



Town of Reading Meeting Posting with Agenda

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2020-12-16

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. General Manager's Update – C. O'Brien, General Manager
 - Community Updates
3. Policy 30 - Power Supply Update – C. O'Brien, General Manager and
C. Underhill, Director of Integrated Resources
4. 2020/2021 Review
 - Business, Finance and Technology Review – W. Markiewicz, Director of
Business, Finance and Technology
 - Engineering & Operations – H. Jaffari, Director of Engineering & Operations
 - Integrated Resources – C. Underhill, Director of Integrated Resources
5. Scheduling: CAB Meetings & Coverage for Commissioners Meetings – J. Small, Chair
6. Adjournment – J. Small, Chair

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.

Attachment 1:

Agenda Item 3: Policy 30 – Power Supply Update

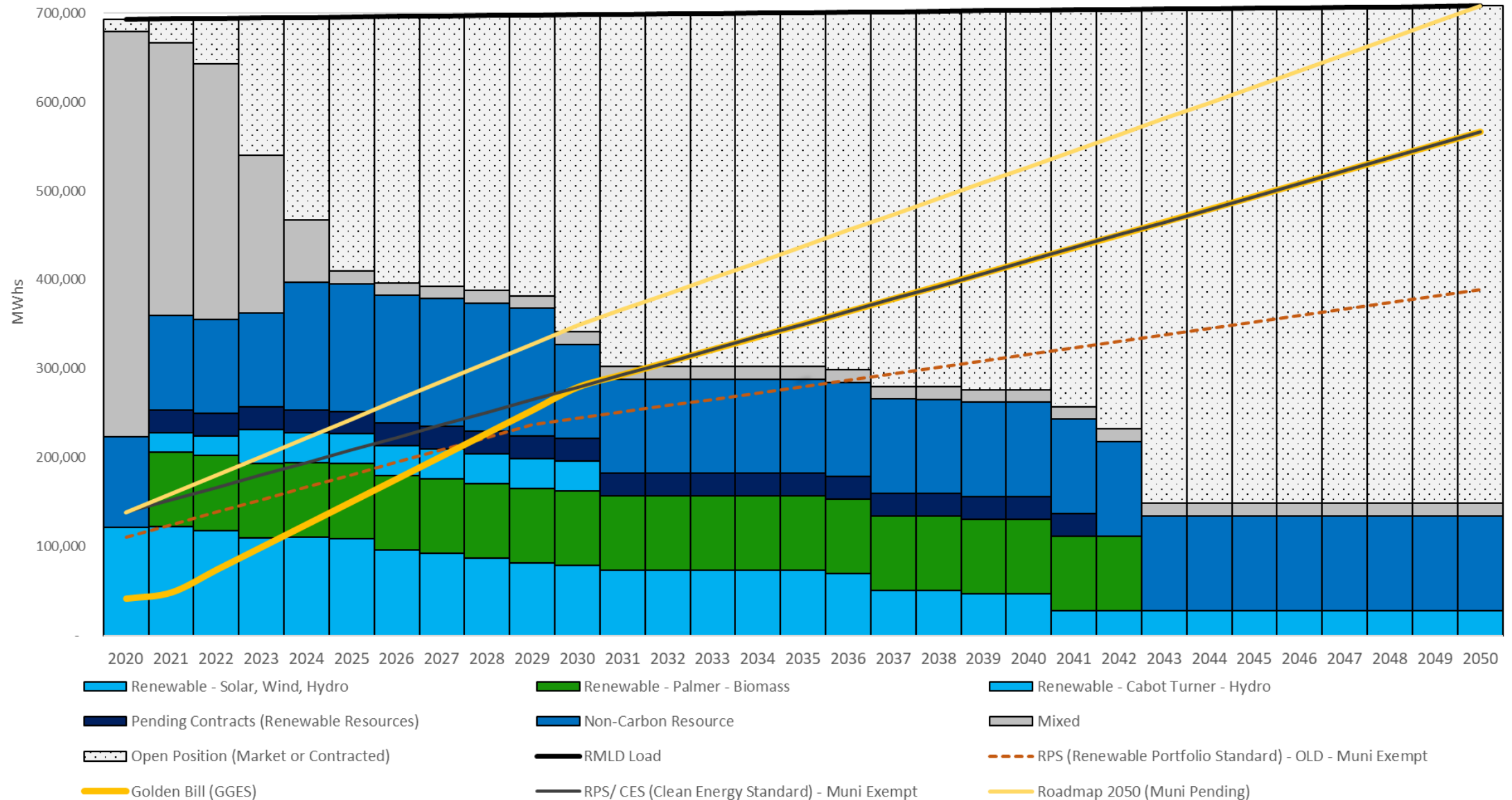
Policy 30 Discussion

RMLD Citizens' Advisory Board

December 16, 2020

RMLD Power Supply: Outlook Through 2050

Net Zero Carbon (GHG Emissions)



RMLD – Current Comparisons

| RMLD - RPS/CES Compliance Comparison | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| RMLD Portfolio - Current | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| MA Class 1 | 0.3% | 0.3% | 0.3% | 0.3% | 3.0% | 3.0% | 2.7% | 2.7% |
| Other Class 1 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| MA Class 2 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Other Class 2 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Hydro - no REC | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Solar - no REC | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| SREC (Solar)*** | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| CPS | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| APS | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| EFECs | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| CES-E (EFECs)*** | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Total | 0.3% | 0.3% | 0.3% | 0.3% | 3.0% | 3.0% | 2.7% | 2.7% |

| RMLD - RPS/CES Compliance Comparison (w/o REC RPS match) | | | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| RMLD Portfolio - Current | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| MA Class 1 | 0.3% | 0.3% | 0.3% | 0.3% | 3.0% | 3.0% | 2.7% | 2.7% |
| Other Class 1 | 2.7% | 2.7% | 7.7% | 20.7% | 18.0% | 17.0% | 18.3% | 18.3% |
| MA Class 2 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Other Class 2 | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Hydro - no REC | 14.0% | 18.0% | 17.0% | 18.0% | 14.0% | 14.0% | 12.0% | 12.0% |
| Solar - no REC | 1.0% | 1.0% | 1.0% | 3.0% | 6.0% | 6.0% | 5.0% | 5.0% |
| SREC (Solar)*** | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| CPS | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| APS | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| EFECs | 15.0% | 16.0% | 21.0% | 21.0% | 27.0% | 28.0% | 27.0% | 27.0% |
| CES-E (EFECs)*** | 0.0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Total | 33.0% | 38.0% | 47.0% | 63.0% | 68.0% | 68.0% | 65.0% | 65.0% |

| IOU - MA RPS/CES | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| MA RPS/CES Requirements | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| Class 1* | 15% | 17% | 19% | 22% | 24% | 27% | 29% | 33% |
| Class 2** | 7% | 7% | 7% | 7% | 7% | 7% | 7% | 7% |
| SREC (Solar)*** | 5% | 6% | 5% | 5% | 4% | 3% | 3% | 1% |
| CPS | 2% | 3% | 5% | 6% | 8% | 9% | 9% | 9% |
| APS | 5% | 5% | 6% | 6% | 6% | 6% | 7% | 7% |
| CES-E (EFECs)*** | 0% | 20% | 20% | 21% | 21% | 21% | 21% | 21% |
| Total | 33% | 57% | 61% | 66% | 70% | 73% | 76% | 78% |

*Incremental CES requirement is included in Class I RPS

**Class II includes Class II Waste Energy, Hydro; requirements for 2023-2027 are TBD and simply rolled forward

***SRECs (Solar) include both SREC I and SREC II

****CES-E not applicable prior to 2021; TBD from 2024-2027 and simply rolled forward

RMLD – Roadmap 2050

| | <i>RMLD - Roadmap 2050 100% non-carbon</i> | | | | |
|--------------|---|-------------|-------------|-------------|-------------|
| | | 2020 | 2030 | 2040 | 2050 |
| | Roadmap 2050 non-carbon goal | 20% | 50% | 75% | 100% |
| | | | | | |
| RMLD current | non-carbon | 32% | 46% | 36% | 18% |
| | | 12% | -4% | -39% | -82% |
| RMLD current | carbon | 66% | 2% | 2% | 2% |
| RMLD current | open | 2% | 52% | 62% | 80% |



Next Steps – Educational Discussions

Economic implications – Dec 16th BoC meeting

RPS/CES and Roadmap 2050 consultant workshop – Jan 2021 BoC meeting

Policy 30 reformation and vote - TBD

Policy 30 Discussion



RMLD Board of Commissioners and Citizens' Advisory Board

16 December 2020 via Zoom

Context –Roadmap 2050 and RPS/CES

Roadmap 2050 – pending MLP statutory requirement for clean energy, specifically, non-carbon emitting where non-carbon emitting consists of RECs, or measured reduction of GHG, or CECs purchased and then retired

RPS/CES – existing IOU statutory requirements for clean energy with annual increases;
CES additive to RPS requirements, and broadened sources, made clarifications;
IOU's buy system energy, then separately buy RECs
MA Class 1 and CES-E comprise bulk of RECs purchased

| <i>RMLD - Roadmap 2050 100% non-carbon</i> | | | | |
|--|------|------|------|------|
| | 2020 | 2030 | 2040 | 2050 |
| Roadmap 2050 non-carbon goal | 20% | 50% | 75% | 100% |
| | | | | |
| non-carbon | 32% | 46% | 36% | 18% |
| | 12% | -4% | -39% | -82% |
| carbon | 66% | 2% | 2% | 2% |
| open | 2% | 52% | 62% | 80% |

| <i>IOU - MA RPS/CES</i> | | | |
|-------------------------|------|------|------|
| MA RPS/CES Requirements | 2020 | 2021 | 2022 |
| Class 1* | 15% | 17% | 19% |
| Class 2** | 7% | 7% | 7% |
| SREC (Solar)*** | 5% | 6% | 5% |
| CPS | 2% | 3% | 5% |
| APS | 5% | 5% | 6% |
| CES-E (EFECs)*** | 0% | 20% | 20% |
| Total | 33% | 57% | 61% |

Roadmap 2050 Compliance Cost Impact

RMLD portfolio non-carbon compliant through 2029

RECs to be retired

| non-carbon | | 2021 | 2022 | 2023 | 2024 |
|------------|--|--------------|--------------|--------------|--------------|
| | unit price (\$/MWH) | \$1.91 | \$1.91 | \$1.91 | \$1.91 |
| | required for non-carbon compliance (count) | 159,515 | 180,447 | 201,409 | 222,400 |
| | | | | | |
| | value (\$) | \$304,673 | \$344,654 | \$384,691 | \$424,783 |
| | | | | | |
| | compliance value (\$) | \$304,673 | \$344,654 | \$384,691 | \$424,783 |
| | | | | | |
| | operating revenues budget (\$) | \$92,092,414 | \$92,726,173 | \$93,461,603 | \$94,473,006 |
| | compliance cost / budget (%) | 0.3% | 0.4% | 0.4% | 0.4% |

*RECs already
contracted*

*No additional RECs
required for
compliance*

RPS / CES Compliance Cost Impact

RPS / CES compliance not MLP statutory requirement

RMLD portfolio designed for non-carbon and renewable in Policy 30 (not RPS/CES)

Compliance would require additional REC, alternative REC, CES-E (EFEC), etc., see RPS chart - slide 2

The following table represents the cost impact for just the MA Class 1 REC requirement

| MA Class 1 REC | | 2021 | 2022 | 2023 | 2024 |
|---|--------------------------------|--------------|--------------|--------------|--------------|
| | unit price (\$/MWH) | \$43.00 | \$41.50 | \$34.00 | \$32.00 |
| required for RPS/CES compliance (count) | | 152,579 | 166,566 | 180,573 | 194,600 |
| | value (\$) | \$6,560,901 | \$6,912,507 | \$6,139,492 | \$6,227,189 |
| currently contracted (\$) | | \$99,329 | \$95,740 | \$78,336 | \$73,632 |
| net required for compliance (\$) | | \$6,461,572 | \$6,816,767 | \$6,061,156 | \$6,153,557 |
| | operating revenues budget (\$) | \$92,092,414 | \$92,726,173 | \$93,461,603 | \$94,473,006 |
| compliance cost / budget (%) | | 7.0% | 7.4% | 6.5% | 6.5% |

*Compliance would add
~\$6.3M annual costs
or ~7% to customer billing*

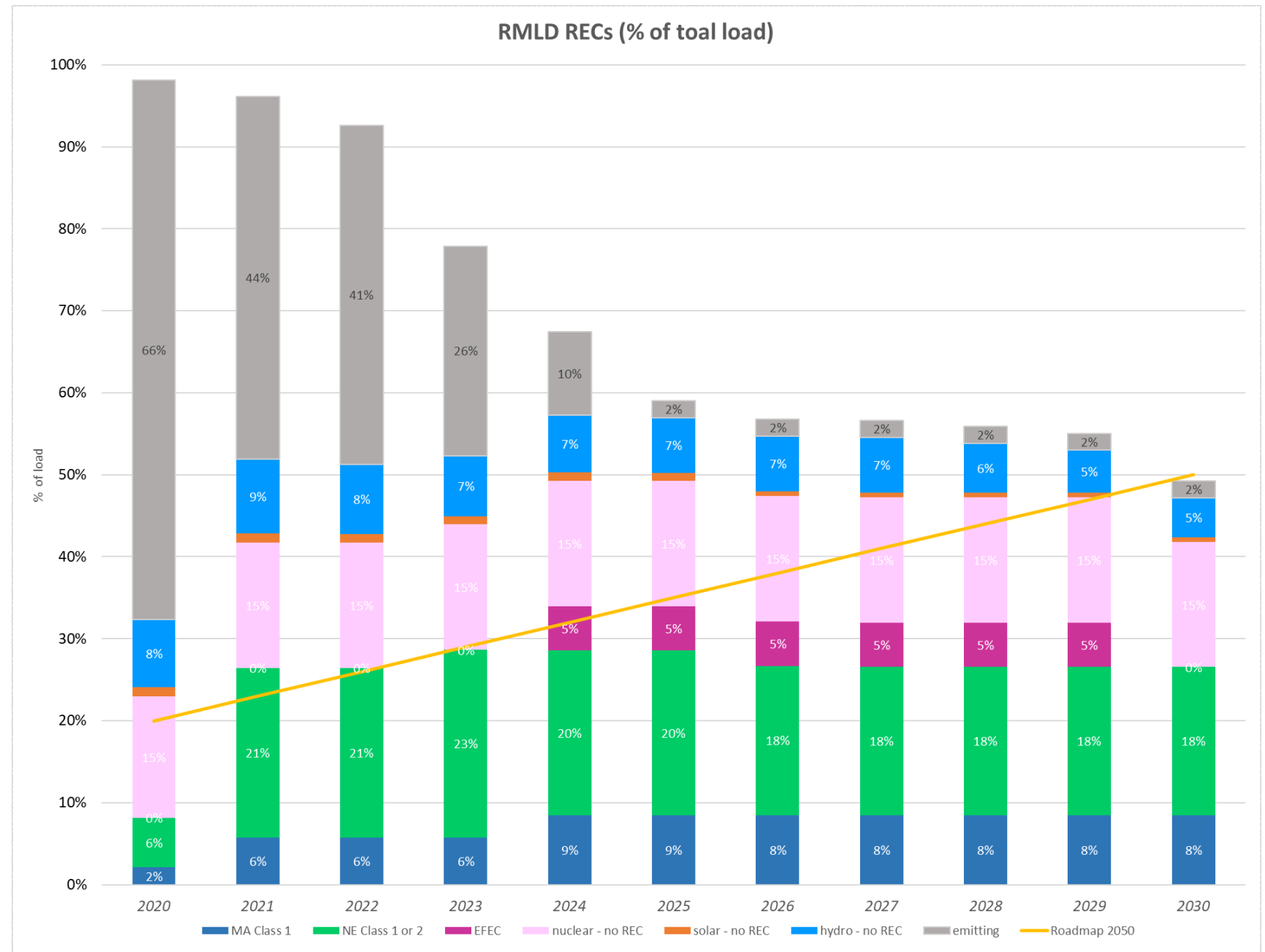
RMLD Position



Much of RMLD non-carbon portfolio currently have no RECs

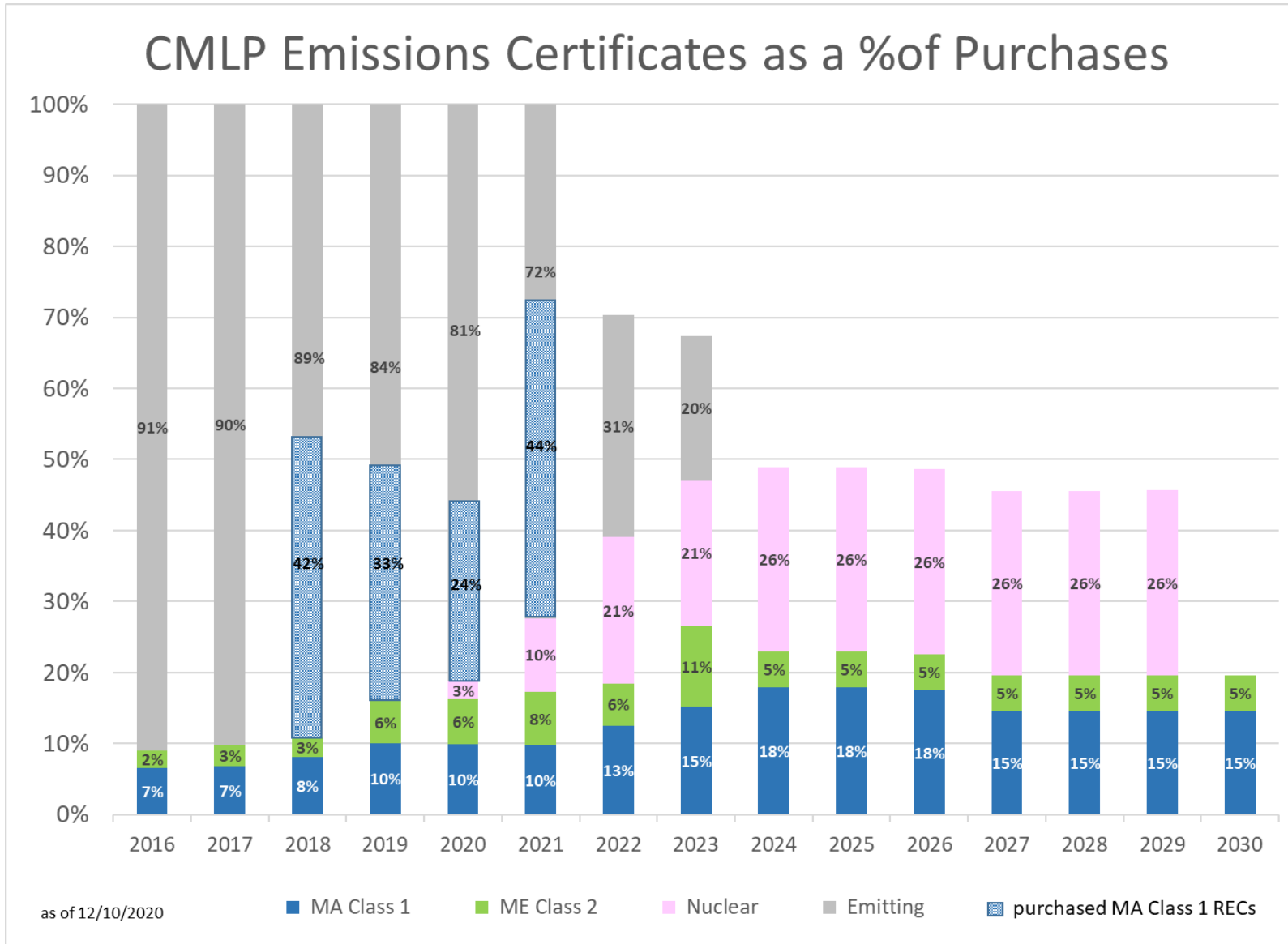
Several non-carbon asset do not issue RECs

No RECs purchased to cover carbon position



CMLP REC Procurement Development

from CMLP



- CMLP is gradually increasing its contracted power purchases that include RECs
- Increasing market prices for MA Class 1 RECs reduced the quantity of non-associated RECS that CMLP was able to purchase in 2019 and 2020
- In 2021 a rate increase will **double** the amount of money available to purchase renewable energy; resulting in an expected increase in the number of non-associated RECs acquired and the total percentage of purchases for which CMLP retires certificates

Attachment 2:

Agenda Item 4: 2020/2021 Review

- **Business, Finance & Technology**
- **Engineering & Operations**
- **Integrated Resources**



BUSINESS, FINANCE & TECHNOLOGY

CY2020 in Review

BUSINESS



Lead Initiative
for
Paperless
Accounts Payable



Lead Initiative
for
Paperless
Payroll



Town of Reading
Quarterly
Communication



Integrated
Processes
and
Procedures



Developed
Cohesive Relationship
between
Payroll & Human
Resources

- CY2019 Audit resulted in an Unqualified Opinion (clean) after a 5-week virtual audit
- CY2019 Department of Public Utilities Annual Return filed timely
- CY2021 Capital/Operating Budget Presented and Approved
- Credit & Collections Diligence and Success Working with Customers for Continued Payments

FINANCE

TECHNOLOGY

Securing the RMLD IT Infrastructure

- ❖ Lessons Learned after Recovery from Ransomware Intrusion
 - ✓ Independent Consultant Review
 - ✓ Analysis of System Defined Roadmap
- ❖ Removed/Upgraded Machines with Outdated Operating Systems
- ❖ Strengthened User Level Security
 - ✓ Modified Permission Levels
 - ✓ Implemented Stronger Password Requirements
- ❖ Conducted Full Inventory of IT Assets
- ❖ Monitor/Maintain IT Assets
 - ✓ Ensure Proper Security Updates/Patches

CY2021 GOALS

BUSINESS

- Cohesive Relationship with all Divisions
- Integrated Processes and Procedures Cont'd
- Paperless Efficiency and Training Efforts Cont'd

FINANCE

- CY2020 Unqualified Audit Opinion
- Credit & Collections Succession
- Billing Succession

TECHNOLOGY

- Secure New IT management
- Migrate Billing Software to Cloud Solution
- Upgrade Firewalls, Expand Coverage of Protection at RMLD Substations in line with NERC Compliance
- Investigate Organizational Software Integration Initiative



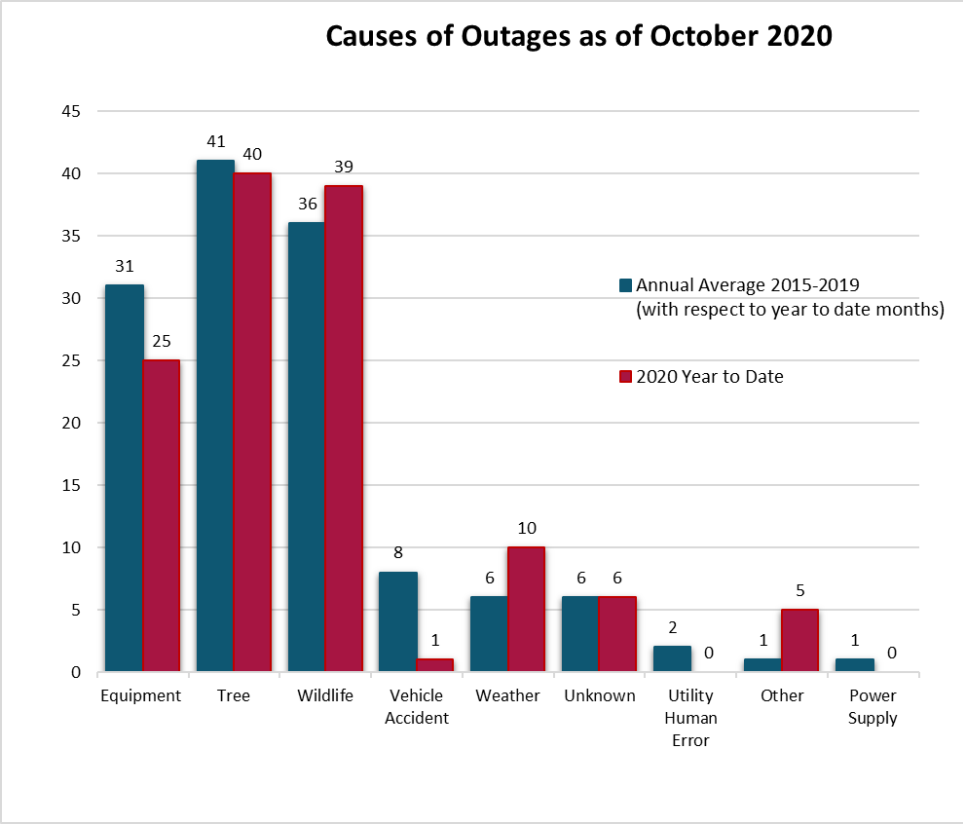
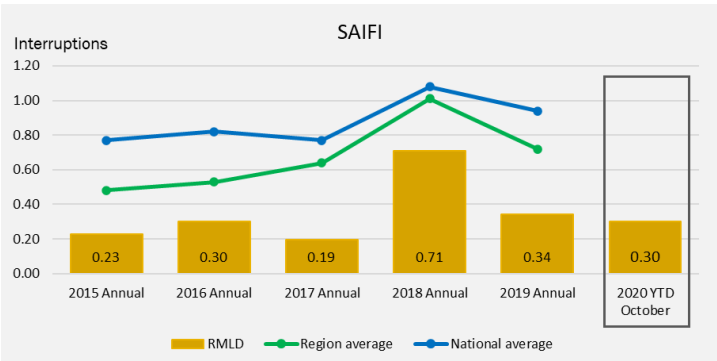
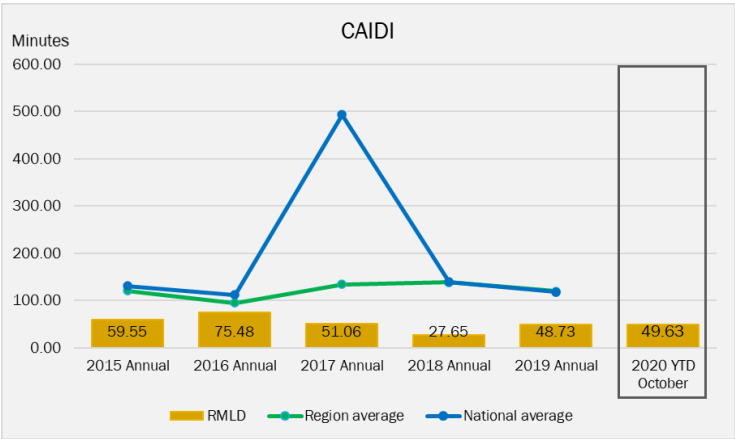
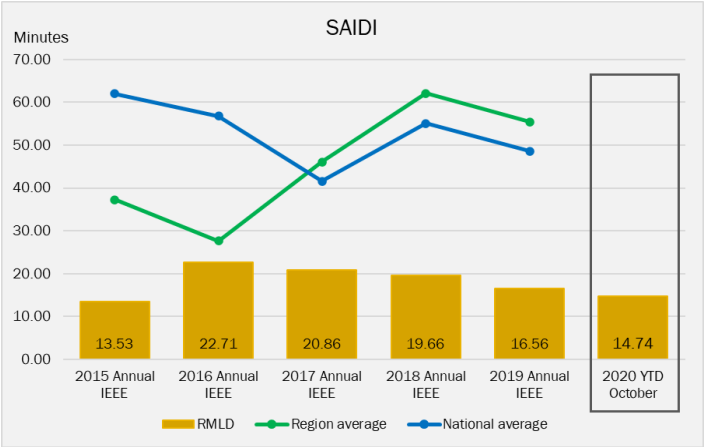
ENGINEERING & OPERATIONS

Working to Maintain A Reliable Electric Service

By: Hamid Jaffari
Director of E&O



SYSTEM RELIABILITY



MAINTENANCE PROGRAMS

- Tree Trimming
- Pole Inspection/Replacement
- Porcelain Cutout Replacement
- Manhole Inspections
- Feeder Inspections
- Primary Metering Inspection and Testing



LONG- TERM RELIABILITY PROJECTS

Aged Transformer Replacement

13.8kV (Step-down) Upgrades

Overhead and Underground
Facilities Upgrades

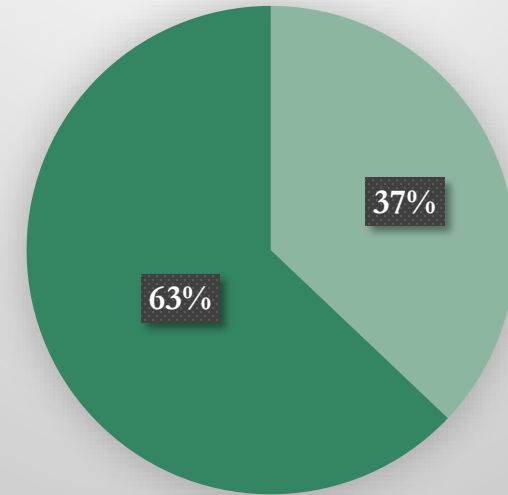
Grid Modernization

Pad-mount Switchgear
Replacement

AGED TRANSFORMER REPLACEMENT



4,077 Transformers
System Wide
As of November 19, 2020



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

Aged Transformers Replaced as Part of Reliability Projects

2020 (through October)

- ✓ 11 Pad-mount Transformers Replaced
- ✓ 77 Overhead Transformers Replaced

2021 Goal: Replace 100 Transformers

2020 13.8kV STEP- DOWN AREA UPGRADES

2021 GOALS

Complete North Main Street/
Lowell Street (Lynnfield) Area
plus
two additional areas TBD

North Main Street/Lowell Street Area
Lynnfield (**In-progress**)

Dogwood Lane/Adams Street Areas
North Reading

Thomas Road Area
Lynnfield

Melch Road Area
Lynnfield

Carson Avenue
Wilmington

2020 OVERHEAD AND UNDERGROUND AREA UPGRADES

2021 GOALS
three areas TBD

OVERHEAD

Parkview Road
Reading

Deborah Drive/Applegate Lane/Covey Hill Road
Reading

Kenwood Road
Wilmington

UNDERGROUND

Greenbriar Drive
North Reading

Westover Drive
Lynnfield

28 Manholes Replaced

GRID MODERNIZATION

2020 ACCOMPLISHMENTS

- ✓ **Four Scada-Mate Switches Installed:**
Lowell Street, Wilmington
Woburn Street, Wilmington – 2 switches
Eames Street, Wilmington
- ✓ **Two IntelliRupters Installed:**
Main Street and Eames Street, Wilmington
- ✓ **OMS/IVR**
- ✓ **Power Factor Correction**

2021 GOALS

- **Install Four Scada-Mate Switches and two IntelliRupters – locations TBD**
- **Crew Management**
- **Meter Data Management (MDM) – in collaboration with IRD**

Pad-mount Switchgear Upgrades at Industrial Parks

- Program began in FY17 and is expected to run through CY24
- Program initiated to improve reliability by replacing old and/or failing live-front units with dead-front units
- 29 Units System Wide
- 11 Switchgear have been replaced (as of 12/3/20)

2021 Goal:

8 Locations Targeted for 2021



PROJECTS & STUDIES DONE IN 2020

Meter Replacement Project - Consultant hired to evaluate meter purchase options and integration of Meter Data Management.

Distributed Energy Resources (DER) Hosting Capacity Study - Study to determine the amount of DER power generation that could be interconnected and operated in parallel with RMLD's electric distribution system without causing any adverse system impacts to safety and reliability.

Service Requirements Handbook - Revised and updated – to be finalized by the end of the year.

5G Small Cell Signaling Attachment Agreement – Template completed. Negotiations underway with AT&T and Verizon.

NERC Compliance Standards - Updated Physical and Cyber Security Requirements

2021 Electric Reliability GOALS

- **Primary Metering Inspection and Upgrade Program:** repair, upgrade and/or replace equipment as necessary based on results of assessment
- **Relay Protection Upgrades – Station 4:** Replace existing relay protection on the 211-503 and 211-504 transmission lines.
- **New Wilmington Substation:** Secure land and begin permitting and planning. Construction to begin in 2022, with commissioning by the end of 2023.
- **3W18 Getaway Improvements:** Install new underground cable from Station 3 to a new riser installed in 2020.
- **AMI Mesh Network Expansion and Meter Replacement:** Upgrade AMI mesh network and metering system per consultant recommendation.
- **Radio/Fiber Communication Study:** Consultant to perform communication study of smart grid assets and develop plan to enhance communication between various field equipment and SCADA system.

FACILITIES

2020 Accomplishments

- **Emergency Generator:** replacement generator installed at Ash Street Campus
- **Parking Lot Upgrade:** upgrade to parking facilities to include public EV charger
- **Deck (OSHA Requirement):** deck at rear of 230 Ash Street replaced
- **Roof Repair:** at 230 Ash Street
- **Security Assessment:** comprehensive assessment of physical plant security is currently underway with Burns & McDonald. Recommendations to be implemented in 2021.
- **Fleet Upgrades:** four hybrid SUVs and one eco-boost truck
- **COVID-19:** safety modifications to offices @ 230 Ash Street

- **2021 Goals**

- Substation 3 - Emergency Generator Upgrade
- Substation 4 - AC/Cooling Unit
- Fleet Upgrades
- Transformer Storage
- Lighting Upgrade (LED Fixtures)
- Security Upgrades



Thank you





RMLD IRD Accomplishments and Goals

Citizens' Advisory Board
December 16, 2020



IRD 2020 Accomplishments

- Wholesale
 - Executed non-carbon supply contracts for 25.3% of RMLD's resource portfolio
 - Demand Response savings of \$691,542
- Retail
 - Implemented or enhanced electrification/rebate programs:
 - EV chargers
 - Heat Pumps
 - Breaker panels
 - Yard equipment
 - Annual savings estimates from all programs: \$527,618
 - Paid \$500,000 solar rebates (\$250,000 from RMLD)
 - Prepared and submitted Residential Conservation Services (RCS) filing
 - Implemented tracking and reporting improvements for rebate processing
- General
 - Developed in-house and external responses to Covid-19
 - Maintained continuity of Customer Service while staff worked from home
 - Developed programs to maintain customer activities during isolation period
 - Filled 2 positions on the IRD team



IRD 2021 Goals

- Roadmap 2050
 - Identify goals and requirements
 - Establish implementation process
 - Develop monitoring and reporting
 - Support BoC as Policy 30 is updated
- Wholesale
 - Enhance resource portfolio
 - Update budget to actual and variance analysis
- Retail
 - Enhance resource portfolio
 - Finalize RCS filing
 - Develop tracking and reporting