



Town of Reading Meeting Posting with Agenda

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2020-09-16

Time: 6:30 PM

Building:

Location:

Address:

Agenda:

Purpose: General Business

Meeting Called By: Jason Small, Chair

Notices and agendas are to be posted 48 hours in advance of the meetings excluding Saturdays, Sundays and Legal Holidays. Please keep in mind the Town Clerk's hours of operation and make necessary arrangements to be sure your posting is made in an adequate amount of time. A listing of topics that the chair reasonably anticipates will be discussed at the meeting must be on the agenda.

All Meeting Postings must be submitted in typed format; handwritten notices will not be accepted.

Topics of Discussion:

PER GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF THE OPEN MEETING LAW, G.L. c. 30A, §20 THIS MEETING WILL BE HELD REMOTELY UTILIZING WEB TECHNOLOGY.

FOR PUBLIC PARTICIPATION PLEASE EMAIL: krybak@rmlid.com PRIOR TO THE START OF THE MEETING. INCLUDE YOUR FULL NAME, ADDRESS, AND PHONE #

1. Call Meeting to Order – J. Small, Chair
2. Approval of Minutes – J. Small, Chair
Suggested Motion: Move that the Citizens' Advisory Board approve the minutes of the April 16, 2020, meeting as written.
3. General Manager's Update – C. O'Brien, General Manager
 - RMLD Response to COVID-19
 - Small Cell Attachments
4. Financial Update: 2020 YTD thru June – W. Markiewicz, Director of Business, Finance & Technology
5. Engineering & Operations Report – H. Jaffari, Director of Engineering & Operations
6. Integrated Resources – C. Underhill, Director of Integrated Resources
 - Update on Customer Programs and Activity
 - Electrification
 - Virtual Activities
 - Electric Vehicle Workshop at November Board Meeting

This Agenda has been prepared in advance and represents a listing of topics that the chair reasonably anticipates will be discussed at the meeting. However the agenda does not necessarily include all matters which may be taken up at this meeting.



Town of Reading Meeting Posting with Agenda

- Power Supply Activity Report
 - Roadmap 2050 Compliance
 - Status Update
 - Difference with Golden Bill
 - Rate Impact of Compliance
 - Updated Power Supply Portfolio Chart
 - Discussion of RMLD Clean Energy Policy
7. Scheduling: CAB Meetings & Coverage for Commissioners Meetings – J. Small, Chair
8. Adjournment – J. Small, Chair

Attachment 1: Agenda Item 2 - Approval of Minutes



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2020-04-16

Time: 6:30 PM

Building:

Location:

Address:

Session: Open Session

Purpose: General Business

Version: Draft

Attendees: **Members - Present:**

Mr. Dennis Kelley, Chair (Wilmington Representative); Mr. Jason Small, Vice Chair (North Reading Representative); Mr. George Hooper, Secretary (Wilmington Representative); Mr. Joseph Markey (Lynnfield Representative); Mr. Vivek Soni (Reading Representative)

Members - Not Present:

Others Present:

Mr. David Hennessy, Board of Commissioners
Ms. Coleen O'Brien, Mr. Hamid Jaffari, Ms. Wendy Markiewicz, Mr. John McDonagh, Ms. Kathleen Rybak, Mr. Charles Underhill

Minutes Respectfully Submitted By: Mr. George Hooper, Secretary

Topics of Discussion:

PER GOVERNOR BAKER'S MARCH 10, 2020, ORDER SUSPENDING CERTAIN PROVISIONS OF THE OPEN MEETING LAW, G.L. c. 30A, §20 THIS MEETING WAS HELD REMOTELY VIA ZOOM.

1. Call Meeting to Order and Introductions – D. Kelly, Chair

Chair Kelley called the meeting to order at 6:30 PM and noted the meeting was being audio recorded.

2. General Manager's Update – C. O'Brien, General Manager

Materials: COVID-19 Emergency Plan of Operations & Major Emergency Plan of Operation (Presentation Slides)

Ms. O'Brien welcomed Mr. Joseph Markey the Lynnfield Representative. Mr. Markey provided a brief overview of his background.

COVID-19 Update: Ms. O'Brien reported that in response to the COVID-19 crisis, the RMLD immediately organized an emergency response team consisting of eight senior staff (Directors and Assistant Directors); this group meets daily at 10:00 AM. Ms. O'Brien noted that the DPU extended the moratorium for residential shutoffs. The RMLD has an obligation to serve and to maintain certain levels of construction and reliability to the electric system. Staff are working with local and national peer groups, and continually reviewing federal, state, and local guidelines to determine

best practices. The RMLD has developed EOP 20-03 Emergency Infectious Disease Plan, a living procedure with linked updates from the Governor, Board of Health, and local Incident Command. Ms. O'Brien reviewed the presentation slides, noting RMLD is currently in Phase II of the Emergency Plan of Operations.

Ms. O'Brien asked Mr. McDonagh to update the CAB on the response to the recent storm (on April 13) and to provide an overview of restoration operations. RMLD had roughly 3,900 customers interrupted during the storm and responded to over 40 calls. Most services were restored within the first 24 hours, with restoration for damage to single electric services continuing thereafter. All service has now been restored.

Ms. O'Brien reported that the Wilmington Board of Selectmen voted to approve the extension of the 20-Year Agreement, and thanked Mr. Hooper and Mr. Kelley for their assistance with the process. Ms. O'Brien noted that letters went out to each town regarding the extension and responses are due back to RMLD by May 31st.

3. Integrated Resources Report – C. Underhill, Director of Integrated Resources
Materials: RMLD COVID-19 Virus Impact Assessment (Presentation Slides)

COVID-19 Load Impact Discussion: Mr. Underhill reported that staff is working to identify what the impacts of COVID-19 might be on RMLD's financial situation and what appropriate responses that would engender. Mr. Underhill noted staff is assessing changes both externally and internally (as outlined on Slide 2), looking at load changes, fixed operating expenses and how the capital budget may evolve over time.

Mr. Underhill then reviewed the COVID-19 Load Impacts on RMLD (Slide 3) noting that staff used estimates of what other utilities within high COVID-19 risk areas are/have experiencing/ed; RMLD does not have enough data to generate RMLD estimates at this time; collections remain steady to date. Mr. Underhill noted that staff has looked at the COVID-19 load impact on the power supply budget, and projected (with the lower load and our contractual commitments) through the end of 2020. The RMLD is (currently) assuming a straight 8% load reduction for the remainder of 2020 and a straight reduction in peak values for transmission savings. RMLD will not see an impact to capacity for another year. Mr. Underhill reviewed the RMLD Monthly kWh Load Comparison (Slide 4), which shows historic values from 2018, 2019, and the 2020 budgeted value. Mr. Underhill noted 2020 actual year-to-date (through March) is below budget due primarily to the warmer than expected winter that significantly reduced the wholesale load. Mr. Underhill then reviewed the Assumptions (Slide 5) used (with the 2020 budget as a baseline) to understand cash reserves and how much revenue erosion RMLD could support over time. Staff has been in touch with Nextera (one of our larger energy suppliers) as one of the phase contingencies to discuss the potential of a deferment of some power supply expenses.

Mr. Underhill continued with a review of Slide 6 (Assess Impacts). Mr. Underhill noted the RMLD has suspended some programs related to appropriate social distancing and in-home inspections and will be modifying some programs, i.e., the residential audit program, inspections on efficiency installations at commercial and industrial sites; distributed generation has slowed dramatically. Mr. Underhill stated that staff will monitor programs so that RMLD can continue to deliver programs and services.

Slide 7 (COVID-19 2020 Power Supply Impacts) reflects an ~\$2.1 reduction in power supply expense. Mr. Underhill noted the rate goes up rather than down because the kilowatt hours in the load dropped faster than the price. Mr. Underhill pointed out a typo (on "Power Supply Budget Q2-Q4 2020); the 1.035 is the 3.5% distribution losses that RMLD experienced, so it converts it from a

wholesale load to anticipated retail sales. At retail, the power supply portfolio cost would be at \$0.8560; with the COVID-19 adjusted budget it is at \$0.08876. For the remainder of the year we had anticipated a reduction in the purchase power, and capacity, transmission, fuel components on the bill. Instead (due to COVID-19), we are looking at a slightly higher fuel adjustment, with an impact of approximately \$674K; there are currently funds in the fuel reserves to cover that through the end of the year. Mr. Underhill then reviewed COVID-19 2020 Operating Budget Impacts (Slide 8). If the assumed 8% reduction holds, the RMLD should be alright financially going forward. Mr. Underhill concluded his presentation stating staff will continue to monitor the COVID-19 impact on rate and revenue stability, as outlined on Slide 9 (Develop COVID-19 Response Options).

Mr. Hooper asked if there was any state assistance anticipated to relieve the COVID-19 impact to the RMLD. Ms. O'Brien responded that there is no indication that there would be any kind of reimbursement to the electric company for the electric usage rate; there may be stimulus packages to customers to help them pay their bills. Ms. O'Brien noted that staff is tracking all data on expenses (material and labor) related to COVID-19 should any state or federal programs become available through MEMA, FEMA, etc.

Home Information Sessions: Mr. Underhill reported that successful sessions were held in Lynnfield and Wilmington prior to COVID-19 restrictions. Staff is looking at various options to continue hosting the sessions virtually.

New Rebate Programs: Mr. Underhill reported that Integrated Resources (IR) has launched the heat pump program and will soon be offering incentive rebates for consumer purchase of electric yard maintenance equipment (mowers, trimmers, etc.). IR is also working to modify the audit program to a virtual mechanism.

4. Engineering & Operations Report – H. Jaffari, Director of Engineering & Operations
Materials: Engineering & Operations Report: IVR/OMS Update (Presentation Slides)

Metering Project/Customer Notification System: Phase I & II Implementation: Mr. Jaffari updated the CAB on the status of the Integrated Voice Response/Outage Management System (IVR/OMS), and the Customer Notification System (CNS), which are being rolled out in two phases. Phase 1 includes IVR/OMS rollout, which will be used for unplanned outages; Phase II includes the CNS for planned outages. Mr. Jaffari reviewed the Slides 2-5, which outline each phase and how the systems will work. RMLD will conduct a "Customer Opt-in Campaign" for customers to enroll in the notification programs as outlined on the timeline (Slide 6). Mr. Jaffari then reviewed Slide 7, which shows the RMLD system map (SCADA/OMS) for outages and the customer portal map for outages, which will be available on personal devices and through the RMLD website. Mr. Jaffari completed his presentation with a review of system communication mapping as outlined on Slide 8.

5. CAB Input on Town of Reading Payment – D. Kelley, Chair
Materials: RMLD Payment Scenarios to the Town of Reading

Ms. O'Brien reported that Ms. Markiewicz had reformatted the outline of current recommendations for the Town payment (provided with the Agenda packet) so that it is easier to read. The information contained in this document has already been presented to the Board and has been posted on the RMLD website. Ms. Markiewicz then provided a brief overview of the current recommendations included on the document, noting the second page shows the rolling average for three years based on the five scenarios. Ms. Markiewicz stated, as we said before, the RMLD is not trying to cause a burden to the Town of Reading, but also wants to safeguard the below the line funds for capital improvements and to keep rates competitive; it all must be balanced. Ms. Markiewicz noted, the Town has provided alternate scenarios, but RMLD wants to remain true to

the original idea of going based off the health of the industry, which is kilowatt hour sales. Ms. Markiewicz noted that five scenarios have been presented with 3.75 mil per kilowatt hour sales or 4.0 mil per kilowatt hour sales.

Mr. Soni asked about the impact of COVID-19 on both the above the line and below the line payments this year and possibly next year; should RMLD consider whether the \$2.4m would be appropriate in such a setting? If RMLD is not doing certain capital investments, would the net plant change in the next couple of years, and how would that impact the above the line and below the line payments? Ms. Markiewicz responded that if there is a serious impact from COVID-19, the RMLD would move to supplement with the rate stabilization funds; this is a crisis situation, outside of the norm. The RMLD can shift priorities and look at different options. Mr. Soni summarized: because of the rate stabilization and the fuel stabilization fund you are able to accommodate the loss of revenue without increasing rates and honor the payments to all the towns at the same level, approximately. Ms. Markiewicz responded that at this particular moment (for 2020) she would say yes.

Ms. O'Brien noted that the recommendations were developed prior to COVID-19 and represent a recommendation for a long-term formula. The COVID-19 impact (a catastrophe/crisis event) would need to be addressed separately. Ms. O'Brien stated that she would like to have a discussion at the next Board of Commissioners meeting regarding the COVID-19 impact on the budget, both above the line and below, and the payments to the towns. If the Board of Commissioners were to determine that the payments needed to be adjusted due to any catastrophe, that would have to come from the Board.

Chair Kelley asked if there were any other comments or concerns.

Mr. Small stated that (based on the options presented) he would be inclined to go with a three-year average. If there were minor fluctuations in sales in some years, it averages out and minimizes the overall financial impact to RMLD and the Town. The three-year average may be a good way to ride out some intermittent bumps. Chair Kelley agreed. Mr. Hooper agreed and stated that he would prefer the 3.75 option. Mr. Small agreed the 3.75 would be better for the health of the RMLD.

Ms. O'Brien agreed to summarize the discussion for Mr. Hennessey to present to the Board.

6. Scheduling: CAB Meetings & Commissioners Meetings Coverage – D. Kelley, Chair

Mr. Soni agreed to cover the April 21st Board of Commissioners meeting.

The May meeting was tentatively scheduled for May 21st (pending confirmation of May Board of Commissioners meeting). Mr. Hooper agreed to cover the May Board of Commissioners meeting.

7. Adjournment – D. Kelley, Chair

Mr. Hooper made a motion to adjourn the Citizens' Advisory Board meeting, seconded by Mr. Small. Motion carried 5:0:0 (5 in favor, 0 opposed, 0 absent).

The CAB meeting adjourned 8:16 PM.

As approved _____

Attachment 2: Agenda Item 4 - Financial Update

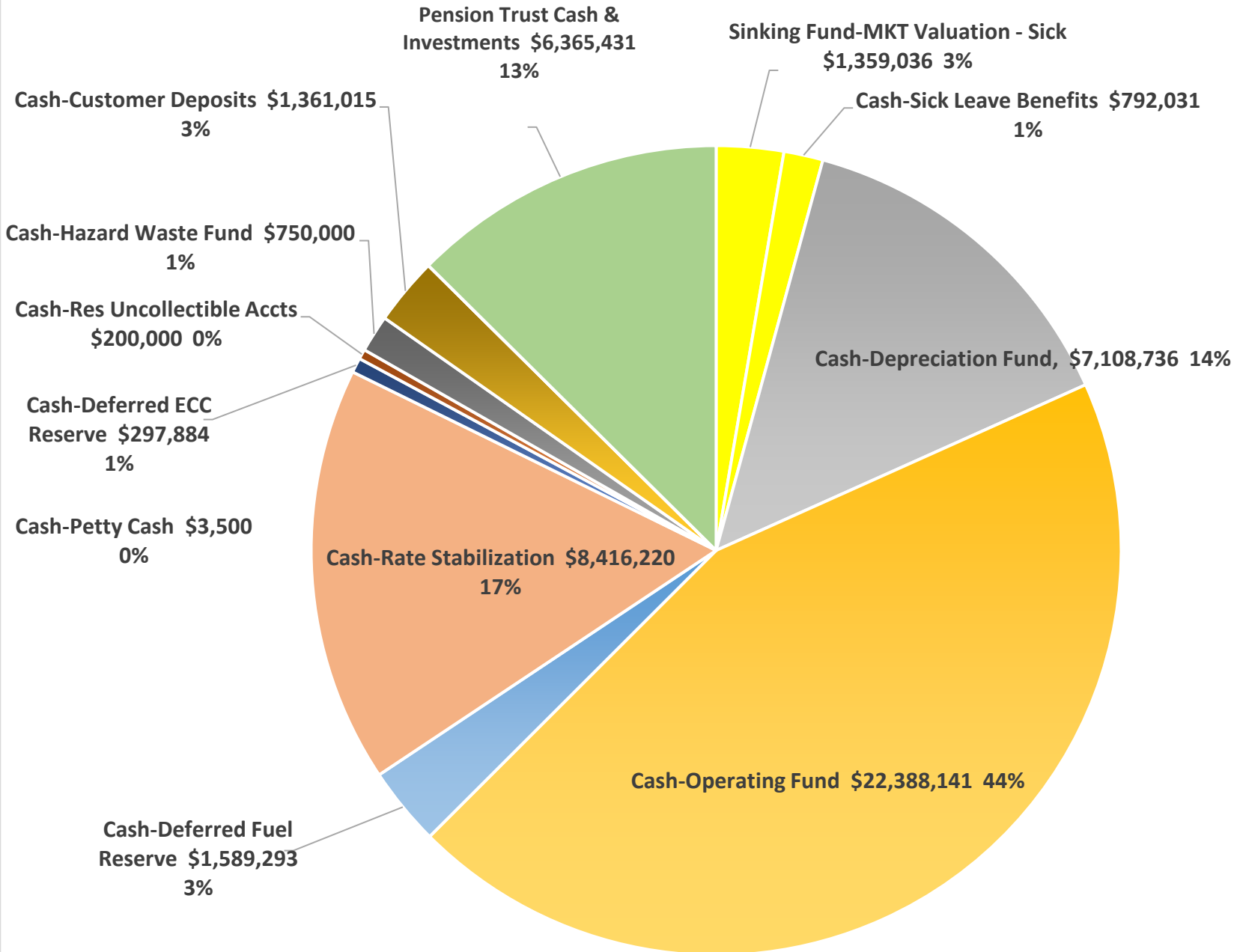
A blue-tinted background image featuring a line graph with a fluctuating line. A silver pen is positioned in the upper right corner, pointing towards the graph. The graph has some numerical values like '2.5' and '2.47' visible. The overall scene suggests a financial or analytical review.

READING MUNICIPAL LIGHT DEPARTMENT

FINANCIAL REVIEW
for the period ended
JUNE 30, 2020

Cash Balances As of June 30, 2020

Total \$50,631,288



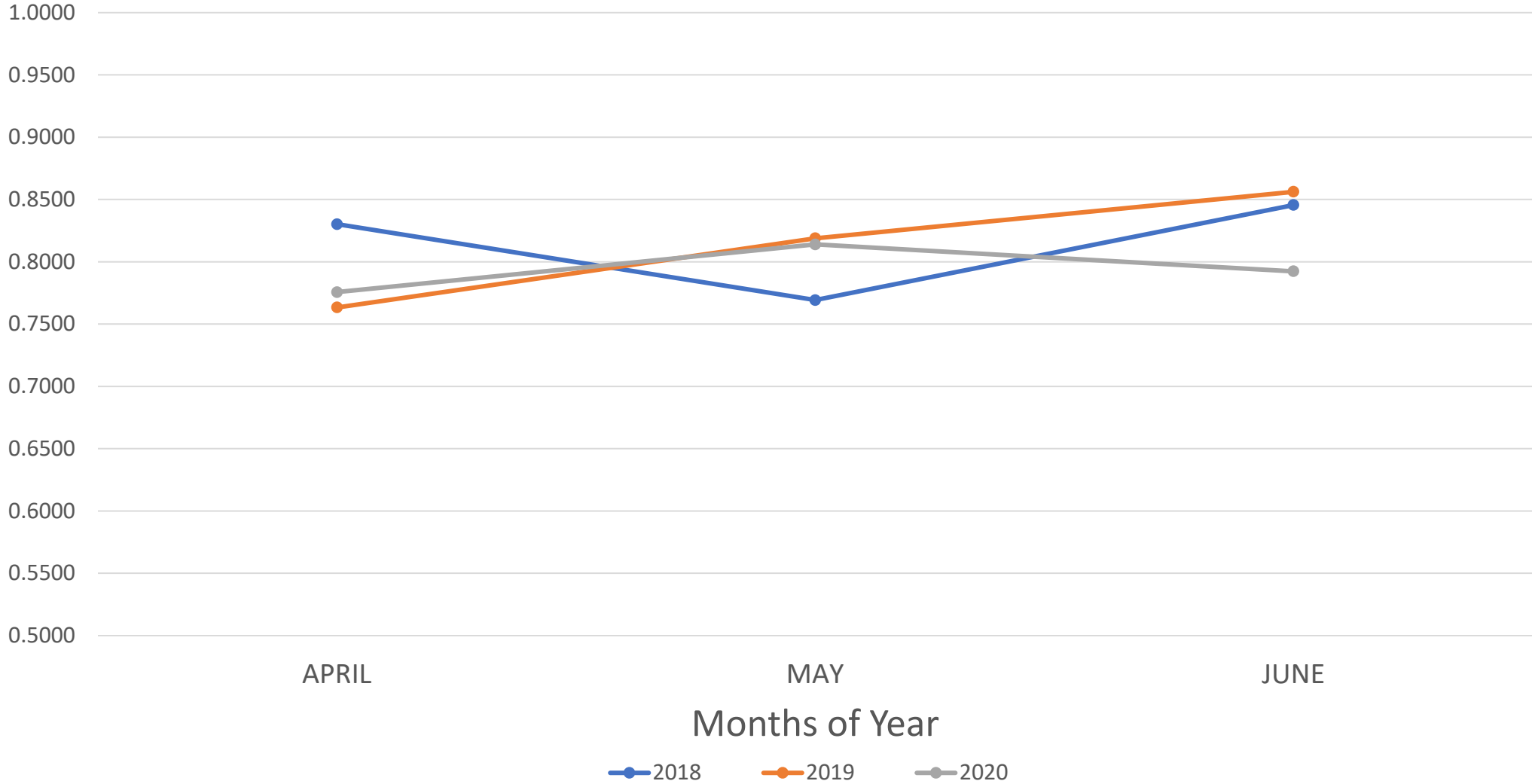
- Sinking Fund-MKT Valuation - Sick
- Cash-Sick Leave Benefits
- Cash-Depreciation Fund
- Cash-Operating Fund
- Cash-Deferred Fuel Reserve
- Cash-Rate Stabilization
- Cash-Deferred ECC Reserve
- Cash-Res Uncollectible Accts
- Cash-Hazard Waste Fund
- Cash-Customer Deposits
- Cash-Petty Cash
- Pension Trust Cash & Investments

Accounts Receivable Aging by Months

30 Days Current

April, May and June

2018-2020

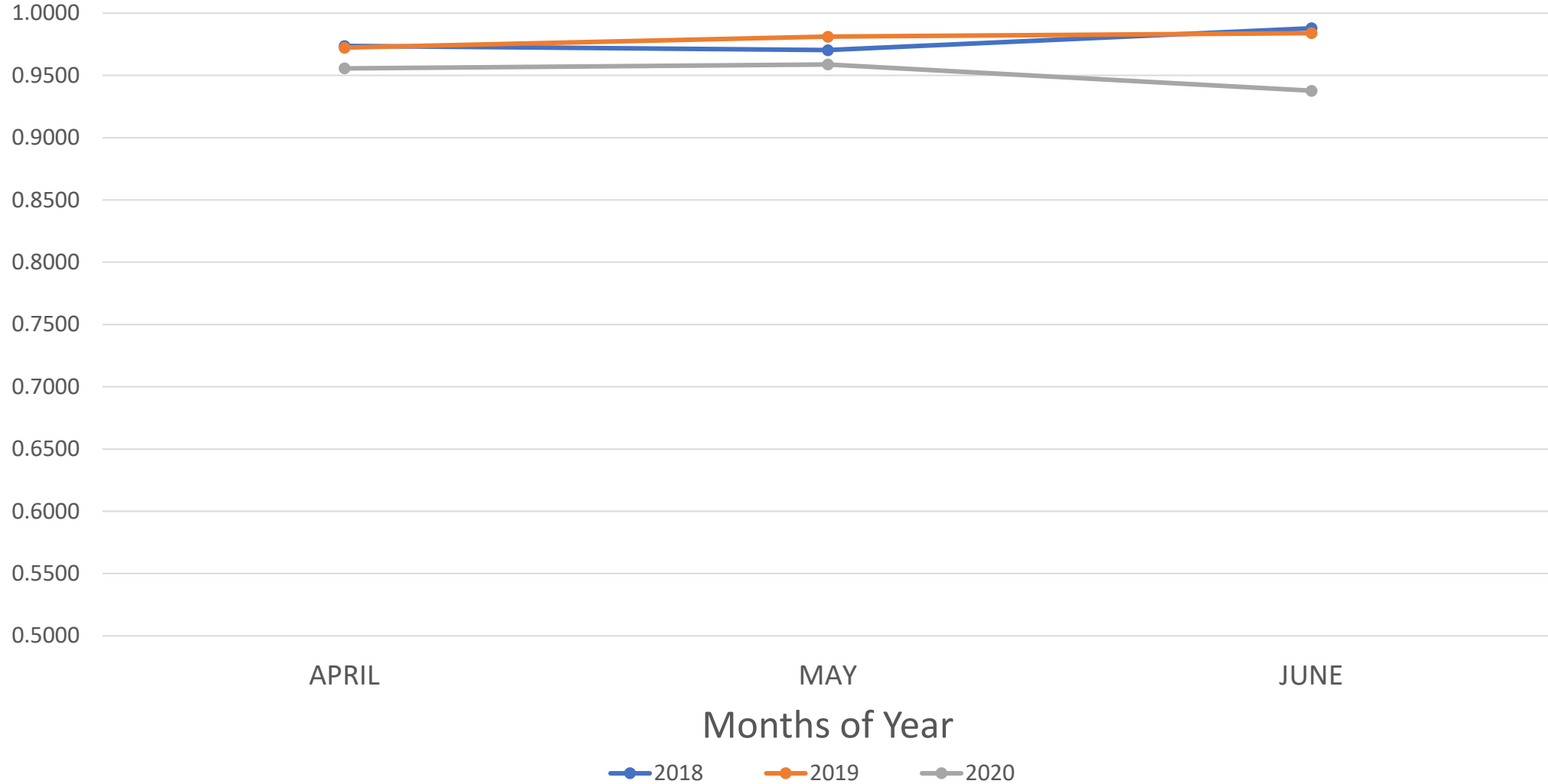


Accounts Receivable Aging by Months

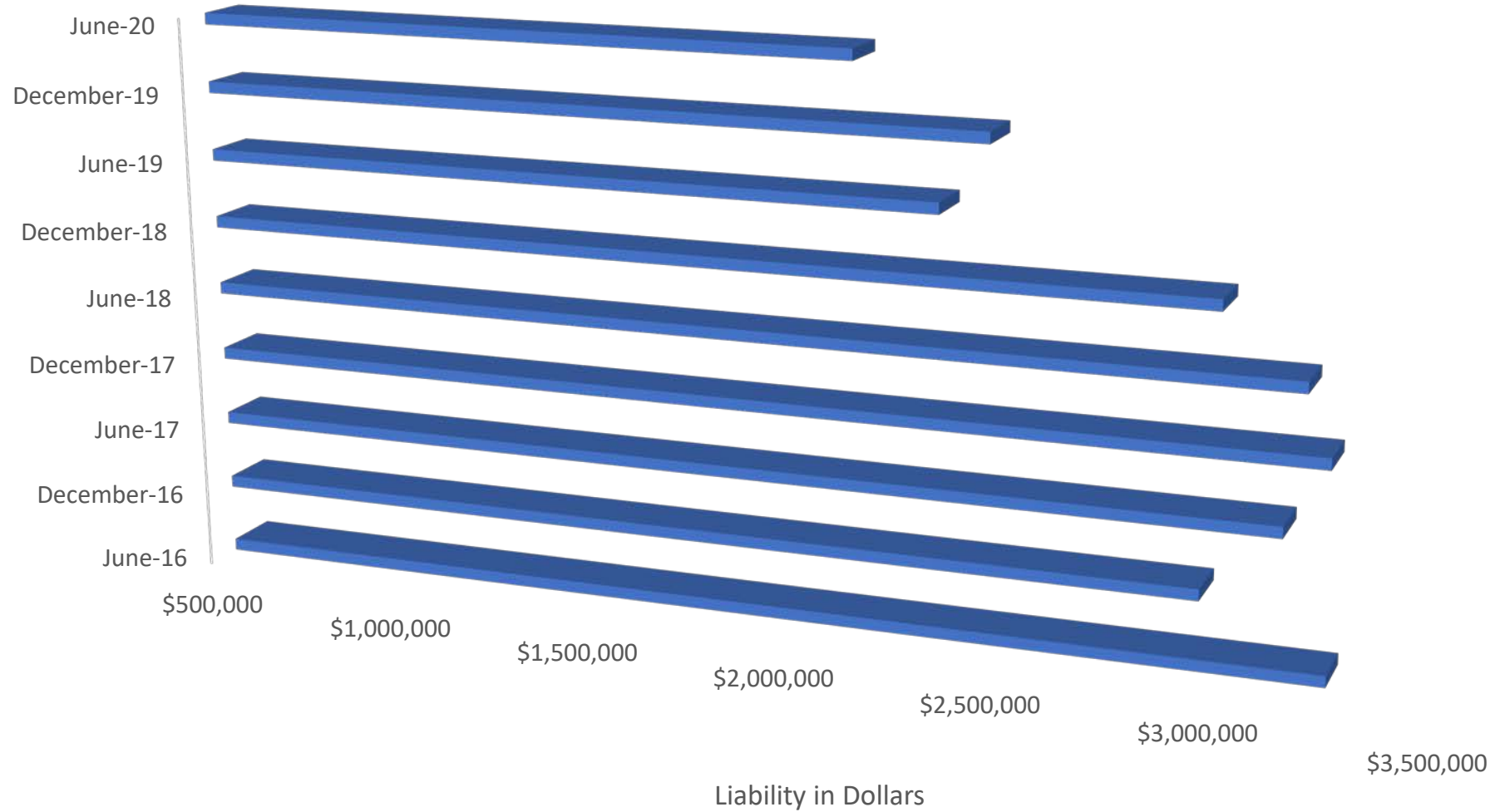
90 Days Current

April, May and June

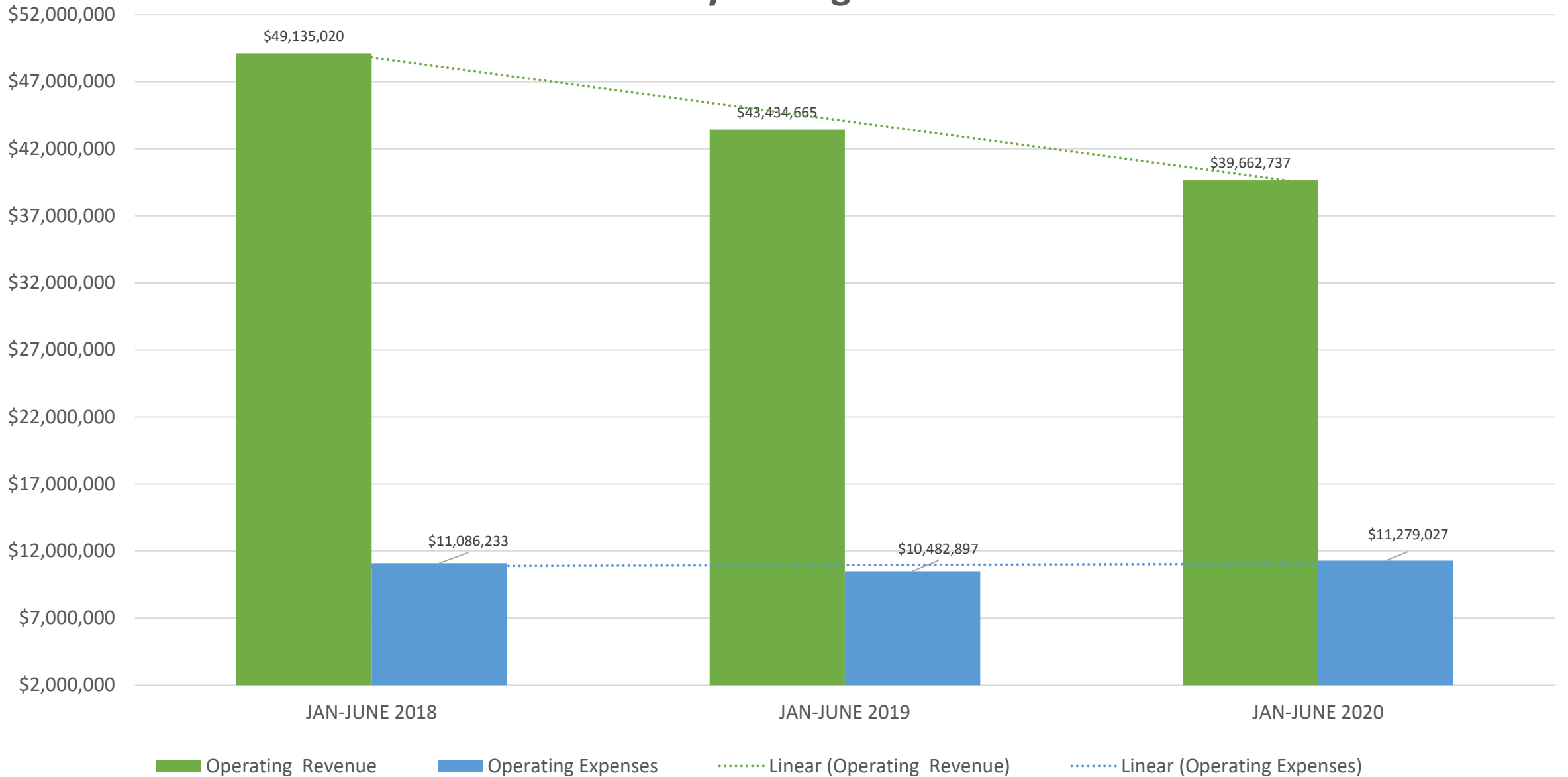
2018-2020



Sick Leave Buy-Back Liability Balances June 2016 through June 2020

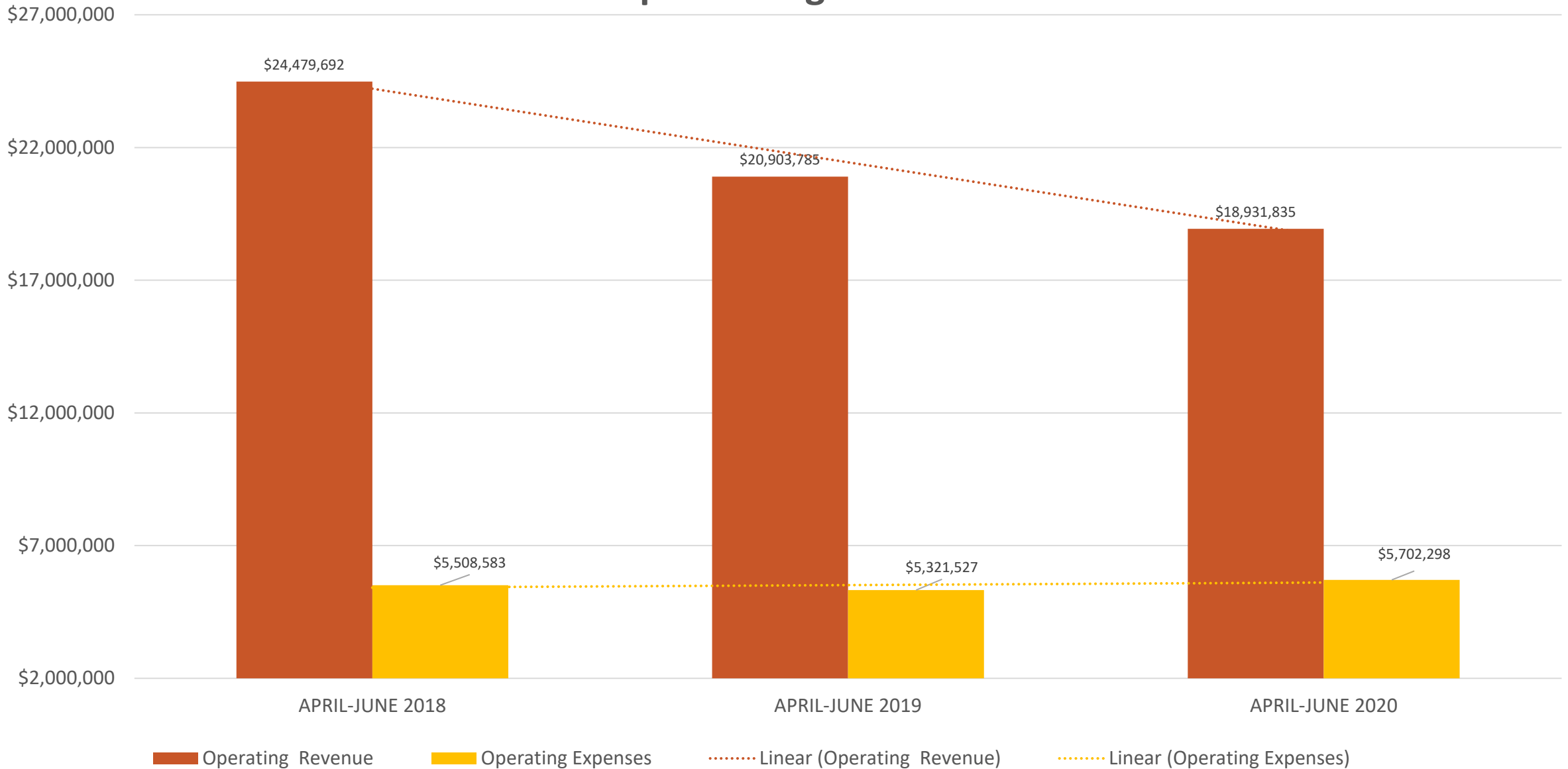


Operating Revenue & Operational Expenses Comparison January through June



Operating Revenue & Operational Expenses Comparison

April through June



Attachment 3: Agenda Item 5 - Engineering & Operations Report

ENGINEERING & OPERATIONS REPORT

Hamid Jaffari, Director of Engineering & Operations

RMLD Citizens' Advisory Board Meeting

September 16, 2020

4W4 EMERGENCY REPAIRS

On August 19th, circuit 4W4 faulted in the underground just outside Station 4. This required the RMLD to replace 1,400 circuit feet (4,200 linear feet) of 1000 kcmil AL with 750 CU UG cable.

4W4 Splices



4W4 Cable



Construction Projects Continued Progress ...

- **North Main Street/Lowell Street (Lynnfield) – Area Upgrade/Step-down Conversion**
Pulled in the three-phase spacer cable on Lowell Street. Currently, working on pulling in the single-phase primary cable on Lowell Street. **Status: ~25% complete.**
- **Westover Drive (Lynnfield) – Underground Facilities Upgrade**
One transformer remaining to be replaced, and then crews will replace remaining 1,800' of primary conductor. Crews were redirected from this project to the 4W4 repair project. **Status: ~80% complete**
- **Kenwood Road (Wilmington) – Area Upgrade**
Completed the installation of the primary cable and the new transformers. Currently working on the secondary cable installation and service upgrades. **Status: ~ 60% complete**
- **Switchgear Replacement - Haven Street (Reading Square), Reading**
Outage scheduled for September 20th to replace cable and install new switchgear. Project will improve reliability in the area.

➤ **Marion Street (Wilmington) Line Extension – Phase II**

RMLD has completed the underground portion of this project and is currently working on pulling in the new primary overhead conductors; all the poles have been set by Verizon. **Status:** *~60% complete*



➤ ***Analog Electric Vehicle Charging Stations***

RMLD has delivered the transformer and installed approximately 1,500 feet of primary cable for the charger installations. The electrical contractor should complete installation of the units by mid-October.



OTHER PROJECTS

- **Power Factor Optimization Software Implementation**

Implementation delayed due to Covid-19 Travel Restrictions – Completion by December 2020

- **Solar Capacity Study - Complete**

Operating Procedure for Solar Installations in Draft Format

- **Meter Replacement Project**

Lemmerhirt Consulting hired to conduct study and evaluate meter purchase options and integration of Meter Data Management

Maintenance Programs

- ❖ Tree Trimming – July: 60 spans YTD: 273 spans
- ❖ Inspection of Feeders –
All Feeder Inspections Have Been Completed for 2020 as of March 19, 2020
- ❖ Pole Inspection/Replacement Program
282 of 518 failed poles have been set 263 of 282 transfers completed
- ❖ Infrared Scans – Completed through August - No Hot Spots Found
- ❖ Primary Metering Testing – delayed due to COVID-19 travel restrictions
- ❖ Manhole Inspection – on-going
- ❖ Porcelain Cutout Replacement – on-going

Aged Transformer Replacement Program (Maintenance Program)

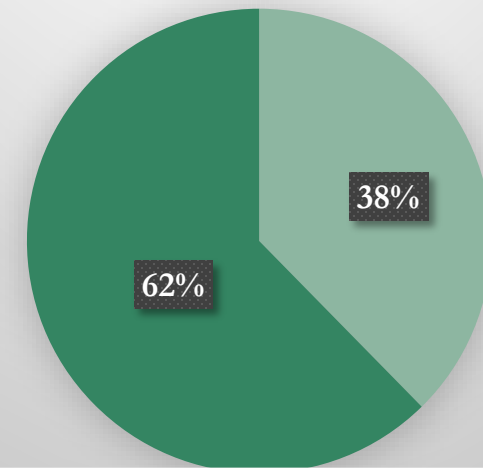
Replaced YTD

	Underground (Pad-mount)		Overhead (Pole-mount)	
	single-phase	three-phase	single-phase	three-phase
JANUARY	0	0	2	1
FEBRUARY	0	0	7	2
MARCH	2	0	10	0
APRIL	1	0	1	0
MAY	0	2	4	0
JUNE	1	0	8	1
JULY	3	0	16	0
AUGUST	0	0	10	0
TOTAL:	7	2	58	4

GRAND TOTAL: 71

Transformers System Wide

As of September 11, 2020



- Transformers 25 Years or Older
- Transformers Less than 25 Years Old

2020 CAPITAL SPENDING By Division YTD through July

DIVISION	YTD	BUDGET	REMAINING BALANCE
Engineering and Operations	3,641,781	9,645,381	6,003,600
Facilities	434,833	1,260,000	825,167
Integrated Resources Division	57,317	199,101	141,784
Information Technology	<u>140,331</u>	<u>409,000</u>	<u>268,669</u>
TOTAL	<u>\$ 4,274,261</u>	<u>\$ 11,513,482</u>	<u>\$ 7,239,221</u>

DOUBLE POLES

Per NJUNS

(as of 9/11/2020)

LYNNFIELD

"Next to Go"	# of Tickets
RMLD	65
Transfer	65
Pull Pole	
VZNESEA - Verizon	0
Transfer	
Pull Pole	
CMCTNR - Comcast	2
Transfer	2
LFLDFD - Lynnfield Fire Dept.	1
Transfer	1
GRAND TOTAL	68

NORTH READING

"Next to Go"	# of Tickets
VZNEDR - Verizon	0
Transfer	
RMLD	10
Transfer	
Pull Pole	10
Dispute	
CMCTNR - Comcast	0
Transfer	
NRDGF - North Reading Fire Dept.	2
Transfer	2
LTFMA - Lighttower Fiber	0
Transfer	
GRAND TOTAL	12

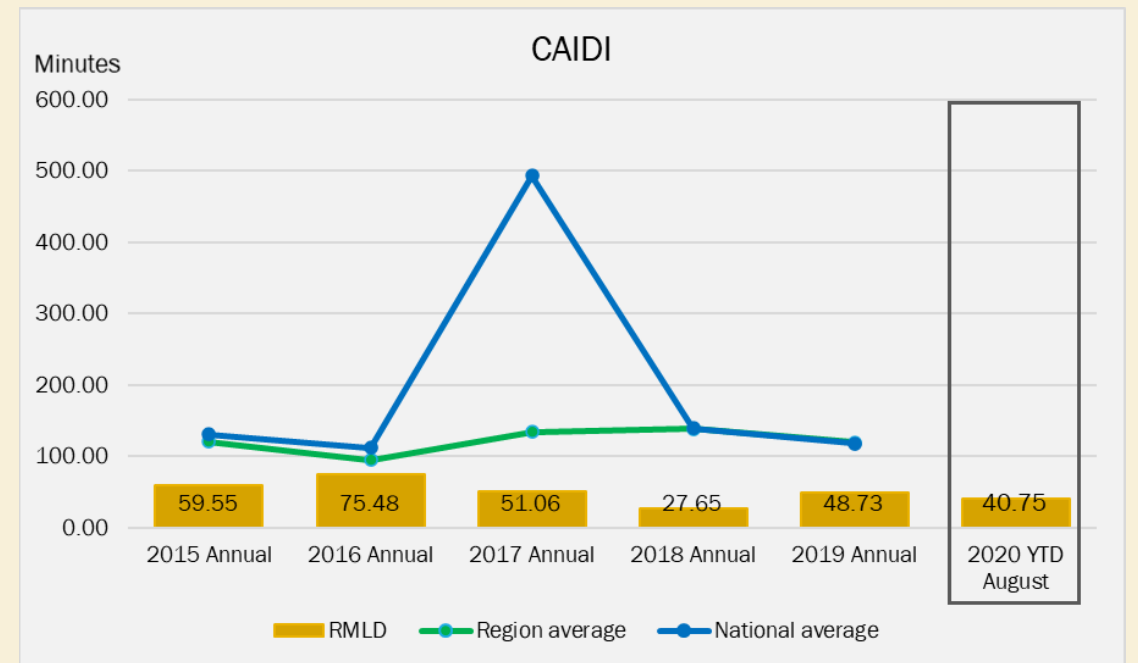
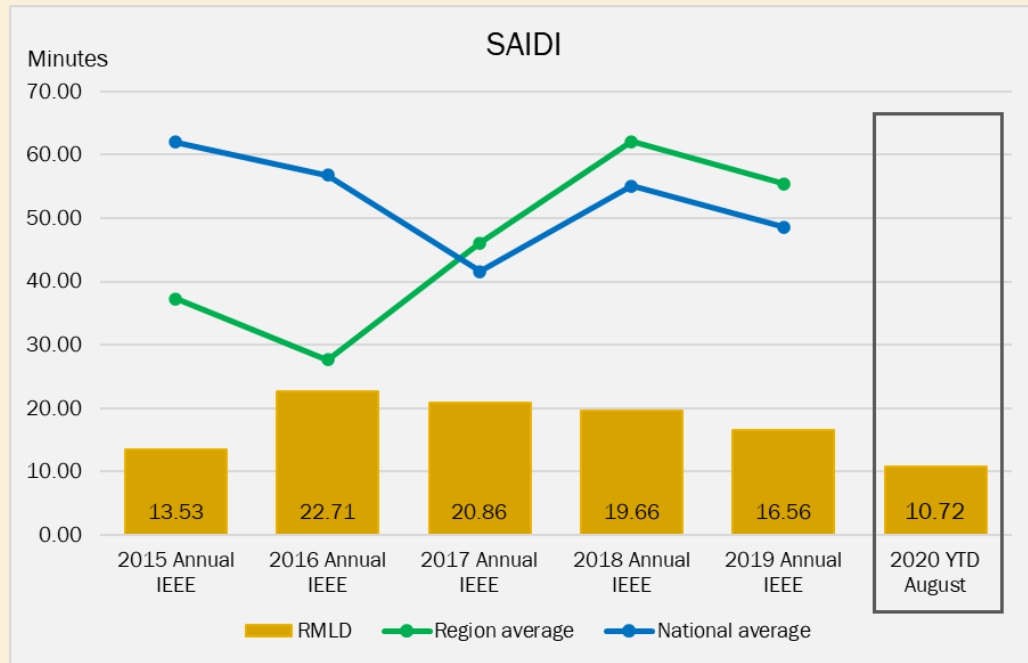
READING

"Next to Go"	# of Tickets
VZNESEA - Verizon	0
Transfer	
Pull Pole	
RMLD	25
Transfer	23
Pull Pole	2
Dispute	
CMCTNR - Comcast	1
Transfer	1
RDNGFD - Reading Fire Dept.	13
Transfer	13
LTFMA - Lighttower Fiber	0
Transfer	
NP3PMA - Non-Participating 3rd Party Attachee	4
Transfer	4
GRAND TOTAL	43

WILMINGTON

"Next to Go"	# of Tickets
VZNEDR - Verizon	3
Transfer	2
Pull Pole	1
Dispute	
RMLD	98
Transfer	97
Pull Pole	1
CMCTNR - Comcast	0
Transfer	
WMGNFD - Wilmington Fire Dept.	32
Transfer	32
WLMFIG - Wilmington Fiber	1
Transfer	1
NP3PMA - Non-Participating 3rd Party Attachee	5
Transfer	5
LTFMA - Lighttower Fiber	0
Transfer	
VZBMA - Verizon Business	0
Transfer	
GRAND TOTAL	139

RMLD Reliability Indices

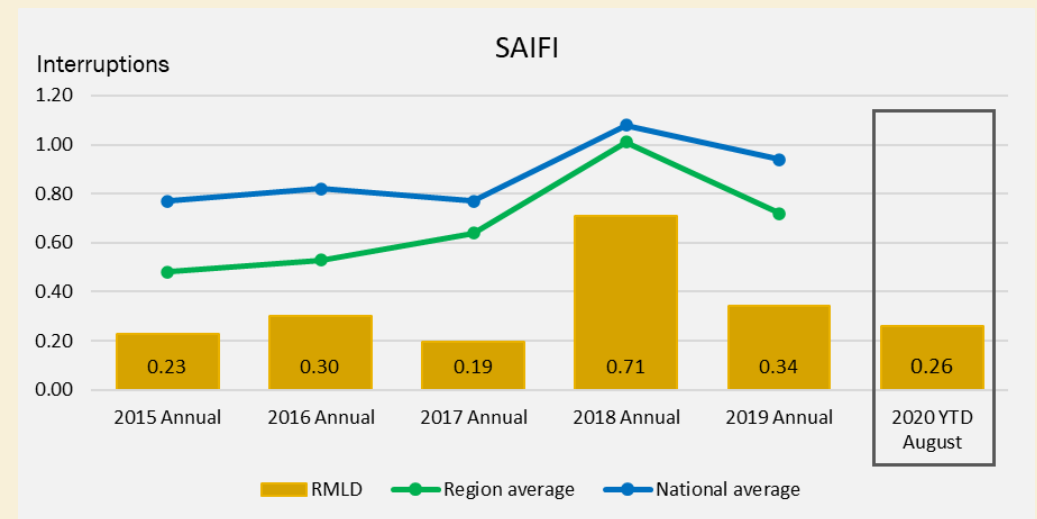


$$SAIDI \text{ (Minutes)} = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customers Served}}$$

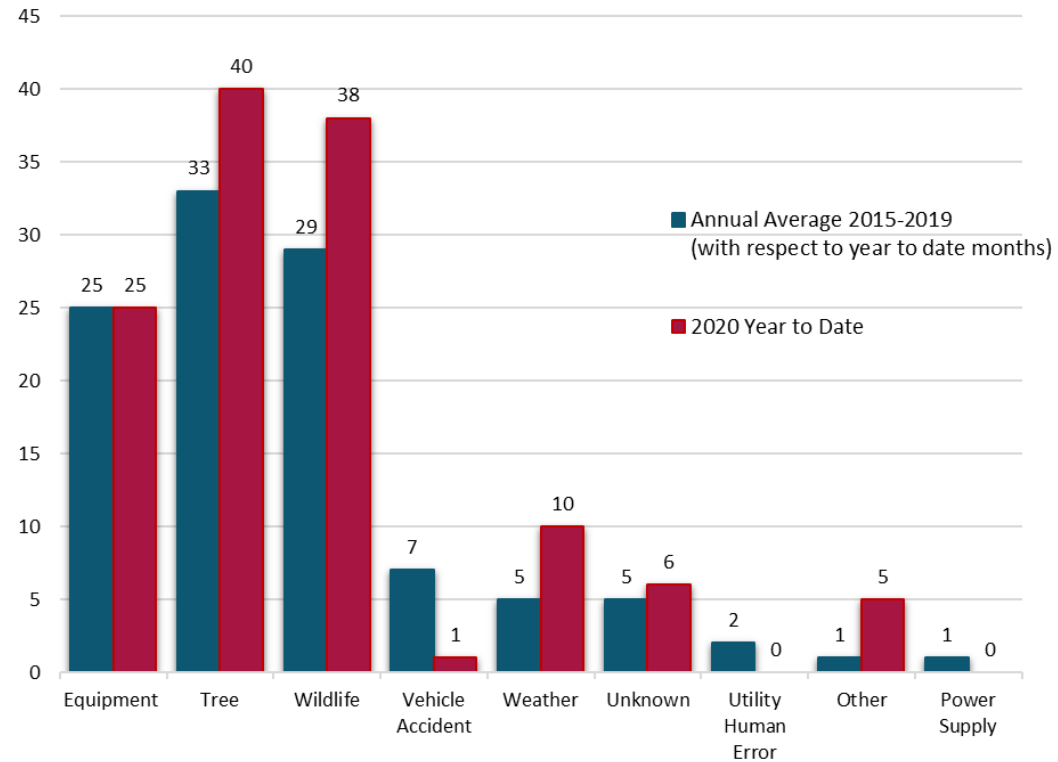
$$CAIDI \text{ (Minutes)} = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customer Interruptions}}$$

Note: APPA eReliability Tracker using IEEE beta threshold method for outages.

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



Causes of Outages as of August 2020



Through August 2020:

Other: (1) corroded connect; (2-3) fire (4) house fire; (5) power cut due to gas leak

Unknown: (1) burnt fuse; (2) two blown cutouts; (3) blown cutout; (4) inside problem; (5) blown cutout; (6) 4W4 operation

New Vehicles Received ...

- *The Underground Utility truck has been received and is now in operation.*
- *Four hybrid SUVs and one pick-up truck has been received; registration is underway.*





Thank
you

Attachment 4: Agenda Item 6 - Integrated Resources

Citizens' Advisory
Board Meeting
September 16, 2020

*Charles Underhill,
Director of Integrated
Resources*

*Reporting for July
2020.*



RMLD 4th Grade Art Contest

- ▶ Voluntary participation
- ▶ Students watch on-line electric educational video
- ▶ Students complete artists' rendition of one or more video lessons
- ▶ Upload a scan or photo of the completed artwork
- ▶ 5 winners selected from each school
 - ▶ Winners announced 11/13/20
 - ▶ Winners receive \$10 Amazon Books gift card



National Drive Electric Week

- ▶ September 26th – October 4th, 2020
- ▶ Virtual Test Drives
 - ▶ Create a video showing what it is like to drive EV
 - ▶ Showcase different models
 - ▶ RMLD staff in Bolt
 - ▶ Coordinate with local EV owners and dealerships
 - ▶ Coordinate with other MLPs to create video library



Public Power Week

- ▶ October 4th – October 10th, 2020
- ▶ Virtual events
 - ▶ Storytime
 - ▶ Pumpkin decorating
 - ▶ Kids' experiment activity
 - ▶ Photo scavenger hunt
 - ▶ A day in the life of a lineman video

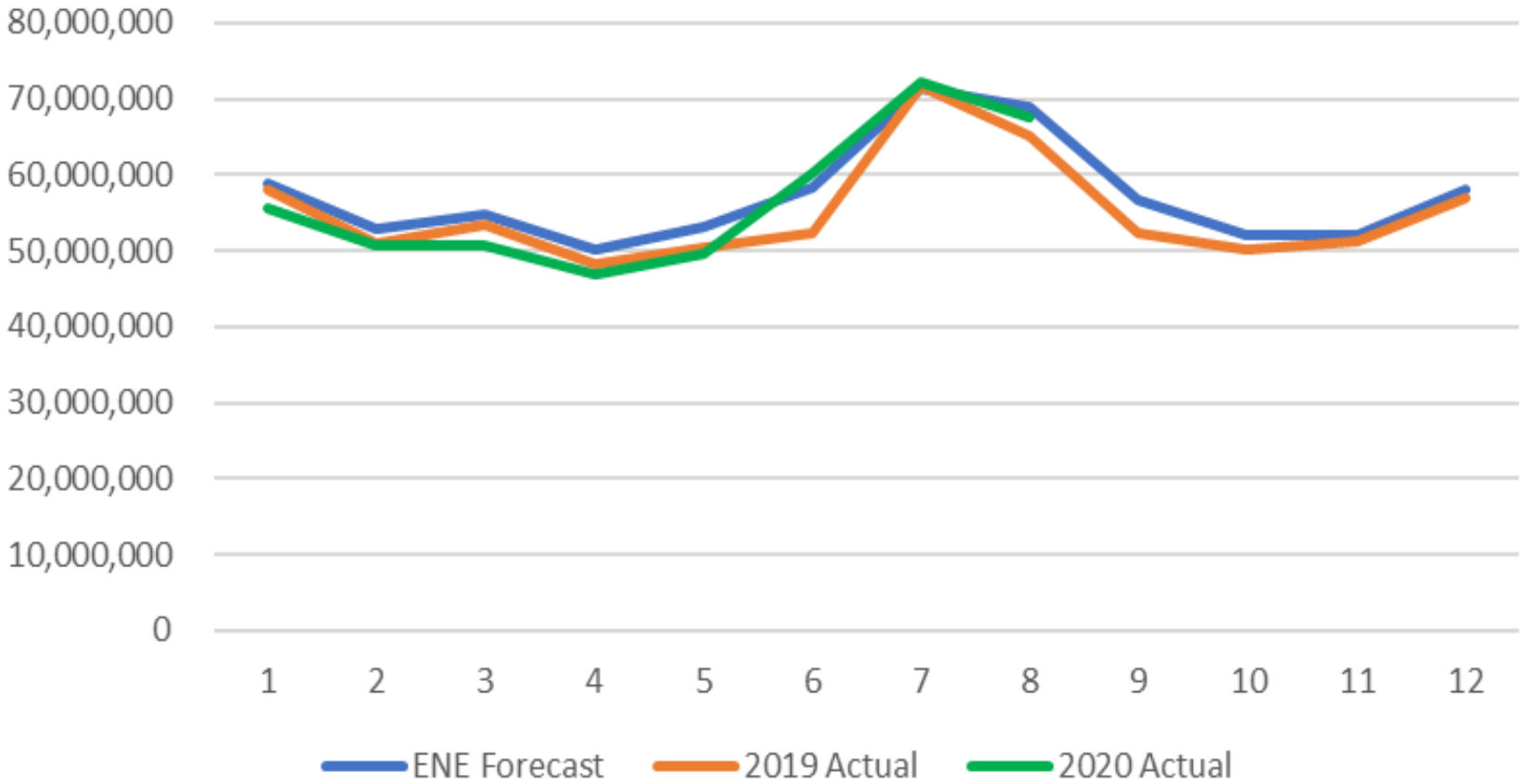
Air-Source Heat Pump Program

- RMLD is expanding its technical/educational services offered under the Program
- Contracted with Abode Energy Management
 - Provide training and education to contractors
 - Provide technical review of all heat pump proposals to ensure proper design and equipment sizing
 - Help customers understand the merits of different proposals
 - Review post-installation documentation
- GOAL: Enhance RMLD's technical capabilities and increase the adoption of high-efficiency air-source heat pumps.

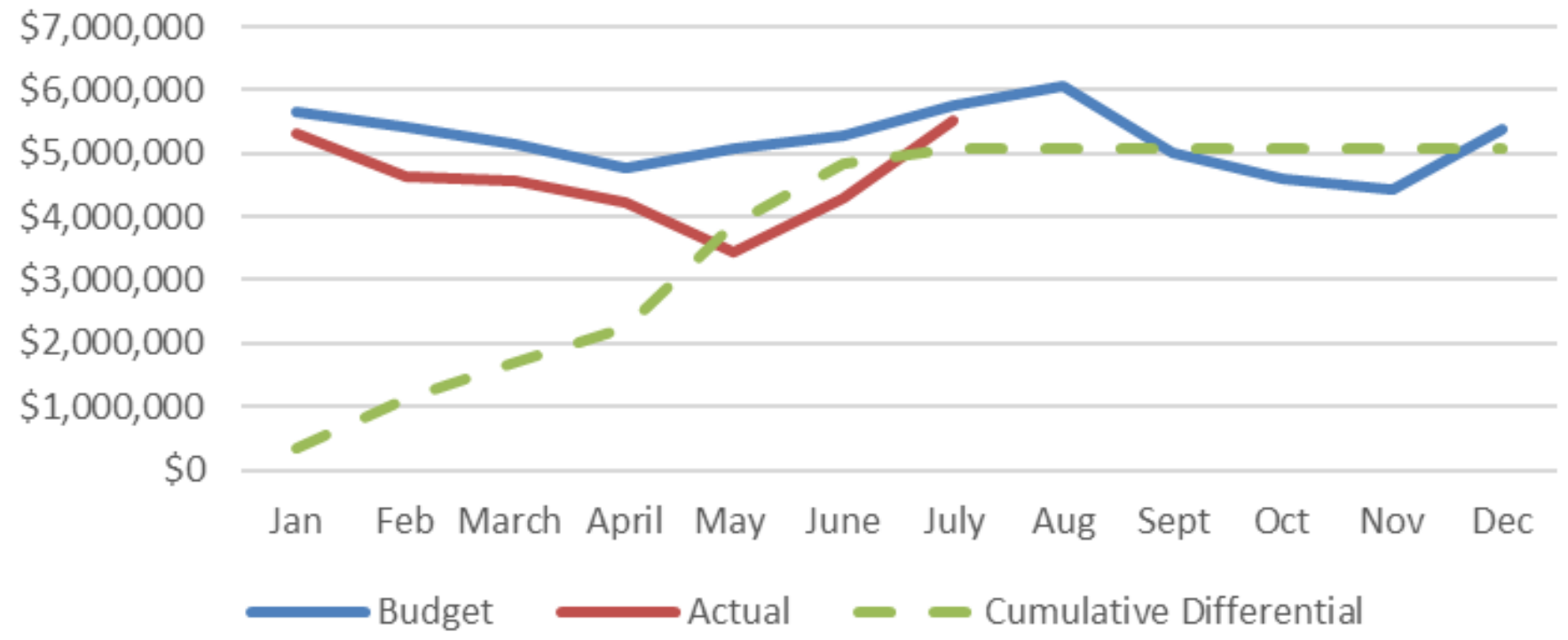


Photo courtesy of MassCEC

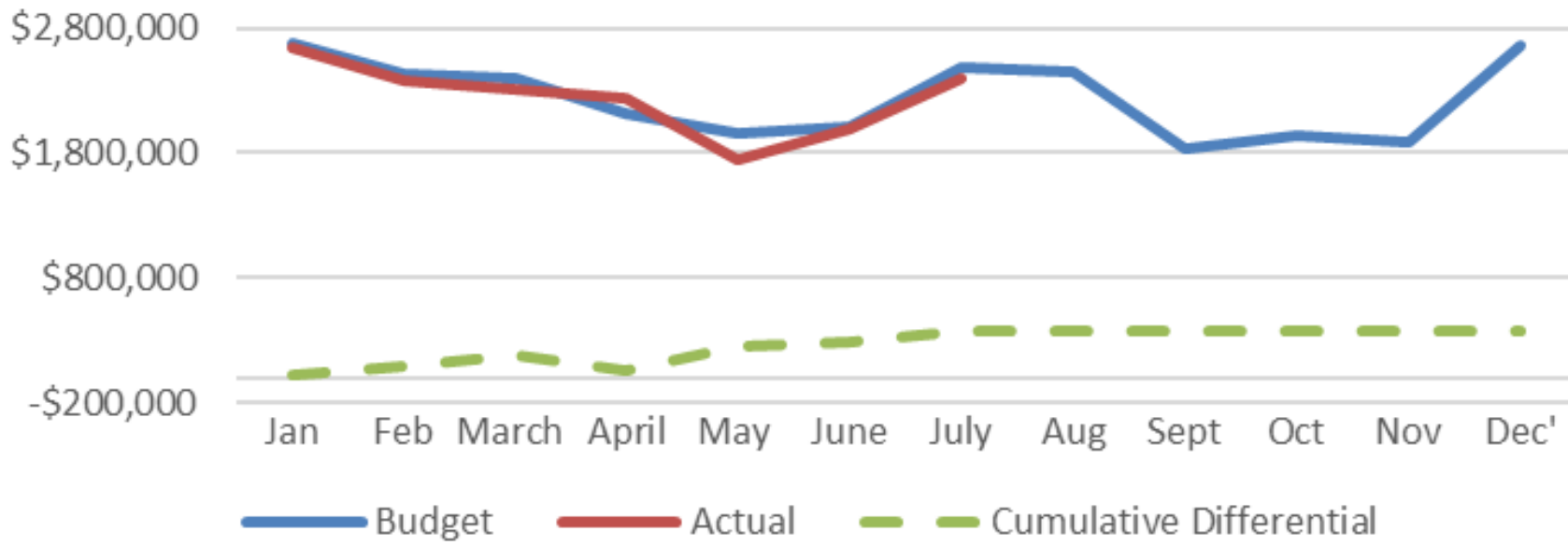
2020 RMLD Total System Loads



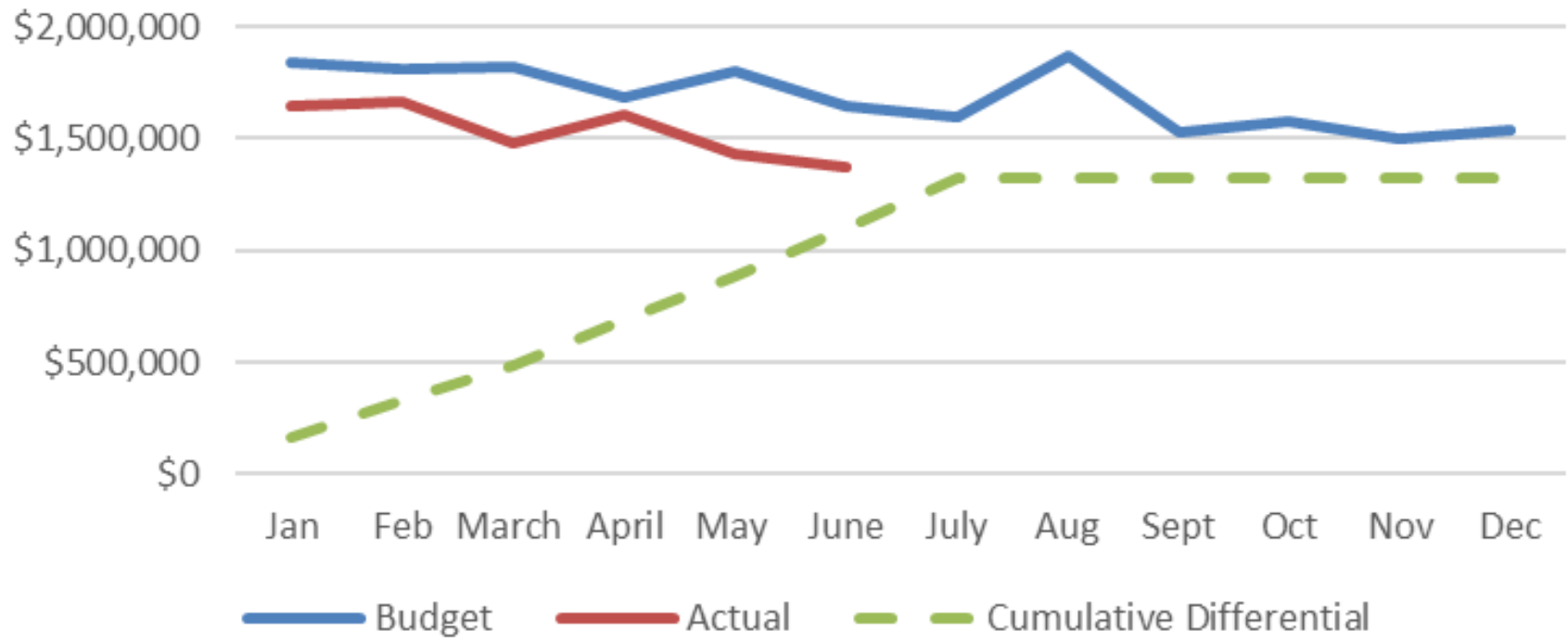
Purchase Power Expense Actual through July 2020



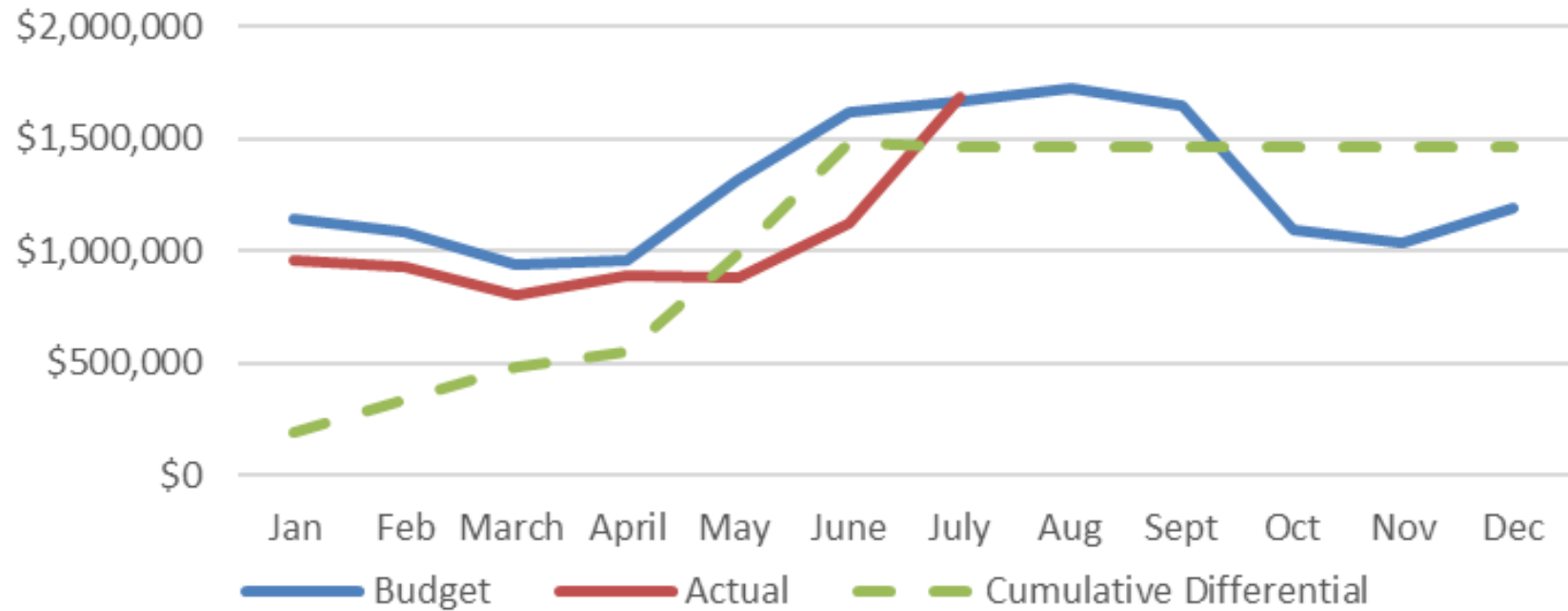
Energy Costs Actual vs. Budget Actuals through July 2020



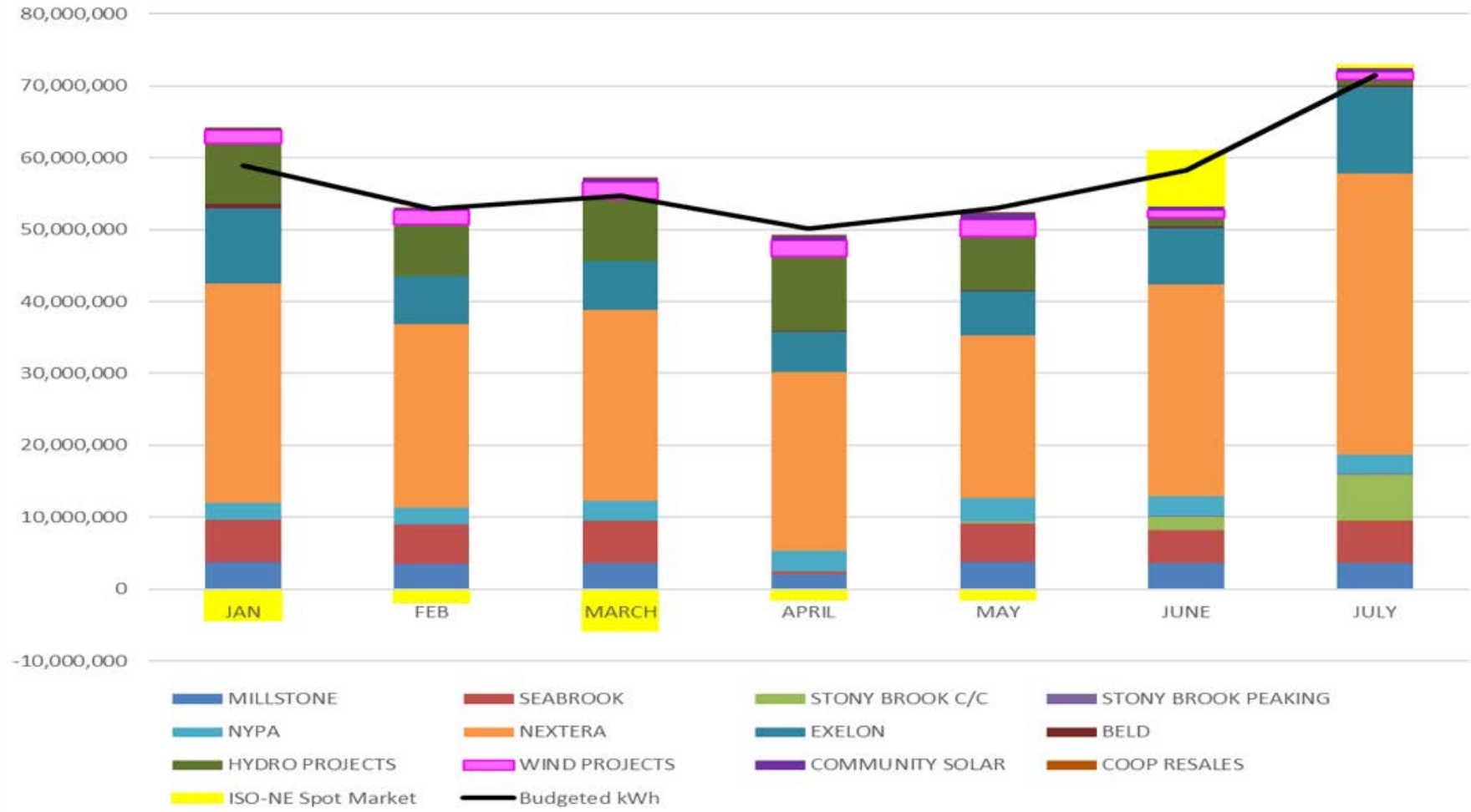
Capacity Costs Budget Vs. Actual Actual through July 2020



Transmission Cost; Budget vs. Actual Actual through July 2020



Actual Kwh Purchases by Resources 2020



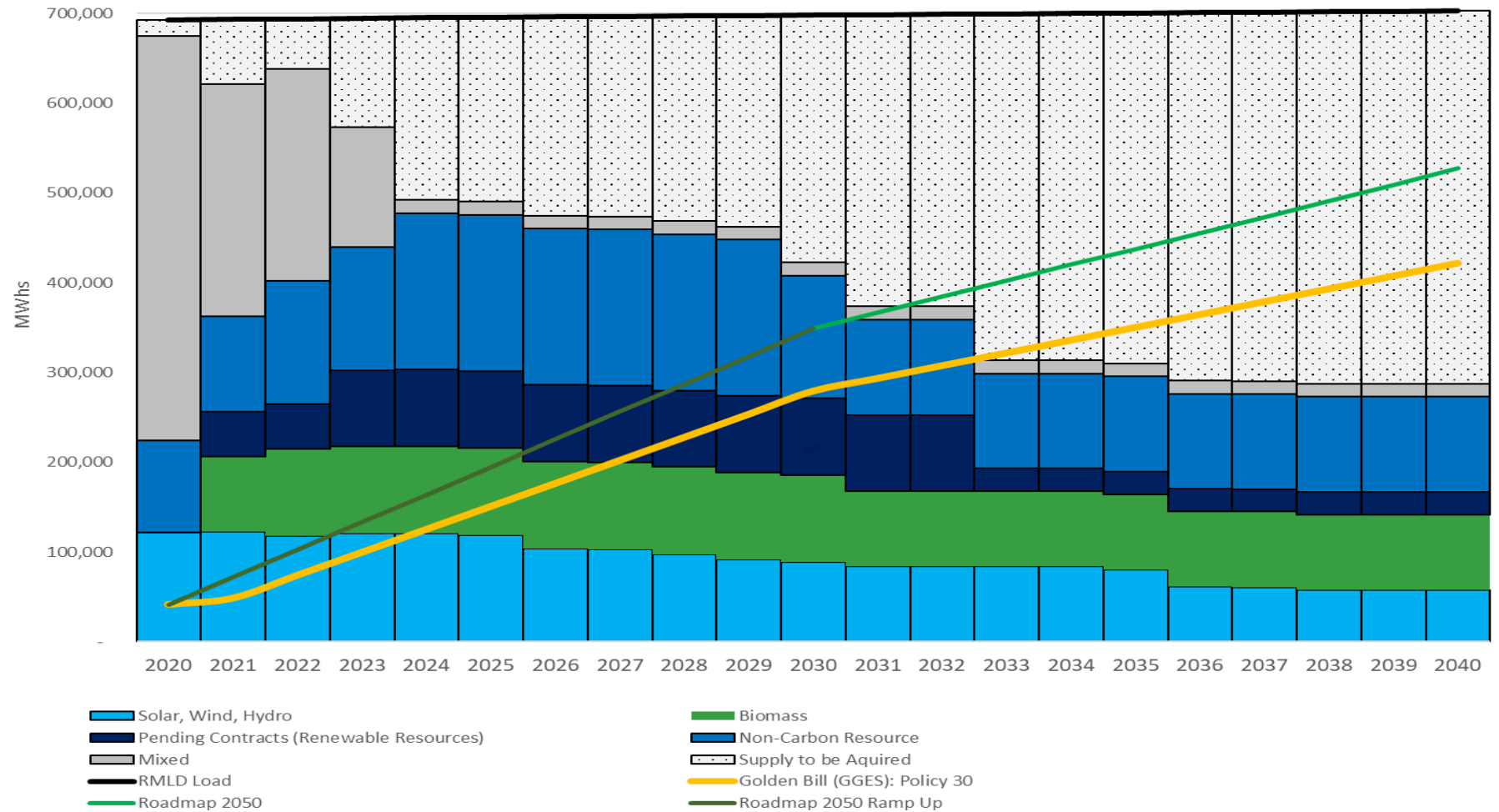


Clean Energy Standard Update

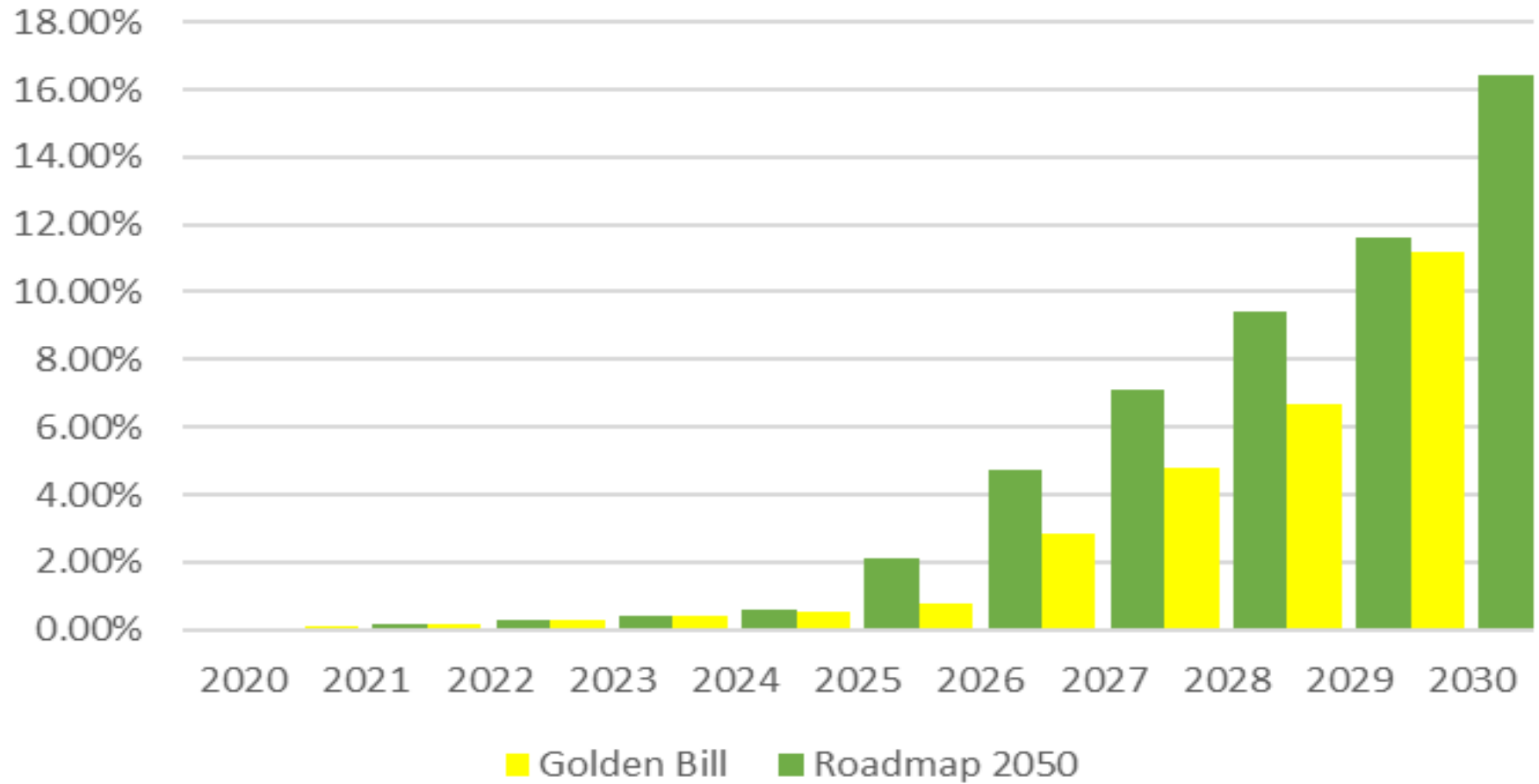
► Roadmap 2050

- Part of H4933
- Establishes horizon targets for clean energy
 - 2030 – 50%
 - 2040 – 75%
 - 2050 – 100%
 - Undefined for intervening periods
- Becomes effective upon signature of governor

RMLD Power Supply: Outlook Through 2040



RMLD RECs Estimated Impacts on Retail Rates





Clean Energy Standard Next Steps

► Upon signature by the governor:

- Identify conformance issues with RMLD's Sustainability Policy #30
- Develop recommendations for RMLD Compliance Plan and action items
 - Identify alternatives and associated financial impacts
 - Identify Strategic Plan objectives and IRD Road Map to integrate existing program activity

Clean Energy Policy_____
General Manager_____
Per Board Vote
Chairman/Date**I. PURPOSE**

- A. To develop a practical approach to addressing the need for clean (non-carbon) energy alternatives that are energy efficient while simultaneously balancing power supply costs and coordinating with electrification efforts.
- B. To establish general guidelines that promote practical, cost effective energy alternatives.
- C. To comply with the statutory requirements of Roadmap 2050 as they pertain to Massachusetts MLPs.

II. RESPONSIBILITIES

- A. RMLD Board of Commissioners
 - 1. Responsible for approving this policy.
 - 2. Review all recommended clean energy alternatives and ensure that they meet the policy guidelines and legislative definitions.
- B. General Manager
 - 1. Responsible for implementing this policy.

III. POLICY ELEMENTS

- A. The RMLD is striving to develop a practical approach to addressing the need for energy alternatives while simultaneously balancing power supply costs and electrification efforts. Clean energy meets the needs of the present without compromising future generations. For purposes of this policy, clean energy shall be defined as energy produced by a Non-emitting Electricity Generator, as that term is defined in 310 Mass. Reg. 7.75 (hydro, nuclear, ocean, solar, or wind), or a "renewable energy generating source", as that term is defined in G.L. c. 25A, §11F, with or without associated Renewable Energy Certificates (RECs). G.L. c. 25A §11F(b) states that a "renewable energy generating source is one which generates electricity using any of the following: (1) solar photovoltaic or solar thermal electric energy; (2) wind energy; (3) ocean thermal, wave or tidal energy; (4) fuel cells utilizing renewable fuels; (5) landfill gas; (6) waste-to-energy which is a component of conventional municipal solid waste plant technology in commercial use; (7) naturally flowing water and hydroelectric; (8) low emission advanced biomass power conversion technologies using fuels such as wood, by-products or waste from agricultural crops, food or animals, energy crops, biogas, liquid biofuel including but

not limited to biodiesel, organic refuse-derived fuel, or algae; or (9) geothermal energy.”

- B. RMLD will review the power supply portfolio from time to time with the intention of meeting specific clean energy target percentages from a combination of Non-emitting Electricity Generators and renewable energy generating sources. Specifically, RMLD will strive to reach 50 percent clean energy goals by 2030, 75 percent clean energy goals by 2040, and 100 percent clean energy goals by 2050. These target percentages and dates were established by the legislature under Roadmap 2050 and will be reviewed by the RMLD Board of Commissioners annually as needed.
- C. The RMLD will analyze power supply projects with a competitive average power supply cost and positive environmental/stewardship impacts. Only projects that meet this criterion will initially be brought to the General Manager for further review.
- D. Massachusetts law requires the RMLD to participate in a Clean Energy Standard (CES) Program, currently designated as Roadmap 2050. In the event the compliance standard changes over time, RMLD will review and make appropriate adjustments to this Policy and the RMLD’s power supply portfolio.
- E. In the interest of providing RMLD ratepayers with a cost-effective clean energy portfolio, RMLD shall have the ability to market all or a portion of the RECs from any existing contract or potential project until the target date deadline. At such time as a Program becomes applicable to RMLD, RMLD will purchase Emissions Free Energy Certificates (EFECs) or retire RECs associated with resources in RMLD’s power supply portfolio up to the target amount in the most cost-effective manner possible, while remaining in compliance with the statutory requirements.
- F. The General Manager will report quarterly on the composition and estimated value of any Renewable Energy Certificates and Emissions Free Energy Certificates in its power supply portfolio, whether optioned, sold, or retired.

Revision No. 29 RMLD Policy No. 30 Effective Date: 11/01/2012 Review Date:

Clean Sustainable Energy Policy

11/01/12
General Manager

Per Board Vote
Chairman/Date

I. PURPOSE

- A. To develop a practical approach to addressing the need for clean (non-carbon) sustainable energy alternatives that are energy efficient while simultaneously balancing power supply costs and coordinating with electrification efforts.
- B. To establish general guidelines that promote practical, cost effective energy alternatives.
- C. To comply with the statutory requirements of Roadmap 2050 as they pertain to Massachusetts MLPs.

II. RESPONSIBILITIES

- A. RMLD Board of Commissioners
 - 1. Responsible for approving this policy.
 - 2. Review all recommended sustainable-clean energy alternatives and ensure that they meet the policy guidelines and legislative definitions.
- B. General Manager
 - 1. Responsible for implementing this policy.

III. POLICY ELEMENTS

- A. The RMLD is striving to develop a practical approach to addressing the need for sustainable energy alternatives while simultaneously balancing power supply costs and electrification efforts. Sustainable-Clean energy meets the needs of the present without compromising future generations. For purposes of this policy, clean energy shall be defined as energy produced by a Non-emitting Electricity Generator, as that term is defined in 310 Mass. Reg. 7.75 (hydro, nuclear, ocean, solar, or wind), or a "renewable energy generating source", as that term is defined in G.L. c. 25A, §11F, with or without associated Renewable Energy Certificates (RECs). RMLD shall use G.L. c. 25A to define qualifying sustainable generating sources. G.L. c. 25A §11F(b) states that a "renewable energy generating source is one which generates electricity using any of the following: (1) solar photovoltaic or solar thermal electric energy; (2) wind energy; (3) ocean thermal, wave or tidal energy; (4) fuel cells utilizing renewable fuels; (5) landfill gas; (6) waste-to-energy which is a component of conventional municipal solid waste plant technology in commercial use; (7) naturally

flowing water and hydroelectric; (8) low emission advanced biomass power conversion technologies using fuels such as wood, by-products or waste from agricultural crops, food or animals, energy crops, biogas, liquid biofuel including but not limited to biodiesel, organic refuse-derived fuel, or algae; or (9) geothermal energy." ~~A facility that converts one of the foregoing fuel or energy resources to energy is referred to as a "Renewable Generation Unit."~~

- B. ~~The~~ RMLD will review the power supply portfolio from time to time with the intention of meeting specific clean energy sustainability target percentages from a combination of Non-emitting Electricity Generators and renewable energy generating sources. Specifically, RMLD will strive to reach 50/45 percent sustainability by 2015, 20 percent sustainability by 2020 and 25 percent clean energy goals sustainability by 2030/25, 75 percent clean energy goals by 2040, and 100 percent clean energy goals by 2050. These target percentages and dates were established by the legislature under Roadmap 2050 and will be reviewed by the RMLD Board of Commissioners annually as needed. ~~Add two tiers; non-carbon and renewables; true renewables.~~
- C. The RMLD will analyze ~~sustainable~~ power supply projects with a competitive average power supply cost and positive environmental/stewardship impacts. Only projects that meet this criterion will initially be brought to the General Manager for further review.
- D. ~~— In Massachusetts law requires the RMLD to participate in a Clean Energy Standard (CES) Program, currently designated as Roadmap 2050. In the event the compliance standard changes over time, RMLD will review and make appropriate adjustments to this Policy and the RMLD's power supply portfolio, the interest of providing RMLD ratepayers with sustainable energy that is cost — effective the RMLD shall have the ability to market all or a portion of the RECs from any given potential project until the target date deadline or an RPS becomes applicable to the RMLD. At such time, the RECs will be retired up to the target amount.~~
- E. In the interest of providing RMLD ratepayers with a cost-effective clean energy portfolio, RMLD shall have the ability to market all or a portion of the RECs from any existing contract or potential project until the target date deadline. At such time as a Program becomes applicable to RMLD, RMLD will purchase Emissions Free Energy Certificates (EFECs) or retire RECs associated with resources in RMLD's power supply portfolio up to the target amount in the most cost-effective manner possible, while remaining in compliance with the statutory requirements.
~~If Massachusetts law requires the RMLD to participate in either a clean energy or renewable energy portfolio standard program, the RMLD will review and make required adjustments to this policy and the RMLD's power supply portfolio.~~
- F. The General Manager will report ~~monthly~~ quarterly on the composition and estimated value of any Renewable Energy Certificates and Emissions Free Energy Certificates in its power supply portfolio, whether optioned, sold, or retired ~~banked and projected Renewable Energy Certificates.~~

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