair Hooper called the meeting of the Citizens' Advisory Board to order at 6:30 PM and noted that the meeting was being audio recorded.
2. FY19 Operating Budget – C. O'Brien, General Manager
Materials: FY19 Budget; Operating Budget Presentation Slides (Handout)

Ms. Markiewicz presented slides which provide a high-level summary of the FY19 Operating Budget. Ms. Markiewicz reviewed the FY19 Operating Budget Highlights (Slide 1). FERC accounting allocations were changed as part of the budgeting process; the FY17 and FY18 Operating Budgets reflect changes to FERC allocations so that the comparison would become relative to the FY19 Budget. The bottom line for each year is the same, but the amounts in each FERC account (primarily Operating and Maintenance) were changed. Ms. O'Brien noted that FERC (Federal Energy Regulatory Commission) accounting system is the standard for utilities. These revised allocations will allow RMLD to more accurately track and trend what we are doing, where we are focusing, and where we need to focus. Ms. Markiewicz then reviewed the remaining bullet points on Slide 1. Ms. Markiewicz noted that FY18 year-end estimates include 8 months actuals and four months projections. The March storms cost approximately \$700k and these costs were anticipated as part of the year-end projection. As of February 28, we were under budget by 4%, so some of these costs could be absorbed through year-end. Ms. O'Brien noted that RMLD will not receive MEMA reimbursement for the first or second storm; we have not heard on the third storm.

Ms. Markiewicz then reviewed the "Actual and Projected Fixed and Semi-Variable Costs" (FY19 Budget – page 94). Of note, *Employee Benefits/Pension* has increased 25% due mostly to funding the OPEB obligation. *Legal and Professional Services* is one area where FERC accounting had a huge impact on the figures. Some services (such as

engineering) really should have been considered outside professional services, but were being charged to other areas; costs in other areas (such as, Other Operating and Maintenance Expense) went down proportionately. *Bad Debt Expense* was reduced for FY19.

Ms. Markiewicz reviewed "Supplemental Information" (FY19 Budget - Page 95), which shows the total overall costs by category and what areas are impacted by what is being pulled out of operating expenses for capital allocations.

Ms. Parenteau began review of the "Six-Year Plan" (FY19 Budget - Page 91). As discussed with last year's budget review, in order to arrive at the Net Income, which is included as part of the motion for the Operating Budget, we look at net revenue (and specifically base revenue). The only way base revenue will go from \$26,136,738 (FY18 estimate) to \$27,786,190 in FY19, is either through growth in sales (additional kilowatt hours sales) or with a base rate increase. Year-to-date (through March) sales are down approximately 1.8%. The current forecast is a 1% decrease in sales FY19-23. In order to earn the budgeted net income, arrive at a rate of return of 7.96%, and meet all obligations and expenses, there will be a required rate increase associated with the approval of the FY19 Budget.

Ms. Parenteau continued review of the Operating Revenues. Purchase Power (Capacity/Transmission and Fuel) is a pass through to customers; we do not make a return on that. Capacity was at its peak in FY18; for FY19 there is an approximately \$2m decrease in capacity charges expected. An increase in transmission charges is anticipated (a little less than \$1m) and fuel is anticipated to be flat. This results in a \$1m differential (less) between FY18 projection and FY19 estimate for Purchase Power. Purchase Power expenses are broken out on Page 96 of the Budget.

Based on the overall budget (including operation and maintenance expenses), we are projecting (on average) a 1-3% overall rate increase by class (depending on customer usage). Ms. Markiewicz noted that going forward, we anticipate an estimated 0-3% increase overall over the next six years.

Ms. Markiewicz presented Slide 4, which illustrates the anticipated net income per year and where the rate of return falls with that net income. For now, we are trying to hold the rate of return as close to 8% as we can, but then it goes downward with the net income, which means less rate increases.

Chair Hooper noted that the impact of energy efficiency measures on sales should eventually level off and asked if that had been considered in the projections. Ms. Parenteau responded that this leveling-off will happen over 10-20 years. RMLD has been conservative in their estimates over the next five years. The group discussed the impact on sales of technology changes, new construction, and commercial growth. Ms. O'Brien stated that the electrical utility world is in transition. Technology is moving quickly.

Ms. O'Brien noted that the Board had voted to keep the rate of return at 8% for several years with the six-year budget. This would provide RMLD enough money in the operating fund to make transfers to capital to complete the necessary improvements to the infrastructure and avoiding substantial bonding. As illustrated on the Six-Year Plan, the rate of return is projected to decrease down to 6.29% by FY23. Part of the potential study (per the Subcommittee to the Payment to the Town of Reading request) will look at what the correct rate of return should be, what the correct payment to the Town should be, and how this impacts rates moving forward. As an example, net plant is going up; if you can earn 8% of net plant, that would mean that in FY23 RMLD could make \$10m. However, the only way to make that, if kilowatt hour sales are going down, is to keep raising the rate, which we don't want to do. We are trying to balance the rate increases with our obligations for payments, and the decline in kilowatt hour sales. As costs increase and sales are coming down, there will be a convergence at some point and that is what we need to study further. Mr. Talbot questioned whether

such a study would produce anything we don't already know, and suggested we have a report out of the Department prior to committing funds to a study.

Ms. Markiewicz presented Slide 5, which shows the 1% decrease in kilowatt hour sales and how that relates to the rate of return percentages. Slide 6 (Budgeted Capital Funds Balances and Budgeted Capital Spending) illustrates where the Capital funds come from and what they are supporting. The Beginning Balance represents what we are projecting to have at the end of the prior year to start the fiscal year. Depreciation (3% of net plant) is the money that is reserved for capital projects only. Operating Fund Transfers is what we have determined is the amount we need to transfer from our operating fund to continue to fund capital projects, while also ensuring we maintain enough money in the operating fund (two months expenses). The Bond Proceeds include anticipated bonding and other proceeds such as force jobs from the State of Massachusetts. RMLD is planning to go out to bond for the new Wilmington substation.

That concluded the presentation. Chair Hooper asked if there were any questions. There were none.

Ms. O'Brien followed up on a question raised at the Capital Budget presentation relative to the LED lighting project at the RMLD facilities and the cost of engineering and design services related to that project. RMLD does not qualify for rebates, and may be subject to different procurement laws than the Wilmington project referenced during the Capital presentation. However, the suggested consultant was contacted regarding the lighting survey at RMLD. There were other components in the engineering/design services (i.e., create the specs and the punch-list); RMLD will consider doing the punch-list in-house. The \$8,000 remains as an earmark, but there may be savings with the lighting survey.

Chair Hooper called for motions.

Mr. Cohen made a motion that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Fiscal Year 2019 Operating Budget with a Net Income of \$4,053,233 as presented, seconded by Mr. Small. Hearing no further discussion, **motion carried 3:0:2** (3 in favor, 0 opposed, 2 absent).

Mr. Cohen made a motion that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Fiscal Year 2019 Capital Budget in the amount of \$7,570,489 as presented on April 11, 2018. Any significant changes are to be submitted to the Citizens' Advisory Board for review and recommendation, seconded by Mr. Small. Hearing no further discussion, **motion carried 3:0:2** (3 in favor, 0 opposed, 2 absent).

3. Proposed Rate Adjustment – J. Parenteau, Director of Integrated Resources
Materials: FY2019 Proposed Rate Increase Comparative Rates Present/Proposed (Handout)

Ms. Parenteau began the presentation by reviewing the current strategy of reducing subsidizations within each rate class and bringing the residential rates to a zero rate of return. This strategy was presented to the CAB and Board after last year's Cost of Service Study was completed. The FY19 rates represent across the board increases, with small adjustments to bring rates in line with this strategy. Ms. Parenteau reviewed the various rate scenarios outlined on the FY 2019 Proposed Rate Increase spreadsheet. Of note:

- The low-income rate does not include a customer charge, so that increase is slightly smaller.
- The commercial rates include a demand component and an energy component and are based on assumptions using a sample of demand and energy.
- The LED conversion project for streetlights is near completion, and the old rates will no longer be in place. As lights are converted, adjustments are made to billing and credits issued to the towns.

- RMLD implemented the PPCT (purchase power, capacity, and transmission) demand component for the Industrial Time of Use. This component is being phased in over three years and will go from \$4 (in FY18) to \$8 for FY19 (year 2).
- The large industrial TOU customers show a decrease in their actual rates, which is related to the conversion of the PPCT charge from an energy component to a demand component.

Mr. Talbot asked about the TOU assumptions. Ms. Parenteau noted the calculation is an average that includes all components of the rate including on-peak (20%) and off-peak (80%) for both fuel and PPCT. Savings may be considerably more depending on off-peak versus on-peak usage. Mr. Talbot suggested, when presenting proposed rates the emphasis should be towards the peak (rather than showing it uniformly across two time- periods) to incentivize people to shed and encourage off peak use.

Ms. Parenteau noted the RMLD will be looking at revising the TOU rates. The way the rate for the residential TOU is currently structured, the distribution charge is configured on and off peak. As discussed, distribution charges aren't aligned to on/off peak; it is a fixed component. We are trying to restructure that, as part of this phasing-in process, so that the fixed components are actually fixed, and the fuel and PPCT (which is how RMLD buys its power) are aligned with actual use on and off peak; that should encourage people to use electricity off peak. Ms. O'Brien remarked, that as with the Budget, we are trying to align everything to "cost of service," so we know exactly what it is that we are spending on the various components. We need to align it to be able to study it further and more easily do the analysis.

Chair Hooper stated that he would not entertain the motion on the rates as two CAB members were absent. CAB members present did not object.

A follow-up meeting was tentatively scheduled for April 23rd.

4. Adjournment – C. Hooper, Chair

Mr. Cohen made a motion to adjourn the Citizens' Advisory Board meeting, seconded by Mr. Small. Hearing no further discussion **motion carried 3:0:2** (3 in favor, 0 opposed, 2 absent).

The Citizens' Advisory Board Meeting adjourned at 7:41 PM.

As approved on _____

OPERATING BUDGET PRESENTATION
APRIL 18, 2018

FY19 OPERATING BUDGET HIGHLIGHTS

- **FERC ACCOUNTING - FEDERAL ENERGY REGULATORY COMMISSION, UNIFORM SYSTEM OF ACCOUNTS FOR PUBLIC UTILITIES**
 - **There have been changes made to FERC allocation throughout the entire budget. Most of these allocations have been reworked in FY17 and FY18 for relativity**

- **FIXED COSTS REPRESENT 81.73% OF THE OVERALL OPERATING BUDGET**
 - **The increase in fixed costs from FY18 to FY19 is 1.25%**

- **SEMI VARIABLE COSTS REPRESENT 18.27% OF THE OVERALL OPERATING BUDGET**
 - **The increase in semi variable costs from FY18 to FY19 is 7.98%**

- **THE OVERALL OPERATING BUDGET INCREASE FROM FY18 TO FY19 IS PROJECTED TO BE 2.41%**

- **AS OF 2/28/18, THE FY18 BUDGETED EXPENSES ARE PROJECTED TO COME IN AT 2.71% HIGHER THAN ANTICIPATED DUE TO UNPRECEDENTED STORM COSTS IN MARCH**

READING MUNICIPAL LIGHT DEPARTMENT

FISCAL YEAR 2019 OPERATING BUDGET

ACTUAL AND PROJECTED FIXED AND SEMI-VARIABLE COSTS

FIXED COSTS:	FY17 BUDGET	FY17 ACTUAL	FY18 BUDGET	FY18 - 8 ACT/4 BUD	FY19 BUDGET	% OF FY19 BUDGET
Purchased Power - Fuel	\$ 33,174,492	\$ 31,534,934	\$ 31,291,810	\$ 32,564,234	\$ 32,190,196	33.40%
Purchased Power - Capacity	20,943,651	20,101,145	24,476,161	25,138,916	22,884,320	23.74%
Purchased Power - Transmission	13,378,627	13,067,359	13,612,817	14,034,206	14,992,983	15.55%
Depreciation Expense	4,134,000	4,101,308	4,362,000	4,305,989	4,516,000	4.69%
Voluntary PILOT Payment to Reading	2,384,668	2,384,668	2,420,438	2,419,770	2,480,506	2.57%
Town Payments	1,445,420	1,433,143	1,500,000	1,496,714	1,569,789	1.63%
Misc Deduction - Losses on Disposal	150,000	74,698	150,000	150,000	150,000	0.16%
SUB-TOTAL	75,610,858	72,697,256	77,813,226	80,109,829	78,783,794	81.73%
SEMI VARIABLE COSTS:						
Labor	6,559,885	5,883,643	6,394,381	6,216,899	6,423,097	6.66%
Employee Benefits/Pension	2,922,673	4,334,971	3,000,437	3,760,646	3,772,990	3.91%
Conservation Expenses	871,575	778,281	952,565	712,978	975,712	1.01%
Overtime	561,520	727,092	763,517	979,889	971,731	1.01%
Tree Trimming	786,958	862,024	886,340	754,942	898,865	0.93%
Legal & Professional Services	406,800	851,876	471,900	662,322	811,908	0.84%
Other General and Admin Expenses	481,530	426,133	543,762	511,748	591,646	0.61%
Customer Processing Fees	509,000	747,354	484,599	462,341	532,600	0.55%
Maint of Building and Garage	406,000	364,844	476,400	362,501	497,550	0.52%
Property Insurance	424,500	335,591	427,200	367,626	426,200	0.44%
Other Operating and Maint Expenses	465,986	714,611	473,756	631,686	383,622	0.40%
Maint of General Plant	180,000	336,003	281,880	329,024	335,148	0.35%
Vehicle Expense	549,598	253,122	391,116	322,478	311,200	0.32%
Vehicle Capital Clearing	(300,000)	(245,780)	(301,596)	(324,267)	(284,440)	-0.30%
Transformer (hazardous material)	300,000	34,801	300,000	183,064	300,000	0.31%
Training/Tuition	234,575	127,282	289,691	166,621	243,893	0.25%
Rent Expense	212,000	181,116	212,000	212,000	212,000	0.22%
Bad Debt Expense	150,000	85,707	150,000	150,000	105,000	0.11%
Injuries & Damages	57,215	73,255	52,613	62,104	47,449	0.05%
RMLB/CAB	22,500	3,913	30,000	19,360	30,000	0.03%
Office Supplies	25,000	18,758	25,000	15,692	20,000	0.02%
SUB-TOTAL	15,827,315	16,894,596	16,305,561	16,559,655	17,606,171	18.27%
TOTAL EXPENSES	\$ 91,438,173	\$ 89,591,851	\$ 94,118,787	\$ 96,669,484	\$ 96,389,965	100.00%

READING MUNICIPAL LIGHT DEPARTMENT

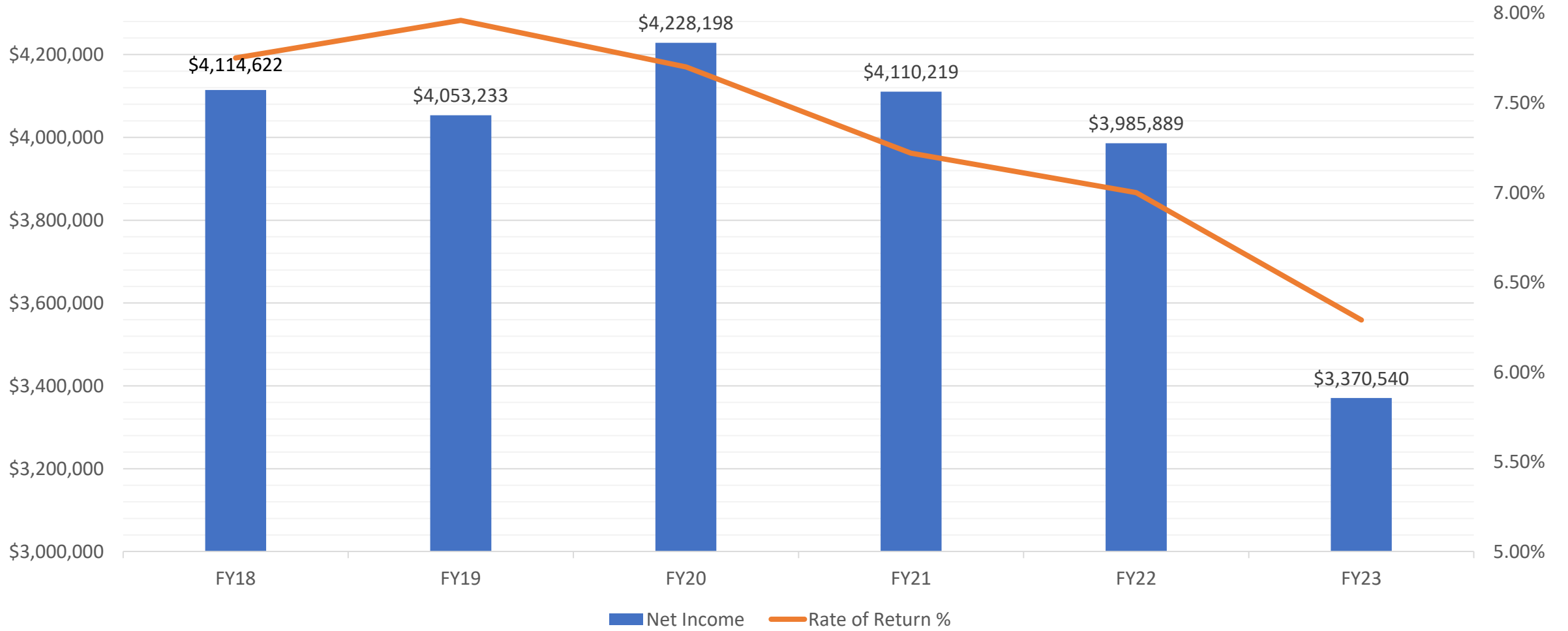
SIX YEAR PLAN

MARCH 31, 2018

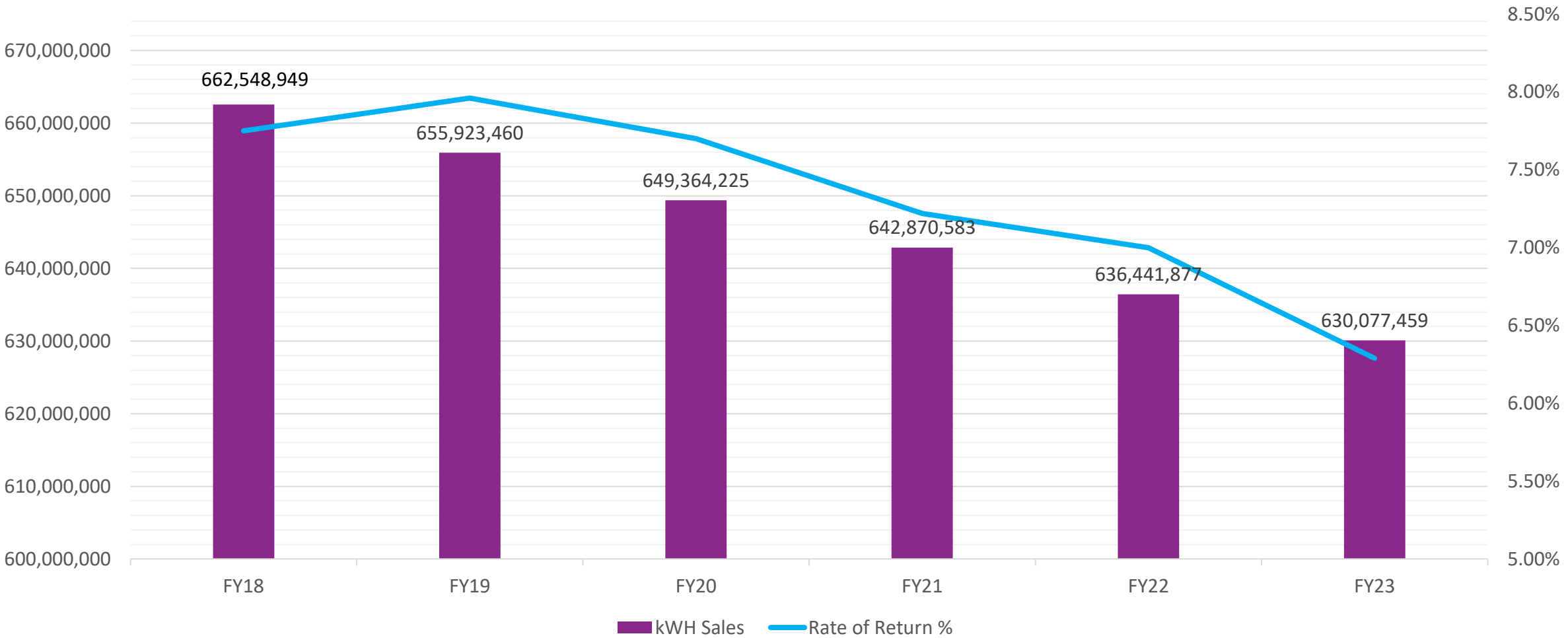
	BUDGET	ACTUAL	BUDGET	8 ACT / 4 BUD	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
	FY17	FY17	FY18	FY18	FY19	FY20	FY21	FY22	FY23
FORECASTED kWh SALES		675,536,970		662,548,949	655,923,460	649,364,225	642,870,583	636,441,877	630,077,459
<u>OPERATING REVENUES:</u>									
SALES OF ELEC - BASE	\$ 25,500,000	\$ 25,601,354	\$ 26,337,621	\$ 26,136,738	\$ 27,786,190	\$ 28,758,707	\$ 29,621,468	\$ 30,510,112	\$ 30,815,213
SALES OF ELEC - FUEL	34,074,492	33,468,084	32,491,810	33,764,234	33,390,196	33,712,097	34,037,218	34,365,591	34,697,247
SALES OF ELEC - CAPACITY/TRANSMISSION	34,322,278	33,237,804	38,088,978	39,173,122	37,877,303	34,582,425	32,972,372	32,789,952	34,460,703
FORFEITED DISCOUNTS	688,500	854,167	800,000	784,102	833,586	862,761	888,644	915,303	924,456
ENERGY CONSERVATION	673,000	663,806	675,000	662,549	655,924	649,364	642,871	636,442	630,078
NYPA	(900,000)	(1,208,457)	(1,200,000)	(1,200,000)	(1,200,000)	(1,200,000)	(1,200,000)	(1,200,000)	(1,200,000)
TOTAL OPERATING REVENUES	94,358,270	92,616,757	97,193,409	99,320,745	99,343,198	97,365,354	96,962,573	98,017,400	100,327,697
<u>OPERATING EXPENSES:</u>									
PURCHASED POWER - FUEL	33,174,492	31,534,934	31,291,810	32,564,234	32,190,196	32,512,097	32,837,218	33,165,591	33,497,247
PURCHASED POWER - CAPACITY	20,943,651	20,101,145	24,476,161	25,138,916	22,884,320	18,589,910	16,355,149	15,672,963	16,379,786
PURCHASED POWER - TRANSMISSION	13,378,627	13,067,359	13,612,817	14,034,206	14,992,983	15,992,515	16,617,223	17,116,989	18,080,917
OPERATING & MAINTENANCE EXPENSE	5,369,935	5,350,517	5,569,029	5,588,934	5,599,394	5,767,376	5,940,397	6,118,609	6,302,167
GENERAL & ADMINISTRATIVE EXPENSE	10,455,280	11,539,403	10,734,032	10,956,721	11,990,777	12,350,500	12,721,015	13,102,646	13,495,725
DEPRECIATION EXPENSE	4,134,000	4,101,308	4,362,000	4,305,989	4,516,000	4,713,000	5,029,000	5,329,000	5,549,000
TOWN PAYMENTS	1,445,420	1,433,143	1,500,000	1,496,714	1,569,789	1,601,240	1,678,270	1,786,480	1,846,300
TOTAL OPERATING EXPENSES	88,901,405	87,127,811	91,545,849	94,085,714	93,743,459	91,526,638	91,178,272	92,292,278	95,151,142
TOTAL OPERATING INCOME	5,456,865	5,488,946	5,647,560	5,235,031	5,599,739	5,838,716	5,784,300	5,725,123	5,176,555
<u>NONOPERATING REVENUES (EXPENSES):</u>									
INTEREST INCOME	125,000	271,658	150,000	250,000	250,000	250,000	250,000	250,000	250,000
OTHER INCOME	890,000	1,176,086	890,000	900,000	850,000	850,000	850,000	850,000	850,000
VOLUNTARY PILOT PAYMENT TO READING	(2,384,668)	(2,384,668)	(2,420,438)	(2,419,770)	(2,480,506)	(2,542,519)	(2,606,082)	(2,671,234)	(2,738,014)
LOSS ON DISPOSAL OF ASSETS	(150,000)	(74,698)	(150,000)	(150,000)	(150,000)	(150,000)	(150,000)	(150,000)	(150,000)
CUSTOMER DEPOSIT INTEREST EXP	(2,100)	(4,674)	(2,500)	(14,000)	(16,000)	(18,000)	(18,000)	(18,000)	(18,000)
TOTAL NONOPERATING REVENUES (EXPENSE)	(1,521,768)	(1,016,296)	(1,532,938)	(1,433,770)	(1,546,506)	(1,610,519)	(1,674,082)	(1,739,234)	(1,806,014)
NET INCOME	\$ 3,935,097	\$ 4,472,650	\$ 4,114,622	\$ 3,801,261	\$ 4,053,233	\$ 4,228,198	\$ 4,110,219	\$ 3,985,889	\$ 3,370,540
RATE OF RETURN	7.81%	7.27%	7.75%	7.77%	7.96%	7.70%	7.22%	7.00%	6.29%
PROJECTED CAPITAL IMPROVEMENTS				\$ 8,009,000	\$ 7,570,000	\$ 11,510,000	\$ 11,017,000	\$ 8,313,000	\$ 8,463,000

The RMLD is allowed up to 8% rate of return, however strategic planning targets a balance of keeping rates low, funding the capital infrastructure plan and supporting nonoperating expenses.

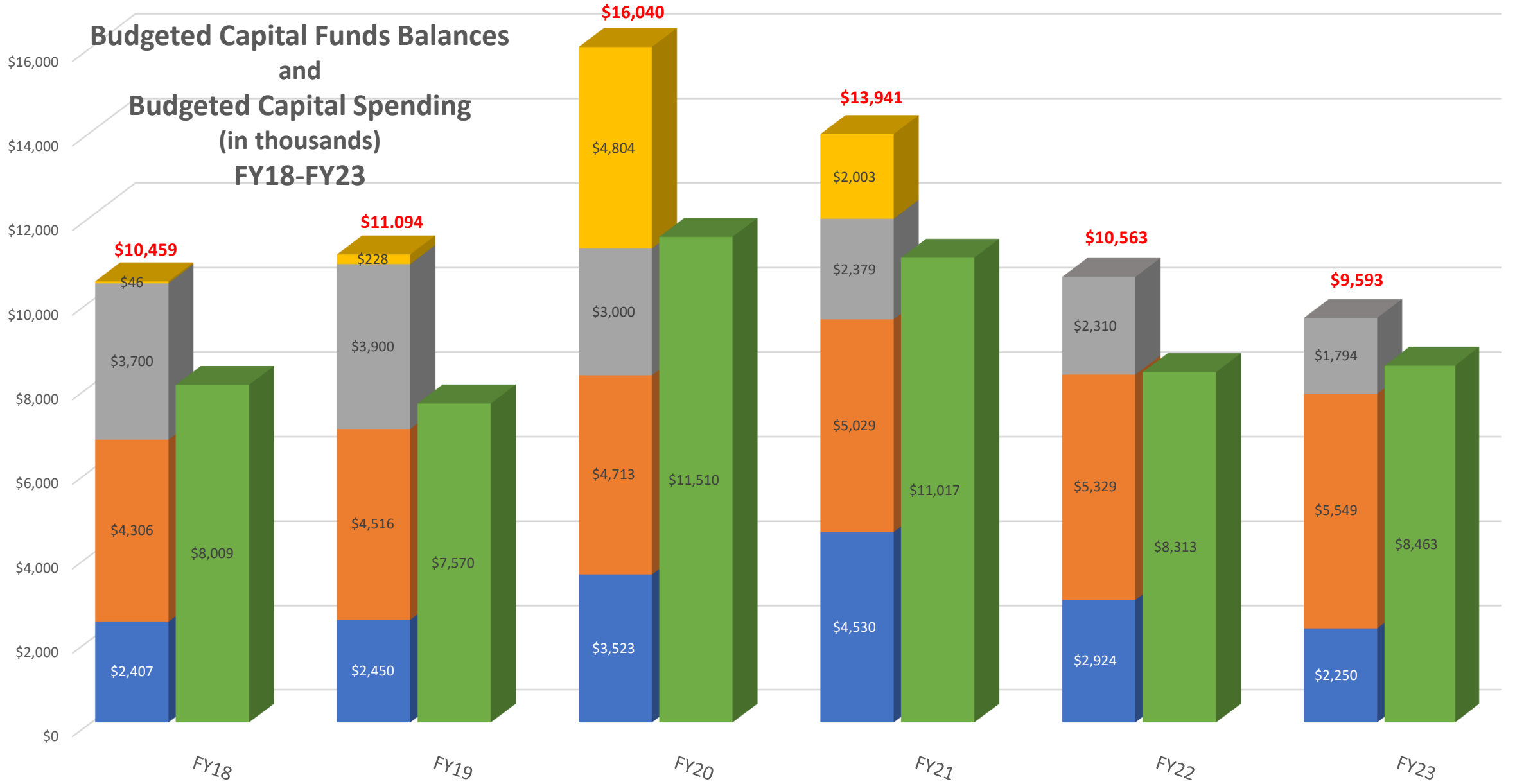
Budgeted Net Income Compared to Budgeted Rate of Return FY18 – FY23



Budgeted kWh Sold Compared to Budgeted Rate of Return FY18 – FY23



Budgeted Capital Funds Balances and Budgeted Capital Spending (in thousands) FY18-FY23



■ Beginning Balance

■ Depreciation

■ Operating Fund Transfers

■ Bond Proceeds

■ Capital Improvement

■ Budgeted Cash totals in RED

ATTACHMENT 2

Agenda Item 4: Electric Vehicle Pilot Program



RMLD PRESENTS: ELECTRIFY YOUR RIDE

ELECTRIC VEHICLE PILOT PROGRAM

RMLD CITIZENS' ADVISORY BOARD

JUNE 20, 2018

ELECTRIC VEHICLE BASICS

- Savings of \$1,000s between cost of gasoline and price of electricity
- Reduces creation of greenhouse gas emissions in the transportation sector
- In New England, electricity production using natural gas and renewables creates a cleaner energy source for EVs

GAS VERSUS ELECTRIC FUEL PRICE

- $25.2 \frac{\text{miles}}{\text{gallon}} \times 0.29 \frac{\text{kWh}}{\text{mile}} \times 0.16 \frac{\$}{\text{kWh}} = \$1.169 \text{ per eGallon}$
- Current average MA gas price is \$2.949 per gallon

	\$/kWh Rate	Price per eGallon
RMLD Residential TOU	0.13	\$0.95
RMLD Residential	0.16	\$1.17
Average IOU	0.23	\$1.68
Equivalent MA Gas Price	0.40	\$2.92

SAVINGS USING ELECTRIC FUEL

- $100 \text{ miles} \times \frac{\text{gallon}}{25.2 \text{ miles}} \times \frac{\$2.949}{\text{gallon}} = \$11.70 = \text{cost to drive 100 miles on gas}$
- **\$1,404 annual spent on gasoline**
- $100 \text{ miles} \times \frac{0.29 \text{ kWh}}{\text{mile}} \times \frac{\$0.16}{\text{kWh}} = \$4.64 = \text{cost to drive 100 miles on electricity}$
- **\$552 annual spent on electric fuel**
- **$\$1,404 - \$552 = \$852 \text{ saved annually}$**

TYPES OF ELECTRIC VEHICLES

Plug-in Electric Hybrid (PHEV)	Plug-in Electric Hybrid PLUS (PHEV+)	Battery Electric Vehicle (BEV)
<ul style="list-style-type: none">• Has both battery and conventional gas engine; uses gas engine once battery is depleted• Lower emissions than conventional gas-only vehicles• Battery capacity less than 10 kWh	<ul style="list-style-type: none">• Same characteristics as PHEV except battery capacity• PLUS indicates a battery capacity GREATER than 10 kWh	<ul style="list-style-type: none">• 100% electric• Zero tail-pipe emissions

CHARGING BASICS

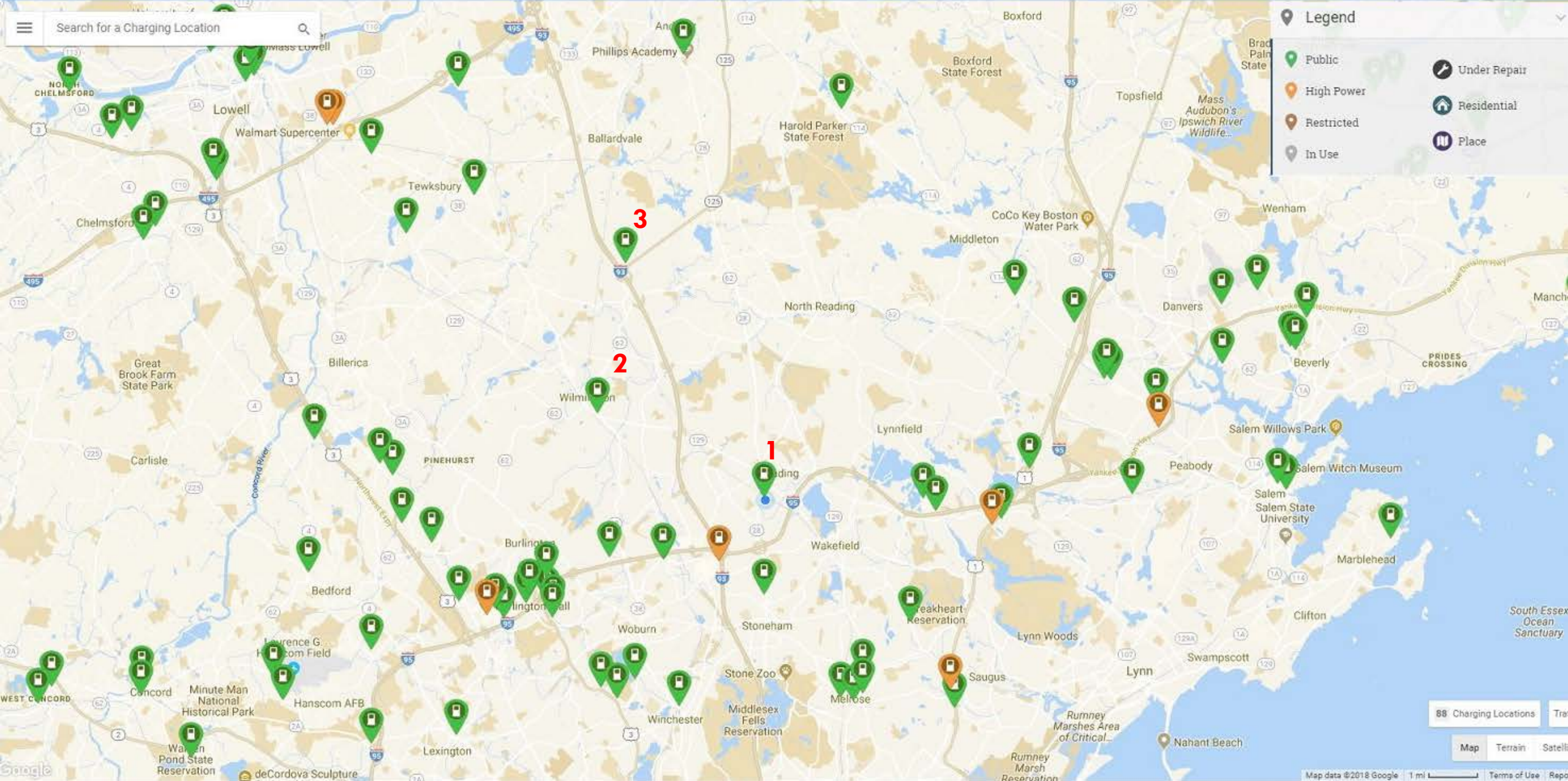
- Many customers choose to charge at home using Level 1 or Level 2 charging facilities
- Level 2 charging style is also known as “Destination Charging”

Types of Charging	AC Level 1	AC Level 2	DC Fast Charge
Description	Standard Household Outlet	Charging Station	Charging Station
Power Level	120 volts	240 volts	480 volts
Range to Charge Ratio	2-5 miles per 1 hr charge	10-20 miles per 1 hr charge	60-80 miles per 20 min charge

CHARGING ON THE ROAD

- Public charging stations are becoming more popular and can be found at:
 - Hotels
 - Shopping Centers
 - Public parking lots
 - Parking Garages
- Charging stations can be located while traveling using services such as:
 - PlugShare
 - Alternative Fuels Data Center (US Dept. of Energy)
 - ChargePoint
 - EVgo

PLUGSHARE MAP OF RMLD TERRITORY



REBATES AND INCENTIVES

- Federal Tax Credit of \$2,500 to \$7,500 depending on capacity of battery
- MOR-EV State rebate of \$1,000 to \$2,500 depending on type of vehicle
- Mass Energy Alliance *Drive Green* Program has secured discounts at partnered dealerships throughout the state
- RMLD's pilot incentive program of \$1,000 for PHEV+s and \$1,500 BEVs

BENEFITS TO RMLD

- Average Level 2 charger uses between 200-300 kWh per month
- Annual revenue between \$312-576
- Contributes to RMLD's "Be Efficient. Get Greener. Go Paperless" campaign
- Updated residential EV charger rebate program encourages installation of networked chargers