



Town of Reading Meeting Posting with Agenda

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2022-01-20

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 AND THE JUNE 16, 2021, ACT EXTENDING CERTAIN COVID-19 MEASURES, THIS MEETING WILL BE HELD REMOTELY VIA ZOOM.

For public participation, please email: krybak@rmlid.com. Include your full name, address and telephone number.

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 September 23, 2021, and October 20, 2021, meeting as written. *Note: Roll call vote required.*
3. General Manager's Update – C. O'Brien, General Manager
 - General/Community
 - Green Communities
 - Organizational Study
4. Integrated Resources Report – G. Phipps, Director of Integrated Resources
 - Rates – Status of 2022 Rates
 - Power Supply – Status of New Supply Contracts
 - Hydro Quebec I/II Rights Extension
5. Engineering & Operations Report – H. Jaffari, Director of Engineering & Operations
6. Scheduling – J. Small, Chair
 - February CAB Meeting
 - Coverage for February Commissioners 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

7. Executive Session – J. Small, Chair

Suggested Motion: Move that the Citizens' Advisory Board go into Executive Session pursuant to Massachusetts G.L. c.164 section 47D, exemption from public records and open meeting requirements in certain instances, to discuss trade secrets or confidential, competitively sensitive, or other proprietary information and return to regular session, for the sole purpose of adjournment. *Note: Roll call vote required.*

8. Adjournment – J. Small, Chair

Suggested Motion: Move that the Citizens' Advisory Board adjourn. *Note: Roll call vote is required.*

Attachment 1: Agenda Item 2 - Approval of Minutes



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2021-09-23

Time: 6:00 PM

Building:

Location:

Address:

Session: Open Session

Purpose: General Business

Version:

Attendees: **Members - Present:**

Mr. Jason Small, Chair (North Reading); Mr. Vivek Soni, Vice Chair (Reading); Mr. George Hooper, Secretary (Wilmington)

Members - Not Present:

Mr. Dennis Kelley (Wilmington); Lynnfield Position Vacant

Others Present:

Ms. Coleen O'Brien, Mr. Brian Hatch, Ms. Kathleen Rybak

Minutes Respectfully Submitted By: Mr. George Hooper, Secretary

Topics of Discussion:

1. Call Meeting to Order – J. Small, Chair

Chair Small called regular session of the Citizens' Advisory Board to order at 6:04 PM.

2. Executive Session – J. Small, Chair

Mr. Hooper made a **motion** that the Citizens' Advisory Board go into Executive Session pursuant to Massachusetts G.L. c.164 section 47D, exemption from public records and open meeting requirements in certain instances, to discuss trade secrets or confidential, competitively sensitive or other proprietary information and return to regular session, for the sole purpose of adjournment, seconded by Mr. Soni. **Motion carried (3:0:1)** by a roll call vote of those present: Mr. Hooper, aye; Mr. Soni, aye, Chair Small, aye. Mr. Kelley was not present.

3. Adjournment – J. Small, Chair

Mr. Hooper made a **motion** that the Citizens' Advisory Board adjourn regular session, seconded by Mr. Soni. **Motion carried (3:0:1)** by a roll call vote of those present: Mr. Hooper, aye; Mr. Soni, aye; Chair Small, aye. Mr. Kelley was not present.

The CAB meeting adjourned at 6:30 PM.

As approve on _____



Town of Reading Meeting Minutes

Board - Committee - Commission - Council:

RMLD Citizens Advisory Board

Date: 2021-10-20

Time: 6:30 PM

Building:

Location:

Address:

Session: Open Session

Purpose: General Business

Version:

Attendees: **Members - Present:**

Mr. Jason Small, Chair (North Reading); Mr. Vivek Soni, Vice Chair (Reading); Mr. Dennis Kelley (Wilmington)

Members - Not Present:

Mr. George Hooper, Secretary (Wilmington); Lynnfield Position Vacant

Others Present:

Ms. Coleen O'Brien, Mr. Brian Hatch, Mr. Hamid Jaffari, Ms. Wendy Markiewicz, Mr. Gregory Phipps, Ms. Kathleen Rybak, Ms. Janet Walsh

Minutes Respectfully Submitted By: Mr. Jason Small, Vice Chair

Topics of Discussion:

1. Call Meeting to Order – J. Small, Chair
Chair Small called the meeting of the Citizens' Advisory Board to order at 6:30 PM and noted the meeting was being audio recorded. Chair Small asked all members present to state their names.

2. Approval of Minutes – J. Small, Chair
Materials: Draft Minutes from January 20, 2021, and June 3, 2021, meetings.

Mr. Soni made a **motion** that the Citizens' Advisory Board approve the minutes of the January 20, 2021, and June 3, 2021, meetings as written, seconded by Mr. Kelley. **Motion carried** (3:0:1) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

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

Ms. O'Brien reported that the Air Source Heat Pump Webinar (Residential) Owners Panel is confirmed for November 9th. It will be taped and posted on the RMLD website. Staff will also put together a webinar for the commercial heat pumps, to be announced.

Ms. O'Brien reported that she gave a presentation to the Town of Reading on the Electric Vehicle (EV) Equipment grant. Staff continues to work with the Town on the license agreement to allow the RMLD to put EV equipment on public property rather than using an easement (which would need to go to Town Meeting). Wilmington is also working on their license agreement. Ms. O'Brien noted she is hoping to use a standardized license form for this use of public land. The RMLD wants to be sure that RMLD customer money, including the State grant money, is well invested for the long-term. If within three years RMLD is asked to take a unit out, the grant money would need to be returned to the State.

Ms. O'Brien reported that the AV (conference) room is being redesigned to include technology updates to accommodate hybrid/virtual meetings. Comments on functionality will be solicited from CAB members as the CAB will be a user of the AV room once in-person meetings resume.

4. 2022 Budget Presentation

Materials: RMLD 2022 Budget; Reading Municipal Light Department CY22 Operating Budget Presentation Slides

Mr. Jaffari began the presentation with an overview of the CY22 Capital Budget Planned Programs (page 11-13 - RMLD 2022 Budget). Mr. Jaffari provided a review the Facilities projects (Lines 1-7). Of note, in CY21 a Physical Security Assessment was completed by Burns and McDonnell to identify NERC mandated compliance areas and improve existing security. These recommendations will be implemented through 2022.

Mr. Jaffari then reviewed the Electric Vehicle Supply Equipment (Line 8). For CY22 RMLD is budgeting \$744,000 on Electric Vehicle Supply Equipment (EVSE); \$177,286 is a Massachusetts Grant for level two and level three charges. RMLD plans to apply for another grant for additional chargers to be installed at retail locations and the at the Reading Library. This project supports the Climate Law electrification mandate.

Mr. Jaffari then reviewed the planned spending for Information Technology (IT) (Lines 9-14) including routine hardware and software upgrades as well as various other IT initiatives: Customer Portal Mobile Application; IT Infrastructure Enhancements to accommodate anticipated growth for system applications and databases such as TLM, AMI and MDM; and IT Security. Mr. Jaffari noted the RMLD is continually monitoring both the cyber and internal environments to assess and respond.

Mr. Jaffari noted that Line 14 (New Production Environment Disaster Recovery) represents the unbudgeted item for 2021. This project was approved by the CAB and BOC (in June 2021) and added to the CY21 Budget. Staff has provided a Project Summary and Cost Sheet for this project as reference; there are no expenses anticipated for this project as part of the CY22 Budget.

Mr. Jaffari then moved onto review of the Engineering and Operations (E&O) projects (Line 15-50), which include capital improvements related to the electric distribution system including: substation upgrades, primary metering, relay protection upgrades, pad mount switchgear, the new Wilmington substation, grid modernization and optimization, AMI mesh network expansion, transformer and meter stock (for projects), long-term upgrade reliability projects, service connections, and routine construction, as well as a State project.

Mr. Jaffari noted the increase in the budget amount for Transformers and Capacitors for Stock (CY21 to CY22), is due to increasing the transformer inventory to accommodate the Aged Transformer Replacement Program; this program will be expedited in CY22. Starting in CY22 staff will annually inspect all transformers aged 10-years and up, evaluate their physical condition and historic load data, and then schedule and prioritize replacement as needed based on the scorecard evaluation.

Mr. Jaffari concluded his presentation stating the RMLD is seeking Board approval of \$13,225,575 for the CY22 Capital Plan. Mr. Jaffari asked if there were any questions.

Mr. Soni noted that according to the information from last year's documents and this year's documents, the RMLD did not spend \$3.2 million of the Capital Budget in CY20 and will not spend \$3.1 million of the Capital Budget in CY21; have these expenses been pushed out; how does that play out over time.

Mr. Jaffari responded that the RMLD continues to look for land to purchase and construct a new Wilmington substation; these costs (purchase, construction, and commissioning) have been pushed out. Also, the AMI project was pushed out. Management requires a more thorough study; technology was on the verge of transition, so staff wants to be sure that the RMLD is proceeding appropriately.

Ms. Markiewicz began the presentation of the CY22 Operating Budget by stating when looking at the Operating Budget (which encompasses the Capital Budget), there are many components to determining what the RMLD will have available for funds and what needs to be prioritized. Slide 2: Financial Strategic Balance was reviewed. Ms. Markiewicz noted that there is a motion that

says that the rate stabilization is supposed to be \$6.5 million (plus or minus \$500,000); RMLD needs to keep within that limit.

Ms. Markiewicz then reviewed Slide 3: CY22 Operating Budget Fixed Costs. Fixed costs include power supply costs (65.82%), which have decreased by 2%. Most of this expense is in contracts with no real leeway (for budgeting purposes). This is the costs to RMLD customers (what is going to be collected from revenue). Depreciation expense of 5.52% has increased ~4% due to the continuous necessary capital investments made in the system. The voluntary payment to the Town of Reading reflects the formula change commitment. The town payments related to 2% net plant have increased approximately ~3% and that is driven by our capital projects improvements.

Ms. Markiewicz then reviewed Slide 4: CY22 Operating Budget Semi-Variable Costs. These costs represent 24% of the budget. When you look at each component of the semi-variable costs, there is not much room for adjustment. Ms. Markiewicz noted for the labor expense that there are three labor contracts that RMLD must follow. The efficiency and electrification expenses are ~3%; there was an RMLD motion to increase the efficiency and electrification charge to three-tenths of a cent to continue to support rebates.

Ms. Markiewicz then reviewed Slide 5: Significant Increase Budget to Budget, which provides a high-level look at what each cost represents in the total budget with a description of the significant increases.

Ms. Markiewicz then reviewed Slide 6: Projected Rate Increases. Ms. Markiewicz noted that the RMLD would like to balance the rate stabilization fund. Therefore, will plan to partially supplement rates with the rate stabilization fund for the first half of CY22; approximately 1.4%, or up to \$1.2 million (tentatively), depending on power supply. The second half of the year (July – December) the rates are going to stay exactly as outlined for the first half of the year, but there will be no supplement from the rate stabilization fund.

Ms. Markiewicz noted that she had completed her presentation and asked if there were any questions.

Mr. Kelley asked how the 2.2-4.7% rate increase would impact the average customer bill. Mr. Phipps responded that the residential increase will be 4.7%, which is ~\$5.81 for an average monthly bill.

Mr. Soni noted there is a 20% increase in semi-variable costs for the CY22 budget (\$22.165) versus the CY21 projected (\$18.45). In prior years it was flat, so that is a huge increase. In an environment where RMLD is going to be increasing rates, what are the consequences of taking a less aggressive stance on everything that is being planned.

Ms. Markiewicz responded that the budgets are set with the information available at the time, and in CY20 COVID really impacted those assumptions. The RMLD has been hindered in many areas including construction and hiring. CY21 has been up and down relative to regulations around COVID, and the RMLD has not been able to do as much as expected. Therefore, it is anticipated 2021 will come in under budget. It is unfortunate that RMLD finds itself in this situation, but that's the reason behind it.

Ms. Markiewicz noted the RMLD has not raised rates since 2018. Power supply drives a lot of those increases. The RMLD cannot sustain the infrastructure without having a budget that supports it.

Ms. Markiewicz stated the RMLD is very fortunate to have the ability to reserve the funds for capital, but at the same time the RMLD needs to meet the demands of the organization. The RMLD is adding more staff to meet the demands of the strategic planning. The Climate Law is putting a lot of demand on Integrated Resources as well as customer service, making all necessary changes and implementing best business standards.

Mr. Soni responded, speaking for Reading, the Town really cares about the climate aspect, but at the same time, people will be sensitive to the fact that there's a huge increase in the semi-variable spending. I wanted to make sure that questions were asked.

Chair Small noted if there was no more discussion, that he would entertain motions.

Mr. Soni made a **motion** that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2022 Operating Budget with a Net Income of \$2,533,060 as presented, seconded by Mr. Kelley. **Motion carried 3:0:1** (3 in favor, 0 opposed, 1 absent) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

Mr. Soni made a **motion** that the Citizens' Advisory Board recommend to the RMLD Board of Commissioners the Calendar Year 2022 Capital Budget in the amount of \$13,225,575 as presented. Any significant changes are to be submitted to the CAB for review and recommendation, seconded by Mr. Kelley. **Motion carried 3:0:1** (3 in favor, 0 opposed, 1 absent) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

Ms. O'Brien noted that she would follow-up with Mr. Hooper on the 2022 budget presentation, and thanked Mr. Jaffari and Ms. Markiewicz, as well as the other senior management for their presentations and contributions to the 2022 Budget.

5. Integrated Resources Report – G. Phipps, Director of Integrated Resources
Materials: RMLD Rates 2Q21 Certificates, Wind Power - BOC and CAB Meetings 20-21 October 2021 Presentation Slides

Mr. Phipps began his presentation with a review of Slide 3: Summary of Changes Rate Classes - 2022, which summarizes what was presented at the August and September (CAB/BOC) meetings. Tonight's meeting will focus on the five major rate classes: Residential A, Residential TOU A, Commercial C, Industrial TOU, and School. One of the goals with these rate changes for 2022 is to cover the Budget that was just presented, which includes the initial investment in distribution investment to support upcoming load growth due to electrification.

Mr. Phipps then referenced Slides 8-12, which details, by rate class, the components of the rate and the impact of the proposed increases on an average customer bill. Slide 4: Overview 2022 Rate Recommendations summarizes this information (highlighted in the box at the center of the slide). Mr. Phipps noted the key takeaways are that the increases are very modest, are driven by the Climate Law (driving electrification and load growth), and are intended to dampen any rate shock in the near-term future. Ms. O'Brien added that the RMLD just completed a class cost of service study, which the RMLD is committed to do every three years. By law, the RMLD must get back the RMLD's cost of production. A class cost of service study looks at the rate-of-return for each rate, i.e., if the residential rates are being subsidized a little bit too much and should be closer to a zero rate-of-return. This is why the (percentage) adjustments are not the same for every class/rate, and why, in addition to the Climate Law, there are rate adjustments needed.

Mr. Soni noted that for last year's budget, kWh sales were forecast to be flat over the next six years. This year it is showing growth in kWh sales. How does the Climate Law (and electrification) impact that growth; how much will clean energy certificates impact cost increases going forward? Mr. Soni noted the Town of Reading is very supportive of a lot of climate initiatives and there are costs associated with certificates. There needs to be some recognition of what those costs are.

Mr. Phipps responded that the Climate Law effect has already started, but the next threshold is in 2030. With RMLD Policy 30, Rev. 1, RMLD agreed to a 3% increase (certificate retirement) from the 20% requirement in 2020 up to the 50% requirement in 2030. Each year the RMLD will do a 3% increase in the annual amount of certificates retired. This year (2021), RMLD is retiring 23% of their certificates, based on kWh sales. Beginning in 2022, it will be 26% and increment up 3% annually (certificate retirement). Staff estimates that in the 2022 Budget those certificates are not significant but is about 5% of the cost when RMLD gets to 2025, and will continue to grow and become a significant portion when RMLD gets out to 2030 and beyond.

Mr. Soni noted budgets are going from ~\$85 million to ~\$110 million and staff report part of that is an increase in load, but also increase in costs. Mr. Phipps responded that increased loads are driving increased costs.

Mr. Phipps moved to Slide 5: 2Q21 Certificates – Quarterly Report. Beginning in 2021, RMLD began reporting certificates transactions on a quarterly basis. Currently the RMLD preference is to buy certificates with energy (associated certificates). Currently, a little over 40% of our

energy purchases include certificates. The policy put in place in February 2021 is to retire on a quarterly basis 23% of whatever our retail sales are, which in 2Q21 was just under 36,000, and then sell the rest. Because the RMLD must focus on compliance and minimize rate increases, the RMLD is selling the more expensive ones and retire the less expensive ones. RMLD will net out (in 2021) roughly \$2 million in contribution from selling those certificates, which directly reduces our power supply costs, specifically fuel charges. Moving forward to 2025 and up to 2030, the certificate retirement rate increases each year and the RMLD will retire more certificates. The net cost of certificates will start to become an incremental cost and it will become noteworthy. Mr. Phipps noted staff is keeping track of what the forecast value of all the different certificate categories are. In effect, managing our power portfolio, and now also actively managing the certificate portfolio. The RMLD is now under compliance requirements by the Climate Law and Policy 30 to hit targets each year. Under the current structure, the RMLD will not have to buy certificates in the open market until 2030 or 2031. Mr. Phipps noted the RMLD is aggressive in terms of finding projects with associated certificates because there's an economic benefit of putting the two together as opposed to going to the open market to buy certificates alone.

Mr. Phipps asked if there were any more questions relative to the rates. There were not.

Mr. Kelley made a **motion** that the Citizens' Advisory Board recommend that the Board of Commissioners vote to accept the General Manager's recommendation to replace the following MDPU rates effective on billings on or after January 1, 2022: Replace 279 Residential Schedule A with 296; Replace 280 Residential Time of Use Schedule A2 with 299, Replace 282 Commercial Schedule C with 297, Replace 283 Industrial Time of Use Schedule I with 298, Replace 284 School Schedule SCH with 300, seconded by Mr. Soni. **Motion carried 3:0:1** (3 in favor, 0 opposed, 1 absent) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

Ms. O'Brien stated that the rates and supporting documents will be posted on the website. Additionally, Ms. Markiewicz will provide a memo to the towns (once the Board votes on the Budget and rates) with rate projections that will segue into the towns' fiscal years (these rates start 2022, and then the town fiscal year will go until July 1, 2023). This is a forecast; the RMLD does its best to look at all of the analysis for projecting out 18 months.

2021 Q2 Certificate Update:

2Q21 Certificates – Quarterly Report (Slide 5) was discussed as part of rate summary discussion. Mr. Phipps added that these (certificates) are required for MLPs as part of the Climate Law. If the RMLD does not fulfill our compliance obligations, there is an alternative compliance payment that is at the rate of \$10 a megawatt hour; RMLD wants to make sure to stay in compliance. This requires active management of certificates on an ongoing basis. Management is committed to reporting on these certificates on a quarterly basis.

Power Supply Agreement – Offshore Wind Opportunity (Slide 6)

Mr. Phipps reported that RMLD is seeking permission to pursue a very small (25 megawatt) offshore wind project with Commonwealth Wind. Energy New England is the lead on this project, and RMLD would need to bid in (through a lottery) along with other MLPs. This would get the RMLD in the door for this and other projects. Mr. Phipps noted MLPs have limited opportunity to get into these wind projects, therefore, as part of this request, management is seeking an umbrella request to pursue and to engage in offshore wind projects as they become available; no more than 15% of the portfolio, over the next 24 months.

Mr. Phipps noted there are basically four non-carbon power supply options (nuclear, wind, solar and hydro). RMLD is working hard to pursue all these options.

Ms. O'Brien stated that the Commonwealth Wind proposal is being evaluated through the DOER. The success on this for RMLD is the ability to participate in the bid (December 17th) and get in the door. RMLD wants a voice with the DOER and wants to actively participate in the legislation to be able to participate in all future projects.

Chair Small noted if there was no more discussion that he would entertain a motion.

Mr. Kelley made a **motion** that the Citizens' Advisory Board recommend that the Board of Commissioners vote to accept the General Manager's recommendation to execute offshore wind contracts over the next 24 months with respective asset owners for energy, including associated certificates, from offshore winds facilities off the Massachusetts coast, contingent on

appropriate environmental justice due diligence and limited up to 15% of the RMLD portfolio, seconded by Mr. Soni. **Motion carried 3:0:1** (3 in favor, 0 opposed, 1 absent) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

Mr. Soni noted the cost of gas and oil has gone up. The RMLD has long-term contracts that have kept us safe. Is there concern about the high cost of natural gas right now and what that does to spot prices of energy? Can you comment on how that impacts RMLD if there is a cold winter?

Mr. Phipps responded that the winter forecast is projected to be mild for New England. The RMLD is in good shape due to the way the portfolio is balanced. The only noteworthy exposure is what's known as the two-by-sixteen, which are the weekends, when the load is low. It should be a minimal impact for RMLD in January if in fact it gets colder than forecasted. Mr. Phipps noted that currently there is a market holding of gas reserves, and as you get out of winter (summers are very low gas demand time) the market tends not to hold onto those reserves. Mr. Phipps added that in the next two to three months the fuel adjustment charge will go up slightly, but nothing dramatic.

6. Scheduling – J. Small, Chair
November CAB Meeting: Confirmed for November 17th at 6:00 PM (prior to the Commissioners meeting).
Coverage for November BOC meeting: Mr. Kelley
7. Adjournment – J. Small, Chair
Mr. Soni made a motion to adjourn, seconded by Mr. Kelley. **Motion carried 3:0:1** (3 in favor, 0 opposed, 1 absent) by a roll call vote of those present: Mr. Soni, aye; Mr. Kelley, aye; Chair Small, aye. Mr. Hooper was not present.

The meeting adjourned at 8:09 PM.

As approved on _____

Attachment 2: Agenda Item 4 - Integrated Resources Report



Rates, Power, Hydro Quebec I/II

BoC and CAB Report
from Integrated Resources

19-20 January 2022

Outline

Rate rollout

Power contract status

Hydro Quebec I/II

2022 Rates - Update



Basic rates effective with billings starting January 1st

- MDPU filed
- Billing transition smooth
- PPCT and Fuel relatively high in January relative to December
- Web site discussion updated, Customer Service equipped with talking points

Renewable Choice effective February 1st

- Testing final implementation with billing
- Bill to show incremental rate vs incremental usage (kWh); same result
- Updating customer communication

A3 Rate effective March 1st

- Billing test later in January
- Developing calculator on RMLD website
- Drafting communications

Power Supply Update

TFA's – three executed 2021, driven by time and price triggers

Transaction ID	Executed	2021	2022	2023	2024	2025
3113543	4-May-2021	43,429	1,728	0	8,774	5,363
3084589	22-Mar-2021	36,346	4,008	11,578	29,726	0
3028962	4-Jan-2021	48,055	13,154	0	0	0
subtotal		127,830	18,890	11,578	38,500	5,363
% total power		17%	3%	2%	5%	1%

contracts approved in 2021, **204,000 MWhs annual average** → non-carbon, lower risk

Name	Type	Annual MWhs	Start	End	Notes
Gravity CT	Hydro	25,000	1-Oct-2022	25 years	MOU signed
Gravity Dahowa	Hydro	31,000	15-Mar-22	25 years	maintenance delay, PPA signed
Gravity Plant #4 (NY)	Hydro	25,000	1-Oct-22	24 years	MOU signed
Broadleaf Solar	Solar	27,000	31-Dec-25	25 years	PPA executed Dec 2021
Vineyard Wind	Wind	21,000	2027	25 years	PPA drafting 1Q22
Seabrook Solar	Solar	15,000	31-Dec-2023	30 years	LOI signed, PPA drafting 1Q22
Seabrook Nuclear	Nuclear	60,000	1-Jan-2031	18 years	PPA executed Dec 2021



Forward price curve remains elevated

Open positions to fill in August and November

TFA analysis run regularly

Regular ENE supply strategy discussions

Hydro Quebec I/II Transmission



Existing RMLD contracts provide transmissions rights and equity ownership

- 1985 origin; 2021 renewal; 2041 extension executing now

Increasingly valuable in context of 2021 Climate Law for reliability and cost stability

Transmission rights being sold until additional builds out completed

Four annual \$57,000 equity contributions starting 2022 (all power supply, self funded)

2021	Costs Eversource	Costs NationalGrid	Use Rights Dividends	net RMLD benefit
January	\$ 130.00	\$ 13,822.29	\$ (29,249.00)	\$ 15,296.71
February	\$ 130.00	\$ 11,486.87	\$ (54,556.43)	\$ 42,939.56
March	\$ 130.00	\$ 11,115.78	\$ (54,548.68)	\$ 43,302.90
April	\$ 130.00	\$ 12,195.45	\$ (54,720.92)	\$ 42,395.47
May	\$ 130.00	\$ 12,284.22	\$ (54,804.35)	\$ 42,390.13
June	\$ 54.00	\$ 12,547.62	\$ (49,846.68)	\$ 37,245.06
July	\$ 130.00	\$ 10,576.04	\$ (29,249.00)	\$ 18,542.96
August	\$ 135.00	\$ 10,115.92	\$ (49,875.18)	\$ 39,624.26
September	\$ 135.00	\$ 11,472.89	\$ (49,874.99)	\$ 38,267.10
October	\$ 135.00	\$ 13,943.47	\$ (49,875.18)	\$ 35,796.71
November	\$ 135.00	\$ 13,943.47	\$ (50,020.86)	\$ 35,942.39
December	\$ 135.00	\$ 13,943.47	\$ (29,249.00)	\$ 15,170.53
Total	\$ 1,509.00	\$ 147,447.49	\$ (555,870.27)	\$ 406,913.78

\$400,000 annual benefit RMLD



Thank You
from the IRD Team

Attachment 4: Agenda Item 5 - Engineering & Operations Report

ENGINEERING & OPERATIONS REPORT

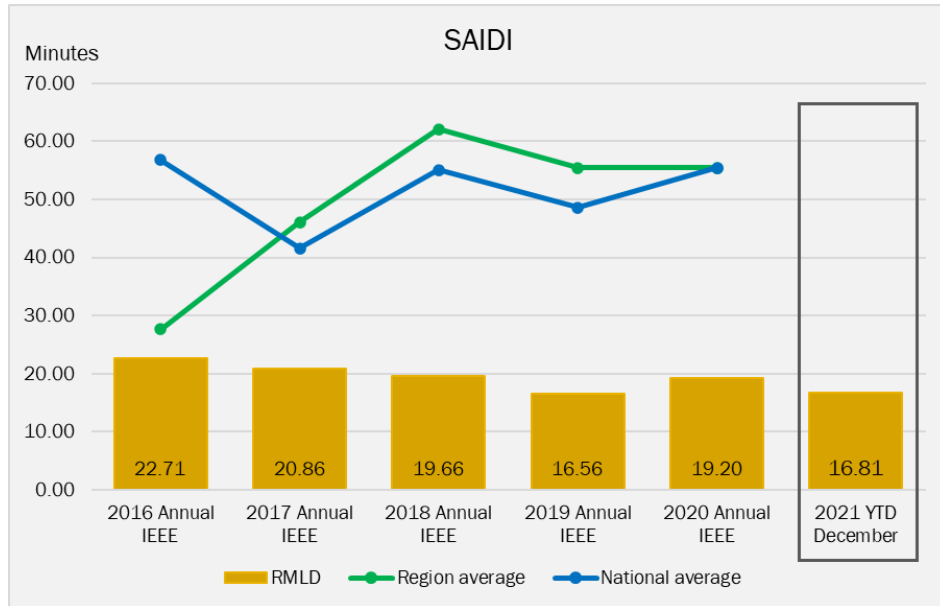
RMLD Board of Commissioners Meeting - January 19, 2022

RMLD Citizens' Advisory Board Meeting – January 20, 2022

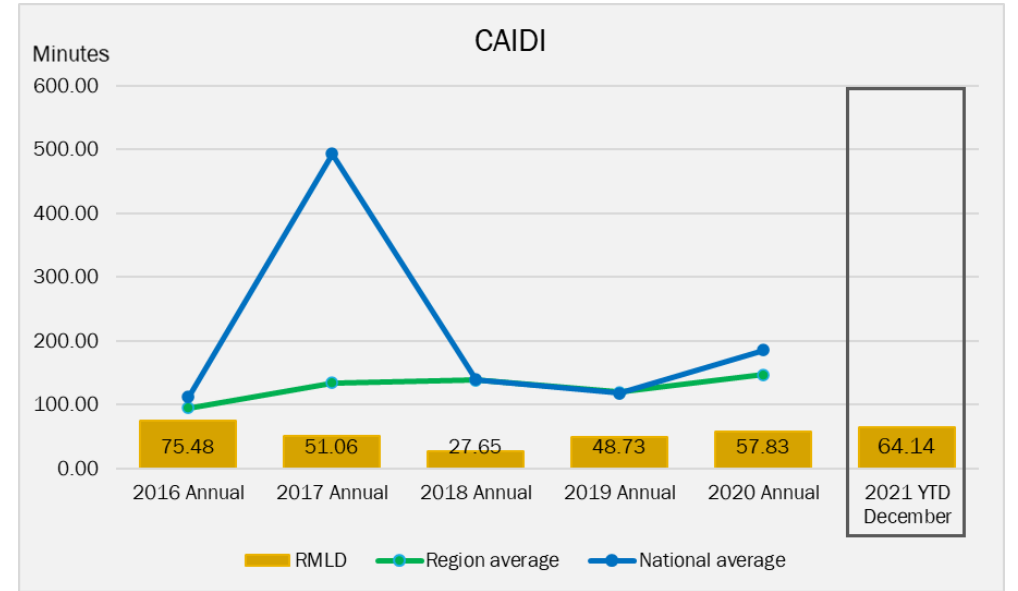


CY2021 Accomplishments

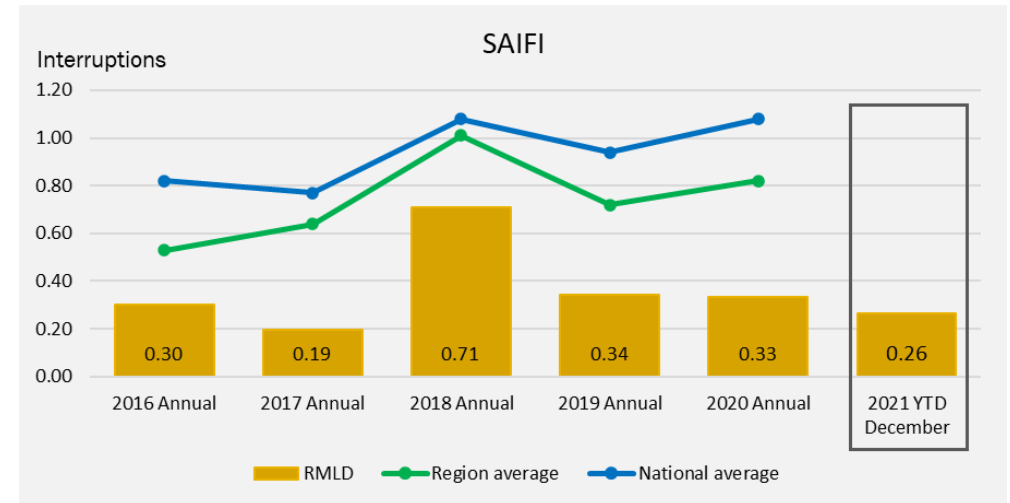
RMLD Reliability Indices CY2021



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



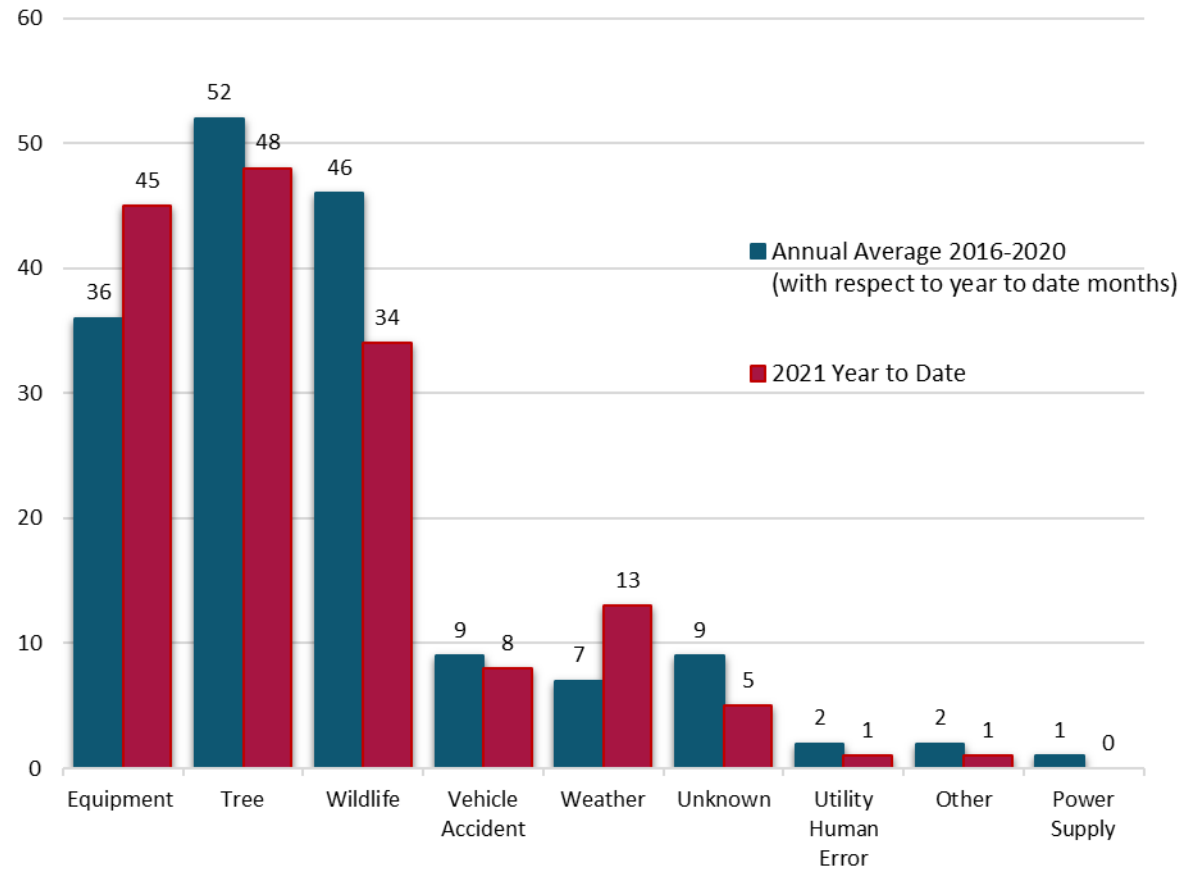
$$CAIDI \text{ (Minutes)} = \frac{\text{Total Duration of Customer Interruptions}}{\text{Total Number of Customer Interruptions}}$$



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

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

Causes of Outages as of December 2021



RMLD's Maintenance Programs

- **Tree Trimming** – 2,726 Spans (thru November 2021)
- **Inspection of Feeders** – **CY21 Goal Achieved**
- **Pole Inspection/Replacement Program** - **CY21 Goal Achieved**
 - 307 of 541 failed poles have been set since program began
 - 284 of 307 transfers have been completed since program began
- **Infrared Scans (Monthly)** – **CY21 Goal Achieved**
- **Primary Metering Upgrades Systemwide (2020-2023).** **CY21 Goal Achieved**
- **Manhole Inspection** – **On-going (CY21 Goal Achieved)**
- **Porcelain Cutout Replacement** – **On-going (CY21 Goal Achieved)**
- **13.8 kV Conversions (2016-2026)-** **Exceeded CY21 Goal**
- **Aged Transformer Replacement Program (Annually)** – **Exceeded CY21 Goal**
- **UG Subdivisions Upgrades Program (2015-2030)** – **CY21 Goal Achieved**

CY2021 13.8 kV (Step-down) Conversions

➤ Upgrading Wires, Transformers, Poles, Accessories

➤ Areas:

- Linda Road, Wilmington: **Completed**
- Pearl Street, Wilmington: **Completed**
- South Street, Reading: **50% completed.**
- Central Street, North Reading: **Completed**
- Summer Avenue, Reading: **90% completed**
- Lowell Street @ Main Street, Lynnfield: **95% completed**

➤ Benefits:

- Reduced Line Losses
- Improved Reliability
- Improved Voltage Support



CY 2021 Underground Subdivisions Upgrade



➤ Upgrading UG Facilities (Transformers, Primary and Secondary Cables, Terminations, Elbows, etc.)

➤ **Areas:**

- Fiorenza Dr, W: **Completed**
- Gandolf Way, W: **Completed**
- Agastino Dr, W: **Completed**
- Washington Ave, W: **Completed**
- Clorinda Rd, W: **Completed**
- Kristyn Lane & Jill Cir, N. R: **Completed**

➤ **Benefits:**

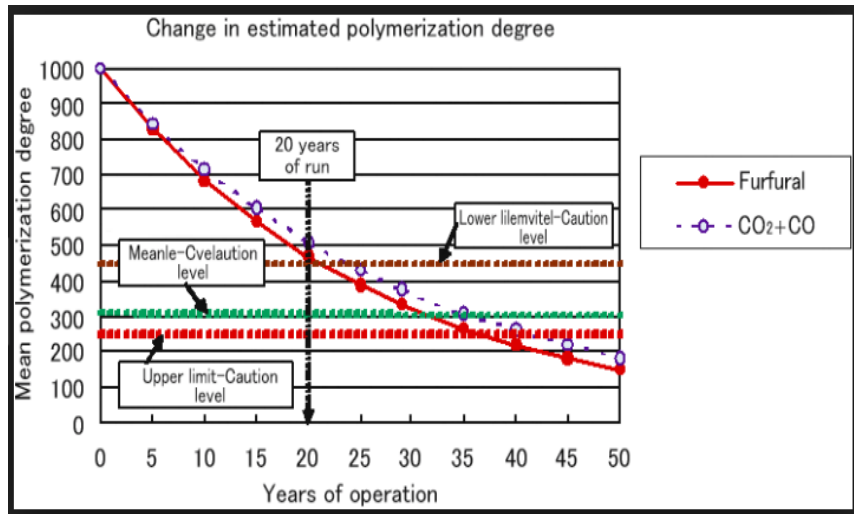
- Reduced Line Losses
- Improved Reliability
- Improved Voltage Support



Aged Transformer Replacement



- Program Started in 2014
- Transformer Inspection in 2021
 - 732 pad-mount transformers over ten years in-service inspected
 - 179 OH/UG transformers (≥ 25 -years old) replaced in CY2021
- Program initiated to replace aged transformers ≥ 25 years old
 - Transformers oil DP starts derating exponentially after 20-25 years in service depending on load and heat
 - Transformers with $DP \leq 200$ can potentially fail.
- Approximately **1,308** of RMLD's 4,009 transformers are over 25-years old
- Live-front transformers will be upgraded/replaced with dead-front transformers
- Transformers are evaluated for upgrade based on:
 - Physical Condition (*Environmental Factor*)
 - Age
 - Load
- New transformers are more efficient with lower losses



Aged Transformer Replacement Program

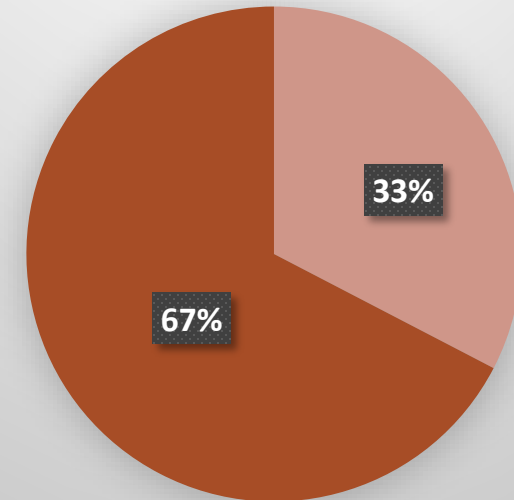
Transformers 25-Years or Older

Replaced 2021

	Pad-mount		Pole-mount	
	single-phase	three-phase	single-phase	three-phase
JANUARY	3	0	8	0
FEBRUARY	0	0	2	0
MARCH	3	0	17	1
APRIL	0	1	1	1
MAY	1	0	20	1
JUNE	5	0	14	0
JULY	2	1	9	1
AUGUST	12	1	4	0
SEPTEMBER	12	1	1	3
OCTOBER	19	7	2	1
NOVEMBER	1	5	1	0
DECEMBER	9	2	6	1
TOTAL:	67	18	85	9

GRAND TOTAL: 179

**4,009 Transformers
System Wide
As of January 3, 2022**



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

Miscellaneous Construction Projects

- Pad-mount Switchgear Upgrades at Industrial Parks
 - 17 Switchgear have been replaced to date (as of 1/11/2022)
 - 6 units installed in CY21
 - CY2022: 6 more units will be purchased (4 standard and 2 special order)

- New Developments
 - Nichols Street, North Reading
 - Shay Lane, North Reading
 - Murray Hill, Wilmington (Phase 3 and 4)
 - Spruce Farm, Wilmington



CY 2021 Smart Grid Automation



➤ SCADA-Mate:

- Lowell Street, Wilmington **Completed**
- Woburn Street, Wilmington **Completed**
- Eames Street, Wilmington **Completed**
- Main Street, Wilmington **Completed**
- Walkers Brook Drive, Reading **Completed**

➤ IntelliRupters:

- Main Street, Wilmington **Completed**
- Birch Meadow Drive, Reading **Completed**
- Concord Street, North Reading **Completed**

➤ Benefits:

- Improved Reliability
- Faster Restoration
- Integrates with OMS
- Provides Metering Data to SCADA (i.e., Voltage, Current, and Harmonics)

Smart Grid Projects

- Smart Grid Devices Communication Study **Completed**
- AMI/MDM Study **Completed**
- OMS/IVR Integration
- Customer Notification System (CNS) **In Progress**
- Volt Var Optimization (VVO)
- S&C Smart Grid Training (Scada-Mate and IntelliRupter)

CY2021 Substation Equipment Testing and Maintenance

➤ Station 3:

- 115 kV Breakers and Relays **Tested**
- 115 kV/13.8 kV Transformers (**Due in CY2022**)
- 13.8 kV Breakers and Relays **Tested**
- 2.5 MW Generator Spring and Fall Maintenance **Completed**



➤ Station 4:

- 115 kV Breakers and Relays **Tested**
- 115 kV/13.8 kV Transformers (**Due in CY2022**)
- 13.8 kV Breakers and Relays **Tested**
- 115 kV/34.5 kV Transformers D&E **Tested**
- 34.5 kV Breakers **Tested and Repaired**



➤ Station 5:

- 34.5 kV/13.8 kV Transformers D&E **Tested**
- 13.8 kV Breakers and Relays **Tested**
- 13.8kV Bus Parts **Replaced and Tested**

CY21-Accomplishments

Substations

- ✓ VLAN Installation at all Substations and 230 Ash Street
- ✓ NERC Directory 1 Relay Upgrade at Station 4 (2021-2023) **In Progress**
- ✓ Ordered Spare Parts (LAs, Bushings, CCVTs, Breakers, etc.)
- ✓ Repaired Tie Breaker and 5W8 Breaker at Substation 5



CY21-Accomplishments

Engineering & Operations Special Projects

- ✓ NERC Physical & Cyber Security CIP-002, CIP-003, and COM-002
 - NERC Committee reviews, assesses, and implements all applicable physical and cyber security requirements
 - Committee Members: Brian Hatch, Hamid Jaffari, John McDonagh, Paul McGonagle, Peter Price, and Nick D'Alleva
 - ✓ Training Done by Utility Services on CIP-003 and COM-002
 - ✓ Training on Incident Response Plan
- ✓ Small Cell (5G) Contract (ATT and Verizon)
- ✓ Hosting Capacity Study (Solar Generation) – Currently Being Updated
- ✓ Set Up Primary Metering Task Force
 - Committee reviews every PM site for eligibility
 - Upgraded PTs and CTs on the PMs
- ✓ SPCC Plan Updated
- ✓ Vegetation Management Plan (VMP)



CY21-Accomplishments

Facilities and Purchasing/Materials Management

- ✓ Materials Management Bids (40 Bids)
- ✓ Stock and Inventory
- ✓ Grounds Maintenance
- ✓ OSHA Remediation: Implementation of Recommendations – **In Progress**
- ✓ Substation 4 AC/Cooling System
- ✓ Substation 3 Generator Bid Award

New Wilmington Substation (CY21-CY24)

- Load Allocation Study: **Completed**
- Site Survey (CY21): **Completed**
- Environmental Assessment (CY21): **Completed**
- Land Appraisal (CY22): **In-progress**
- Land Purchase (CY22)
- Substation Civil and Electrical Design (CY22)
 - Civil Construction RFP
 - Electrical Equipment RFP
- System Impact Study (CY22)
- Site Permitting Process (CY22)
- Site Preparation (CY22-23)
- Civil Construction (CY22-23)
- Electrical Installation and Construction (CY23-24)
- Substation Commissioning and Testing (CY24)
- Load Transfer from Sub 3, 4, and 5 (CY24-26)



Massachusetts Grant EV-Chargers

L2 EV-CHARGERS

➤ **Wilmington**

- Town Hall
- Library

➤ **Reading**

- Library (L2 and Future L3)
- Haven Street and Main Street
- Linden Street

Project Updates:

- **EV-Chargers: Delivered**
- **Construction RFP (Bid Opening on 1/26/2022)**
- **State Contract Deadline: July 10, 2022**
- **Construction to be completed in April/May 2022**



L3 EV CHARGER

➤ **Grant Application In-process**

- Commercial Sites
- Library



DOUBLE POLES

Per NJUNS
(as of 1/11/2022)

LYNNFIELD

"Next to Go"	# of Tickets
VZNESEA – Verizon	1
Pull Pole	1
RMLD	13
Transfer	13
Pull Pole	
CMCTNR - Comcast	2
Transfer	2
LFLDFD - Lynnfield Fire Dept.	0
Transfer	
GRAND TOTAL	16

NORTH READING

"Next to Go"	# of Tickets
VZNEDR – Verizon	0
Transfer	0
RMLD	20
Transfer	3
Pull Pole	17
CMCTNR - Comcast	1
Transfer	1
NRDGF - North Reading Fire Dept.	13
Transfer	13
LTFMA - Lighttower Fiber	0
Transfer	
GRAND TOTAL	34

READING

"Next to Go"	# of Tickets
VZNESEA – Verizon	0
Transfer	
RMLD	88
Transfer	75
Pull Pole	13
CMCTNR - Comcast	0
Transfer	
RDNGFD - Reading Fire Dept.	10
Transfer	10
LTFMA - Lighttower Fiber	0
Transfer	
NP3PMA - Non-Participating 3rd Party Attachee	8
Transfer	8
GRAND TOTAL	106

WILMINGTON

"Next to Go"	# of Tickets
VZNEDR – Verizon	4
Transfer	3
Pull Pole	
Dispute	1
RMLD	44
Transfer	44
Pull Pole	
CMCTNR - Comcast	1
Transfer	1
WMGNFD - Wilmington Fire Dept.	33
Transfer	33
WLMFIB - Wilmington Fiber	1
Transfer	1
NP3PMA - Non-Participating 3rd Party Attachee	4
Transfer	4
GRAND TOTAL	87

Thank You



Question?

