Wakefield Municipal Gas and Light Department

Board of Commissioners

January 5, 2022

NOTICE OF MEETING
WAKEFIELD MUNICIPAL LIGHT & GAS DEPARTMENT
BOARD OF COMMISSIONERS

DATE: **January 5, 2022**
CALL TO ORDER: **6:30 P.M.**

Consistent with the Governor's orders suspending certain provisions of the Open Meeting Law and banning gatherings of more than 10 people, this meeting will be conducted by remote participation to the greatest extent possible. The public may not physically attend this meeting, but every effort will be made to allow the public to view and or listen to the meeting in real time. Persons who wish to do so are invited to click on the following link

Join Zoom Meeting

https://zoom.us/j/91986103502

Meeting ID: 919 8610 3502

Dial in +1 646 876 9923 Meeting ID: 919 8610 3502

Please only use dial in or computer and not both as feedback will distort the meeting.

WMGLD BOARD OF COMMISSIONERS MEETING
480 North Ave
Wakefield, Massachusetts 01880

January 5, 2022

AGENDA
6:30 PM

A. Call to Order

B. Opening Remarks

Chair's Remarks – Tom Boettcher
Commissioners Reports
Town Council Liaison Comments
Public Comments

C. Secretary's Report

1 Approval of December 1, 2021 Minutes

D. Old Business

1 Project Updates
2 Community Solar Structure Options
3 PILOT
4 Winter Gas and Electric Supply Status
5 January Strategic Planning Meeting

E. New Business

1 FERC 2222

F. Any other matter not reasonably anticipated by the Chair

G. Executive Session- If Necessary

H. Adjournment

WMGLD
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Peter D. Dion, General Manager

WAKEFIELD MUNICIPAL GAS & LIGHT DEPARTMENT

BOARD OF GAS & LIGHT COMMISSIONERS MEETING

December 1, 2021

MINUTES

IN ATTENDANCE: Commrs. Thomas Boettcher, Chairman
Elton Prifti, Secretary
Phil Courcy
Jennifer Kallay
Jack Warchol

Peter Dion, General Manager, WMGLD

Mark Cousins, Financial Manager
Dave Polson, Engineering and Operations Manager
Jeff Morris, IT Manager
Sylvia Vaccaro, Office Manager

Matt Ide, MMWEC
Steve Smith, MMWEC

PLACE: ZOOM MEETING

CALL TO ORDER:

Commr. Boettcher called the meeting to order at 6:30 P.M. and informed the Board the meeting is being recorded.

Chair Remarks:

Commr. Boettcher advised the Board that during Town Meeting, which was held on November 6th, he read the letter that WMGLD sent to Northeast Regional Vocational School, about additional opportunities for energy savings and efficiencies into the Town record. He also commented that the IT Update was timely as a cyber-attack occurs every eleven seconds. He noted that we have always had a need for physical security for both safety and malicious attacks. He mentioned a recently declassified thwarted drone attack, which occurred last year against a substation in Pennsylvania.

Commissioner Remarks:

Commr. Kallay provided the Board with an update on the Green Communities application. She mentioned that additional time is needed to assemble the energy reduction plan, so they are going to apply next year. The first presentations for both Town Council and the School Committee were held in November with the second presentations concerning the energy reduction plan are targeted for February of next year.

She commented that she was notified by Steve Maio and Julie Smith-Galvin that Wakefield has been allocated an additional $50,000.00 through the State legislative process for another solar installation on a municipal building. She said that Joe Conway from the DPW will be reaching out to WMGLD about the next steps.

Commr. Kallay said that she and Commr. Courcy attended MMWEC's annual meeting. She stated that this has become her favorite meeting of all the conferences because you are able to have discussions and dialog with other Commissioners, General Managers, and Community Leaders throughout the State. She extended kudos to the MMWEC team for putting together a great meeting this year.

Town Council Liaison Comments:

Not present.

Public Comments:

None

Secretary's Report

Approval of the amended minutes included in the Board book from the November 3, 2021, meeting was before the Board for approval.

A motion was made by Commr. Courcy to accept the November 3, 2021, minutes and seconded by Commr. Boettcher.

Roll Call Vote:	Commr. Courcy	Aye
	Commr. Kallay	Aye
	Commr. Prifti	Aye
	Commr. Warchol	Abstained.
	Commr. Boettcher	Aye

The motion was approved unanimously 4-0.

Presentations

Power Supply Update – Matt Ide and Steve Smith, MMWEC

Pete Dion noted we are entering into a period of time where our prices are higher because of current gas markets. Matt Ide stated that WMGLD's power supply is comprised of three separate components: Transmission, Energy, and Capacity. MMWEC looks at all three components and designs a hedging strategy to effectively control and provide stable costs which translate into stable rates for your customers. The summary of the 2020 portfolio costs are as follows: Transmission - 18%, Energy-35%, Capacity – 44% and Administrative and Settlement costs- 3%. He noted that the transmission cost is low because WMGLD has done an excellent job investing in batteries and in other peak load reducing assets that MMWEC is dispatching on WMGLD's behalf. There are concerns about where transmission costs will be in the future. He said that during the past month, MMWEC started a testimony to drive commentary to FERC that will allow FERC to direct ISO New England to initiate a planned transmission process that will allow transmission to be planned and built to accommodate the offshore wind that the States are soliciting. By doing this, it will emphasize competition and cost reduction as well as, reduce the environmental impact if the transmission lines are planned out. Right now, each developer is responsible for getting their transmission lines to the mainland.

He noted that the steps Wakefield has taken with the assets to reduce consumption during peak periods, which then reduces your overall volumetric charge. Combining this with the potential to own some transmission assets, we will be able to hedge transmission. WMGLD does hedge energy, however we are looking at elevated gas prices due to the world market driving up prices, not including the normal seasonal weather impacts. Matt said that capacity is a concern. One of the ways we will try to utilize the vertically integrated business model is to own the asset that provides the capacity, it is a long-term stable cost, so you will not have the volatility in your cost that effect your rates.

Matt said in looking at how we hedge capacity, we try to create a diversified asset mix, where we have certain assets that Wakefield has entitlements to, i.e., you own them. That is 59% of current capacity requirement. The open position is at 16%, which is where you pick up capacity from ISO New England. These prices change every year dependent on the dynamics of the forward capacity market. We are trying to create stability in our capacity cost over a long period of time. We have target ranges that we discuss with Mark and Pete, as far as, where your risk tolerances are, where you want to have some exposure, and where you want to lock in the prices by owning the assets. You have to procure capacity because that is part of the market rules. We want to be able to deliver that capacity at a stable cost to WMGLD. Matt noted that the energy portfolio has a lot of new requirements due to the new Climate Bill coming into play in managing our energy portfolio to make sure we comply and have non carbon emitting resources.

Commr. Kallay inquired as to what the roughly 18-19% capacity contracts that are coming offline as of FCA 14 represents. Matt noted that Public Service Electric & Gas (PSEG) was a five-year capacity contract. At the time there was volatility in capacity prices, and we wanted to have diversified assets. We would have a contract utilizing different techniques and products to provide stability. There are pros and cons for all these things. One con is when that rolls off you effectively have repricing. You try to balance the portfolio long-term thru asset ownership, contracts, and take some capacity from the market. The balance of all those things combined provide you with relative stable capacity costs.

Commr. Kallay inquired if there is any opportunity for five-year contracts in the future. Matt stated that it becomes a function of price and availability. Basically, PSEG withdrew and sold its assets out of the New England market. Owning the assets generally provides long term price stability. There is a role for short term contracts, we have used them, but right now they are priced very close to where the capacity auction is going to clear at so there is not any benefit.

Commr. Boettcher questioned why the out years capacity is depicted as flat. Matt stated it is a directional best guess depending on the load on our system in the future. Commr. Boettcher inquired if this takes into consideration any batteries or other projects that will impact our capacity requirements.

Pete said numbers went down because of DRT leaving, but with 1200 all electric apartments coming online in the next year or two, electric heat pumps, EV's and other growth, we will see our number increase. Pete said that we will continue to evaluate other battery projects and other options down the road as our load continues to grow.

Steve Smith stated as far as power supply, the shift has changed to the non-carbon position with passage of the Massachusetts Climate Bill. There is an obligation for the MLPS to provide non-carbon energy to its customer, 50 percent

in 2030, 75 percent in 2040 and net zero in 2050. Wakefield has done a great job growing its non-carbon position over time. He reviewed Wakefield's assets with the Board and whether they were from undefined resources, Purchase Power Agreements, or if there were attributes that WMGLD is entitled to count toward their non carbon position. Commr. Boettcher inquired if WMGLD's Green Choice program would be counted in the non carbon bucket or broken out as a separate line. Steve responded that it would count as a small percentage of the Wakefield portfolio that could be broken out in a separate line item. Steve noted that back in 2016, WMGLD was only at 38 percent non carbon and has made significant progress increasing that number in 2021 to 49 percent. He expects this number to continue to grow in 2025 to 54 percent as we have done additional bilateral hedging with environmental attributes attached to it. Wakefield will be achieving the 2030 goals with the renewal of the Hydro Quebec contract. Pete stated that in the 2025-2030 timeframe we are hoping to layer in some offshore wind.

Steve stated that there are two developers that are offered into Massachusetts solicitation and the winners of that will be selected by the State in mid-December. MMWEC has an agreement with one of those developers and if they are chosen by that solicitation then we will be able to sign onto a PPA which will significantly change Wakefield's non carbon portfolio. Commr. Kallay asked if the total committed megawatt hours number is accurate for planning purposes. Steve said that the hedging program would refer to higher levels of energy requirement on a short-term basis (5 years). We would gradually transition to what we have hedged to non-carbon emitting resources. Wakefield has begun to transition some of these shorter-term trades where you are getting power from undefined resources to hydro facilities with attributes attached. Pete noted as you look beyond 2025 the hope is that you will see a percentage of our portfolio tied to long-term offshore wind contracts. Pete stated that when we created the Green Choice program, we were assuming that our portfolio of non-carbon was going to be at 49 percent, so we set the price on the other 51 percent. We are now projecting that we will be at 51 percent, so the percent to buy will be lower but the cost of that energy is going up in the market. He said that we will have to talk about adjusting the 2.2 cents in January or February of next year. Commr. Boettcher thanked Matt and Steve for their informative presentation.

WMGLD IT Update – Jeff Morris, IT Manager

Jeff Morris, IT Manager, updated the Board on recent, current, and future projects. He noted that in focusing on additional security, he will be adding two new high-level firewalls to provide more layers of protection on both the SCADA and corporate networks. It will also provide a layer of protection between the Town corporate network and our network. A new threat intelligence gateway will also be installed that will sit between the outside world and the firewall. In July of this year a new payroll system that integrates with the financial system went live, so

we now have a complete payroll/work order integration directly into the department's financial system. At the same time, a new Time Off Request Calendar was implemented. He noted that he is currently working with Easton Utilities on a new Customer Portal that will provide more flexibility and functionality for our customers so to enhance the customer experience. WMGLD switched over to a new call center, Continental Message Solutions. They provide better support during high volume call times and also relieves the stress on the Town's phone system. This also feeds directly into our Outage Management System (OMS). Additional security to the Wallace substation is being added in the forms of cameras and forced entry alarms.
Other project updates include the billing system, SCADA system, and meter reading software. He also mentioned cooperative projects such as Mass Energy Insights (MEI) and Home Energy Efficiency team (HEET) that he is working on to reduce both carbon and methane emissions.

Old Business:

Project Updates

COVID 19

Thirty-four of our forty-three employees have been vaccinated. On September 24, 2021, the Town adopted an updated Covid policy requiring weekly testing for non-vaccinated personnel.

NGRID 345kv Project Update

United Civil/NGRID plan on working on Salem & Montrose this winter as much as possible. Completion 0r the manhole and ductbanks are targeted for the Spring of 2022.

Wakefield Ave. Substation: all old 4kv and 13.8kv equipment has been removed and building asbestos abated - **Complete**

4kv to 13.8 kv conversions:

- West Water St., Richardson Ave., and Foster St. area (ckt 97-02) -preparing to convert from 4kv 397-02 to 13.8kv – 1302/ 0005 in progress – Verizon completed – **Work in Progress**

- Tuttle St. Chestnut St., Murray, Avon St., Emerson from 4kv to 13.8kv
- (ckt 397-02 to 1302)
- 397-04 Ballister St. area convert to 1302/0005- **(Transformers ordered).**
- Converting portions of ckt9 on Water to ckt 443-W32 **- (on hold)**

Town Projects:

- **Albion Street –** Town is upgrading drains, water, street paving, sidewalks & 18 Street lights.
    - Town has selected and ordered the new lights for Albion St. **– Installation of new Street light is in progress**

WMGLD/ Solar Project Overview

Commr. Warchol recused himself from any discussion or vote on the Community Solar Project. He was placed in a Zoom waiting room during this discussion.
Pete noted that we received a bid back from Ameresco and it was out of market. We went back for revised pricing, and we are now at a more reasonable number. We are recommending proceeding with the 480 North Ave. project. The pricing for McGrail Substation is still too high, noting that perhaps they are not efficient in that smaller market. We may go out to bid again in the Spring, or perhaps marrying up with the Town if they are going to do a small project with the additional $50,000. Our consultant said the market is between $2.80-$3.10 a watt. Ameresco came in at $3.20 a watt. Pete stated that if you factor in increased labor costs the older number of $2.80- $3.10 is probably climbing as we speak. Commr. Boettcher inquired if we go forward with this project, is this being added to our portfolio or are we going to have a true community solar and allow customers to buy shares. Pete stated that we had to get past this point first, we can now craft a community solar offering for part of the output. Either way it makes sense to do this project. It is going to inject into the system, and we can also offer part of the output as a community solar project. He noted that this is a seven-year lease with a buy out to own. Ameresco receives the tax benefits, and we will have full ownership after seven years. We will craft a community solar offering for a percentage of the output. Commr. Kallay asked if the contractor is considering this one big project for the total capacity or is it two projects of these two sizes. Pete said they are doing it as one, but we are taking two separate feeds, one for the building load and one to go out to a separate transformer for the Community Solar. Pete said that our goal is to be net zero ourselves. Some of the capacity of the North Ave and Wakefield Ave roofs will reduce our own carbon footprint, by doing this it will be easier to encourage others like the high school to follow our example. He mentioned that the Board had discussed naming the Community Solar Project after Commr. Chase and dedicating this to him in the Spring. Commr. Boettcher stated it is a great way to honor his many years of service.
Commr. Kallay asked how this project's pricing compares to the Water department installation. Dave Polson said that the Water department installation was much different, as it was all exterior work. Here we have interior work as well, that needs to be done so that is why the cost is a little bit higher. The 480 North Ave.

project is a more complicated job. She also inquired as to the concerns of the neighbors involving sight lines. Pete stated that Atty. Mike McCarthy brought a rendering to the ZBA and there were no issues. Dave stated the panels are a low profile and will not be visible. Commr. Prifti stated the quoted $3.20 price is very reasonable based on developers in his service territory quoting $500,000-$700,000 per megawatt for interconnection costs. Commr. Warchol rejoined the meeting. It was decided that the Board will inform former Commr. Chase that the Community Solar Project is going to be dedicated in his honor.

WMGLD Energy Efficiency Program 2022 Offerings

Commr. Boettcher stated that there was an email from a customer inquiring about rebates for energy efficient dryers. He stated that MASSSAVE does offer dryer rebates. He also said that they also offer a rebate on a heat pump dryer. Pete stated he included what MMWEC's offerings for the Board to review. He stated that we administer our own rebate program but utilize MMWEC's offerings as a guide. A standard energy star dryer rebate is $50 where a heat pump dryer is rebate is $500.00. Commr. Kallay inquired if we are trying to align ourselves with MMWEC's offerings. Pete stated that we already voted to set the budget for next year, so we need to be careful if we want to add anything else to the list. Commr. Courcy stated that he is concerned with adding things one at a time as opposed to budgeting for the year. He commented that we can tell customers that we are considering adding things in the future. Commr. Kallay mentioned, if we can move away from central air conditioning and perhaps dishwashers it would enable us to offer other options, such as pool pumps, heat pump dryers, and electric induction ranges. She noted that by eliminating some options, it would free up some dollars for other options.

Pete asked the Board if they want to incorporate this topic into our strategic discussion. Commr. Boettcher said that we could leave what is in place for now and talk about this further in a strategic planning session. Pete noted that this will be added as an agenda item for January. He further noted that he will do an analysis on other options to present to the Board for review. Any potential changes could be made mid-year.

New Business

WMGLD Fuel Efficient Vehicle Policy

Pete mentioned that last month the Town adopted a Fuel Efficiency Policy. He noted that he drafted our policy effective on December 1, 2021, to mirror the Town's policy except for the last section entitled Questions and Enforcement. This section would have required WMGLD to go through Steve Maio, Town Manager and Joe Conway, Director of Public Works, before purchasing a vehicle. This process

would not have been an effective or efficient process for WMGLD.. Commr. Kallay confirmed that DOER will be in contact directly by WMGLD about our vehicle list. Pete stated that we will be maintaining our own list and updated annually. He commented that Sara Eriksen has already set up this list. He also noted that he will send this policy to Steve Maio, so he can include this into any correspondence to the Green Communities

A motion to adopt WMGLD's Fuel Efficient Vehicle Policy was made by Commr. Courcy and seconded by Commr. Kallay.

Roll Call Vote:	Commr. Courcy	Aye
	Commr. Kallay	Aye
	Commr. Prifti	Aye
	Commr. Warchol	Aye
	Commr. Boettcher	Aye

The motion was approved unanimously 5-0.

Wakefield Municipal Coop Corporation Board Representative

Pete explained that this is a separate entity established for building 480 North Ave. and the procurement of land for the Wallace substation. The Board of Directors include Ron Decurzio, President of MMWEC, Pete Dion, General Manager, and Ken Chase as a representative of the WMGLD Board. We need to replace Ken Chase because the variable rate loan for 480 North Ave. is coming up for repricing. With the uncertainty of interest rates in the future, MMWEC investigated other options and came back with an eight-year fixed rate loan. Upon doing an analysis, it makes sense to refinance now. Pete stated that we will need a Coop Board meeting to vote on this matter. Pete asked if anyone is interested in volunteering. Commr. Courcy volunteered to represent the WMGLD Board.

A motion to replace Ken Chase with Phil Courcy on the Board of the Coop on the premises as discussed was made by Commr Warchol and seconded by Commr Boettcher.

Roll Call Vote:	Commr. Courcy	Aye
	Commr. Kallay	Aye
	Commr. Prifti	Aye
	Commr. Warchol	Aye
	Commr. Boettcher	Aye

The motion was approved unanimously 5-0.

January Strategic Meeting Discussion

It was determined that a Zoom Strategic Meeting will take place on January 26, 2022, at 6:30pm. Pete stated that we may want to talk about balancing our strategies around decarbonization and the net zero goal of 2050, while maintaining reasonable prices and efficient and cost effect operation of the facility. He noted that this point was read into the meeting last month by Commr. Courcy. Conversation ensued around how WMGLD could effectively institute changes to reach the net zero goal. Commr. Boettcher noted that codifying new building requirements is an integral part of achieving this goal. Pete stated that we can offer incentives, but until the building codes change developers will not institute these because of the costs. A prime example of this is the new Northeast Vocational School. The state is giving them millions of dollars and are allowing them to move further away from the goal. The State building people have to change the goals to be more consistent with the 2050 goals. He noted that the most effective thing the Board has done in reducing natural gas consumption is implementing the moratorium on multi-family dwellings.
Because of this vote the 1200 new housing units at the head of the lake will be on electric heat pumps. Pete asked the Board members to submit a few topics that they would like to discuss at the Strategic meeting, and he will share them with the other members, so they can narrow them down to a a few topics for discussion. Commr. Kallay noted that we can look at what has worked as well as what has been challenging. Commr. Warchol commented that in a few years from now everyone will be driving an EV and wondered where these are going to be installed and how these would be metered.

Pete also commented on how we would encourage people not to charge on peak periods.

He mentioned that Groton has a Time of Use (TOU) program where they charge four cents for off peak charging and forty cents for on peak charging. This TOU rate may be something that we consider down the road. Commr. Kallay noted that we need to find where the best place is for us to be operating and working without being stretched too thin. Commr. Boettcher echoed that we would need to find our niche. Commr. Prifti stated that we know what the goals are and perhaps we should work backwards as far as what needs to happen to our system to achieve these goals. Layout what the system should look like in 10 years, 20 years from now, then we can put together plans on how to achieve these goals. He stated that there may be federal or local funding, but what happens when we have to fund these goals from our rates. Do we need to start increasing these rates now? Pete commented that the system is in good shape now, but we have to be sure the system is resilient to handle future load increases down the road. Dave Polson stated that going forward towards electrification the systems are efficient, but EV

chargers are not efficient, and he thinks they will put the biggest drain on the system.
He wants to see EV chargers in new developments metered separately, so we can have some control over them.

2022 Meeting Calendar

Pete mentioned that the five-year Payment in Lieu of Taxes (PILOT) Memorandum of Understanding (MOU) with the Town will expire at the end of this Fiscal Year. He asked the Board if they want to invite the Finance Committee to the January or February meeting for a discussion. It was decided that the Board will have a discussion in January then invite the Finance Committee to the February Board meeting.
Pete noted that staff will be recommending a similar longer term PILOT MOU. This gives everyone numbers for planning purposes. Pete also noted that other towns that have PILOT programs based on a cents per kwh saw a decrease in their payments over the past year due to COVID. Our pilot payment did not decrease.

Commr. Boettcher confirmed that next year's proposed Board meeting schedule was suitable to the other Board members.

Any other matter not reasonably anticipated by the Chair.

Commr. Courcy mentioned that he saw the notice in the paper for the calendar distributions dates. Pete said they will also be available in the office.

A motion to adjourn was made at 9:15 pm by Commr. Kallay and seconded by Commr. Courcy.

Roll Call Vote:	Commr. Courcy	Aye
	Commr. Kallay	Aye
	Commr. Prifti	Aye
	Commr. Warchol	Aye
	Commr. Boettcher	Aye

The motion was approved unanimously 5-0.

WMGLD
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Wakefield, MA 01880
Tel. (781) 246-6364 Fax (781) 246-0419
Peter D. Dion, General Manager

NOVEMBER 2021 WMGLD COMMISSIONER'S DASHBOARD

Outages (Elec)

	SAIFI	CAIDI
Sep	0.57	57
Oct	0.64	63
Nov	0.58	59
Cal YTD	0.58	56

FYTD WMGLD Generation - November

	Salem St.	Battery	Total
RNS Benefit	$ 297,604	$ 122,769	$ 420,373
Capacity Benefit	319,200	166,040	485,240
Debt Service	(265,753)	(102,695)	(368,448)
Net Benefit	$ 351,051	$ 186,114	$ 537,165

CYTD Pipe Replacement

	Replaced	System Total
4"	7,327	173,466
6"	50	151,896
8"	840	81,045

CONSERVATION BUDGET

YTD FY22 Conservation Revenue Billed	$ 84,725
YTD FY22 Paid out to Customers:	
132 Appliances & Thermostats	$ (7,329)
9 Air Sealing (insulation/windows)	(9,573)
33 Heating & Cooling	(26,030)
3 Residential Solar	(13,206)

New Services on the System

	Electric	Gas
Sep	3	3
Oct	2	2
Nov	4	3

GREEN CHOICE RATE

	November	Inception
Green Choice Revenues	$ 806	$ 3,758
KwH billed on GC Rate	36,420	169,818
Number of Customers		72

Solar Generation 71 Customers

	Generated	Back to WMGLD
CYTD	1,837,480	636,511
Comm'l	6,643,440	358,800
Res	1,748,778	44,521
Inception	8,392,218	358,800

Natural Gas Peak Usage

Current Year Peak (Nov '21 → May '22)	371,698 CCF
Prior Year Peak (Nov '20 → May '21)	1,118,751 CCF
All-Time Peak - Jan '18	1,370,554 CCF

Monthly & Annual Peaks

	Prior Year	Current Year
Sep	32.0 Mw	32.2 Mw
Oct	23.8 Mw	21.6 Mw
Nov	25.1 Mw	24.3 Mw

Summer YTD Peak

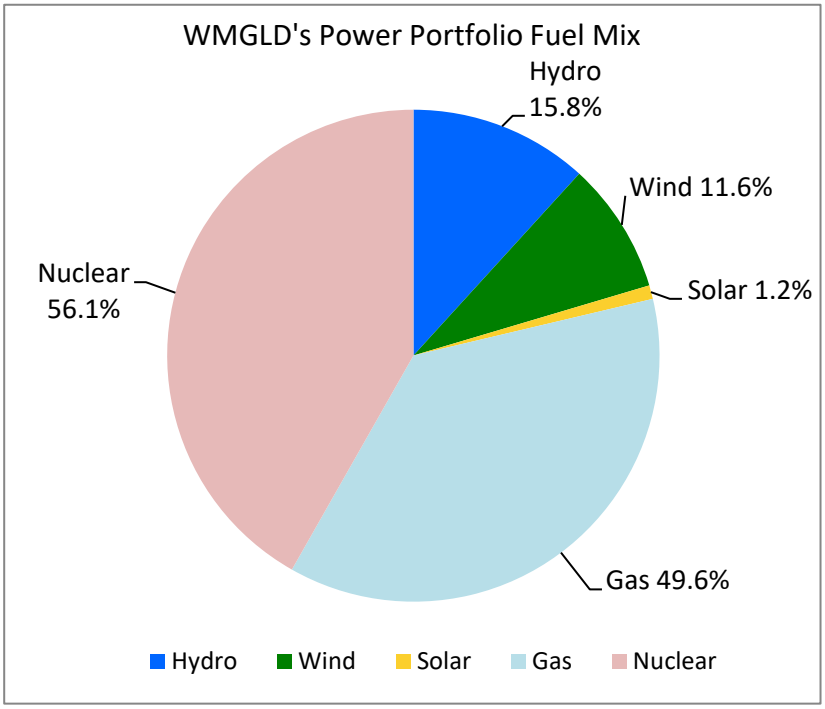
7/28/20	6/30/21
44.0 Mw	43.9 Mw

Winter YTD Peak

1/29/21	11/24/21
28.0 Mw	24.3 Mw

All Time Peak

1/2/14	8/2/06
36.5 Mw	50.7 Mw

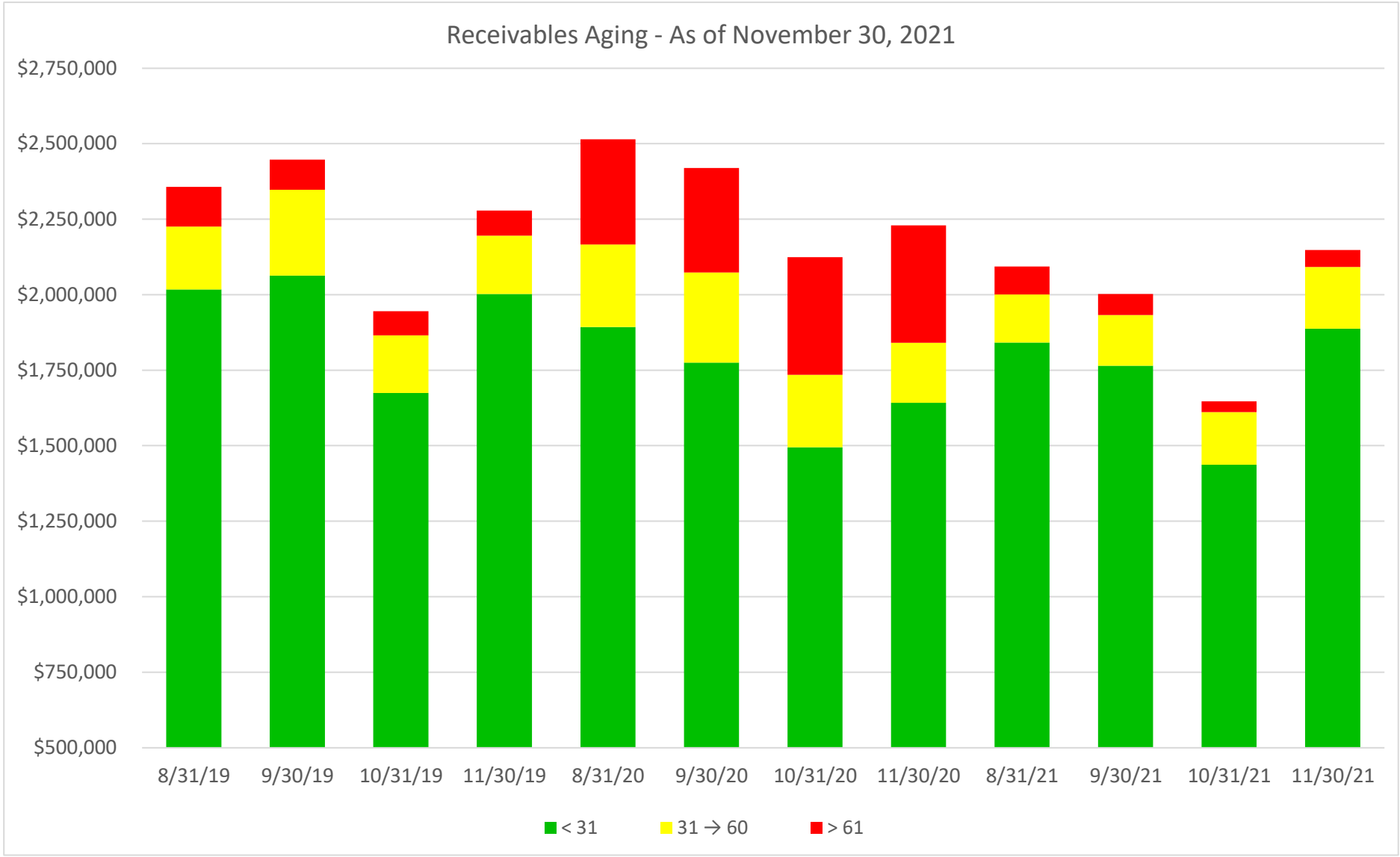


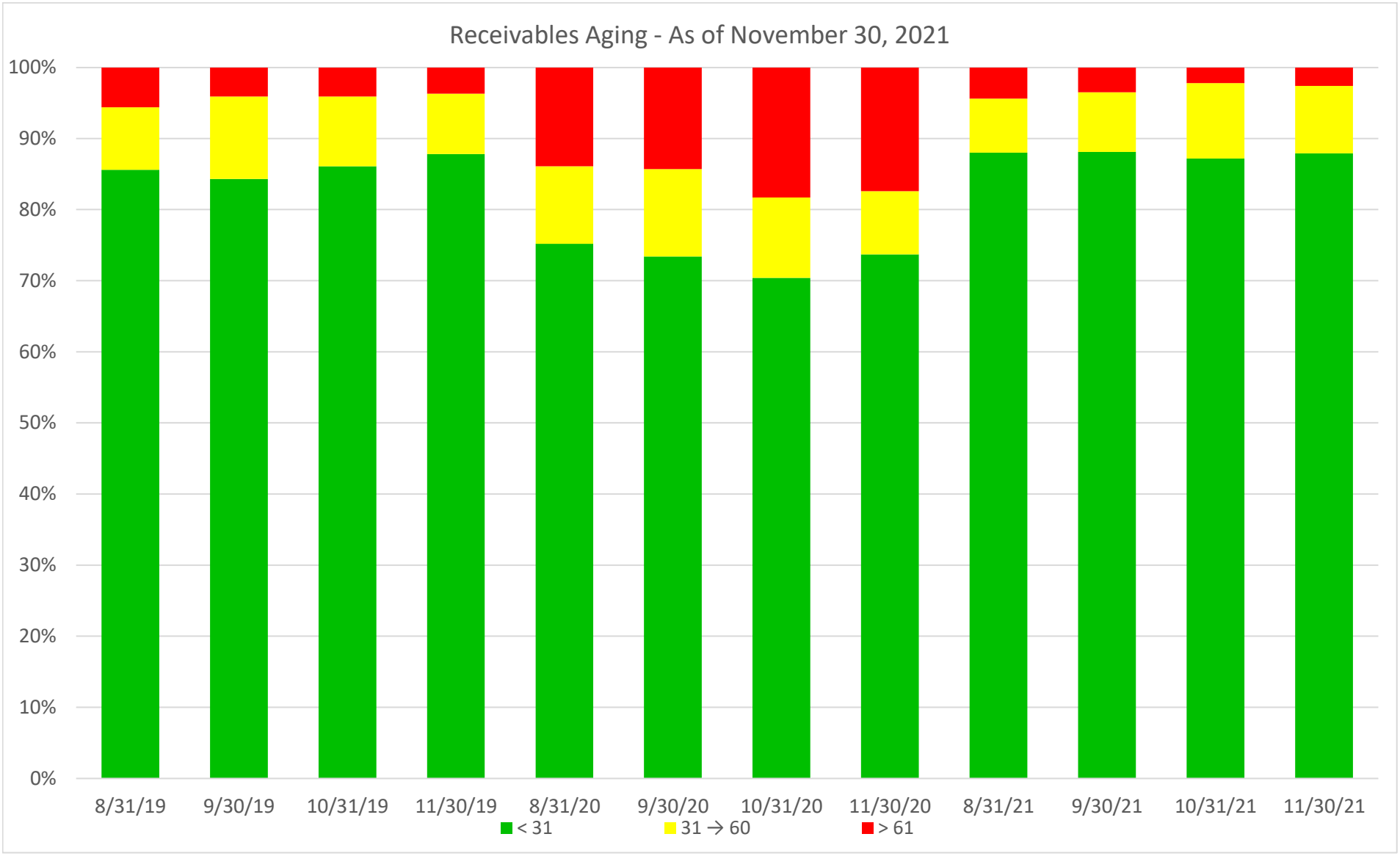
Wakefield Municipal Gas & Light Department
Customer Issues Log

Date	Issue	Resolution
September 17, 2021	Questions from several customers payments not posting to accounts in a timely manner due to LockBox delays - discounts lost	Discounts were manually corrected on accounts affected, communicated with bank - LockBox temp shutdown due to COVID outbreak. Now back to normal.
September 1, 2021	Water infiltration causing gas service interruptions on Wiley Place	Gas main & 12 related services were replaced = issue resolved
December 15, 2020	Question regarding answering service / office calls not being returned in a timely manner for a real estate agent / property sale / final bill	Realtor was given an office single point of contact.
August 24, 2020	Customer called indicating that during storm clean-up our contracted tree crew had damaged a retaining wall & customers driveway	WMGLD's E & O Manager along with representative from tree company met with the customer at his home and explained the damage was caused by erosion during the storm, not tree crew
July 2, 2020	Customer requested billing name change on account to reflect the name of a close relative who did not own & did not lease the property	Explained that the customer of record can only be the owner or lessor of the property
3/16/20 to 5/1/20	Slow down in posting payments to customer accounts due to continued Century Bank LockBox processing delays	Currently in communications with Century Bank & have re-tooled to process additional payments in-house with clean environment
January 16, 2020	Customer claimed move out in November but did not notify WMGLD until January. Disputed Nov - Jan billings. Posted on social media	Discussed with customer the responsibility of timely notification of move out
November 5, 2019	Customer requested service termination on account in his name, not living at service location anymore due to divorce	Explained service termination process involving move in / move out and spousal rights & responsibilities as it relates to the customer of record

COMMISSIONER REQUESTS LOG	Requested By	Request Date	Completion Date	NOTES
Review net metering policy	JK	12/5/18	1/9/19	
Add completion dates to this form	JW	12/5/18	1/9/19	
Remove identifying information on customer requests	JW	12/5/18	1/9/19	
Add solar to fuel portfolio supply mix	JK	12/5/18	1/9/19	
Streetlight conversions to be added to Dashboard	JW	2/1/18	2/26/18	
Dashboard to reflect KWH demand	JW	2/1/18	2/26/18	
3 double poles on Nahant Street	KC	3/1/18	3/2/18	VZ
Review Employee handbook	KH	3/1/18	4/11/18	
Subcommittee of JW and JK on survey development	JW	5/24/18	6/20/18	
Update Gas service Request List	KC/JK	5/24/18	6/20/18	
Berkshire Pro-Formas to Board	JW	3/1/18	4/11/18	
Access to be provided to website under construction	JK	6/20/18	6/27/18	
Minutes to webpage	JK	9/12/18	9/19/18	
Review Energy audit format	WT	11/1/18	12/5/18	
Progress made fixing gas leaks	JW	Continuing	On going	
Copy of Ngrid 345 KV contract	JK	2/13/19	when available	
Share Strategic Planning dates with Town Administrator	JK	2/13/19	2/14/19	
Provide Board with size of solar projects	TB	6/5/19	9/4/19	
Provide Board with additional information for EE proposal	JK, JW, TB	7/7/19	9/4/19	
Updates to EE proposal including rates hearing	JK, JW, TB	9/4/19	10/2/19	
Meet to discuss goal setting with Manager	JW - PC & KC	10/2/19	10/15/19	
Next year's goal setting meet with GM	PC & KC	11/13/19	11/22/19	
Provide pricing on Renewable Energy Credits = 15%	JK	11/13/19	11/20/19	
Provide detailed data on gas leaks	TB	11/13/19	11/27/19	
Provide information on data structures and fields in Customer Informtion System (Cogsdale)	JK	12/4/19	1/8/20	
Rework solar consumption as presented on solar bills	TB	1/8/20	1/31/20	
Update Electric Vehicle Dashboard to include cost data	TB	5/6/20	6/3/20	
Revise 2020 General Manager Goals due to COVID-19	PC	6/3/20	7/15/20	
Mission statatement development	JK	7/15/20	9/2/20	

COMMISSIONER REQUESTS LOG	Requested By	Request Date	Completion Date	NOTES
Rebates - Sense Rebate to Webform & Add WIFI Thermostats to Connected Homes Program	TB, JK	9/2/20	10/7/20	
Provide additional details on Customer Accounts Receivable / Collections	JW	12/2/20	1/6/21	
EV Charger - Year 1 summary data reporting	TB	2/3/21	3/3/21	
Earth Day Brochure	TB	3/12/21	3/30/21	
Upload 5 years of DPU reports to WMGLD website	JK	5/5/21	5/19/21	
Outage map functionality on mobile device	TB	5/5/21		
Green Choice Rate information updates to website	JK	7/14/21	7/16/21	
Present admin costs separately on conservation budget	JK	10/6/21	11/3/21	
Schedule a strategy meeting	JK	12/2/21	1/26/22	


Receivables Aging - As of November 30, 2021
$2,750,000
$2,500,000
$2,250,000
$2,000,000
$1,750,000
$1,500,000
$1,250,000
$1,000,000
$750,000
$500,000
8/31/19
9/30/19
10/31/19
11/30/19
8/31/20
9/30/20
10/31/20
11/30/20
8/31/21
9/30/21
10/31/21
11/30/21
< 31
31 → 60
> 61


Receivables Aging - As of November 30, 2021
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
8/31/19
9/30/19
10/31/19
11/30/19
8/31/20
9/30/20
10/31/20
11/30/20
8/31/21
9/30/21
10/31/21
11/30/21
< 31
31 → 60
> 61

RAW DATA - RECEIVABLES GRAPHS

	8/31/21		9/30/21		10/31/21		11/30/21	
< 31	$1,841,406	88.0%	$1,764,936	88.1%	$1,436,937	87.2%	$1,887,687	87.9%
31 → 60	159,499	7.6%	167,660	8.4%	174,009	10.6%	204,034	9.5%
> 61	92,579	4.4%	69,396	3.5%	35,649	2.2%	56,028	2.6%
Total	$2,093,483	**20.2**	$2,001,992	**19.5**	$1,646,595	**16.5**	$2,147,749	**21.8**

RAW DATA - RECEIVABLES GRAPHS

	8/31/20		9/30/20		10/31/20		11/30/20	
< 31	$1,892,928	75.2%	$1,775,021	73.4%	$1,494,430	70.4%	$1,641,955	73.7%
31 → 60	273,132	10.9%	298,185	12.3%	239,807	11.3%	198,433	8.9%
> 61	348,344	13.9%	345,977	14.3%	389,667	18.3%	388,949	17.4%
Total	$2,514,404	**23.8**	$2,419,183	**23.4**	$2,123,904	**21.1**	$2,229,337	**22.5**

	8/31/19		9/30/19		10/31/19		11/30/19	
< 31	$2,017,092	85.6%	$2,063,572	84.3%	$1,674,196	86.1%	$2,002,204	87.9%
31 → 60	208,356	8.8%	284,205	11.6%	190,857	9.8%	193,084	8.5%
> 61	131,236	5.6%	99,299	4.1%	80,148	4.1%	83,460	3.7%
Total	$2,356,684	**20.6**	$2,447,076	**21.9**	$1,945,201	**17.9**	$2,278,748	**21.3**

Notes: Gross Receivables from customer accounts are aged at month-end.
At 11/30/21, the >61 day balance of $56,028 was analyzed in detail - results include 34 unique accounts which make up $31,144 of the $56,028 balance with >61 day account balances ranging from $500 to $6,395
DSO Ratio is also presented in **RED**

REVENUES REVENUES REVENUES REVENUES REVENUES REVENUES

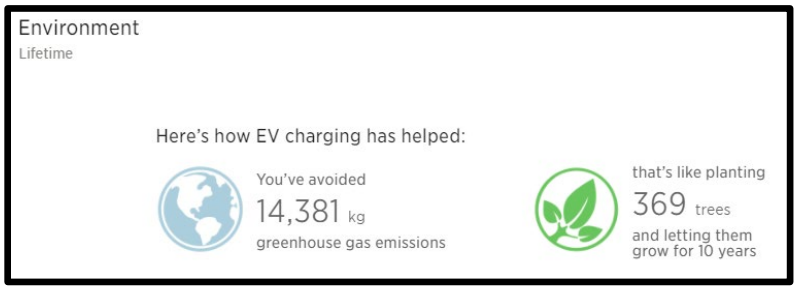
	8/31/21	9/30/21	10/31/21	11/30/21
ELECTRIC	2,364,658	2,603,991	2,063,432	1,951,364
GAS	210,639	214,480	268,230	647,253
TOTAL	$2,575,297	$2,818,471	$2,331,662	$2,598,617

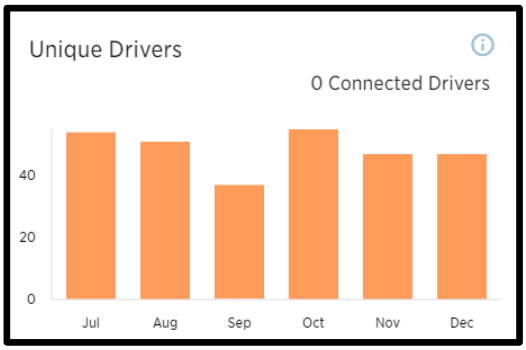
	8/31/20	9/30/20	10/31/20	11/30/20
ELECTRIC	2,840,633	2,315,544	1,974,107	1,867,315
GAS	196,008	207,306	306,311	654,714
TOTAL	$3,036,641	$2,522,850	$2,280,418	$2,522,029

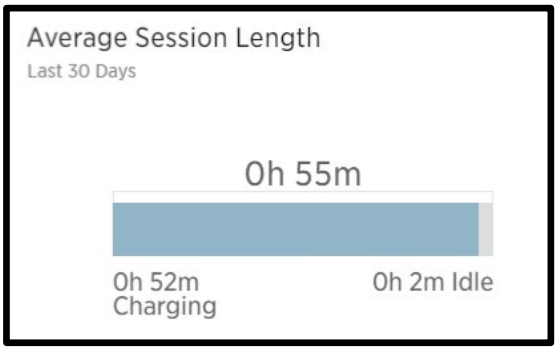
	8/31/19	9/30/19	10/31/19	11/30/19
ELECTRIC	2,813,216	2,459,071	2,095,661	1,998,241
GAS	204,743	222,433	324,669	728,498
TOTAL	$3,017,959	$2,681,504	$2,420,330	$2,726,739

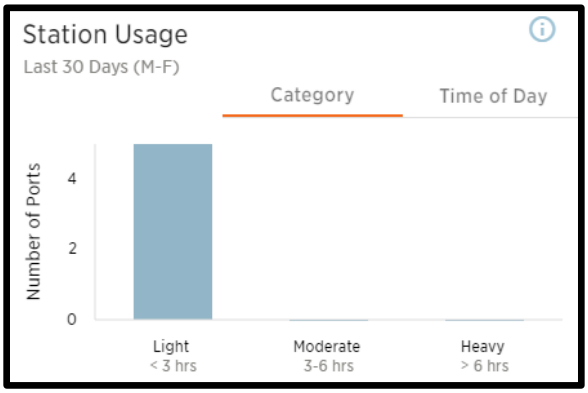
Electric Vehicle Public Charging Stations Dashboard – December 2021

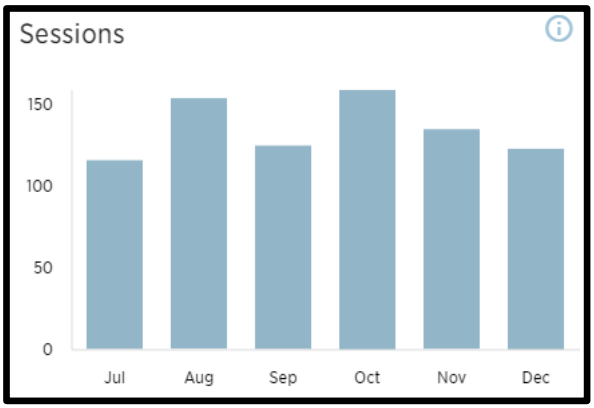
EV Charging Stations Utility Billing and Town Revenue Dec-21				
Locations	**Utility Billing**	**KWh**	**Town Revenue From Charge Point**	**KWh**
Vets Field	$29.48	122	$34.94	125
Civic Center	$8.07	50	$8.92	50
Public Parking Lot	$442.35	2581	$555.94	2470
Totals	**$479.90**	**2753**	**$599.80**	**2645**

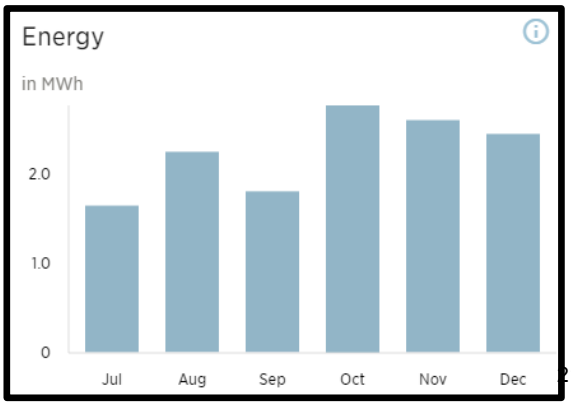






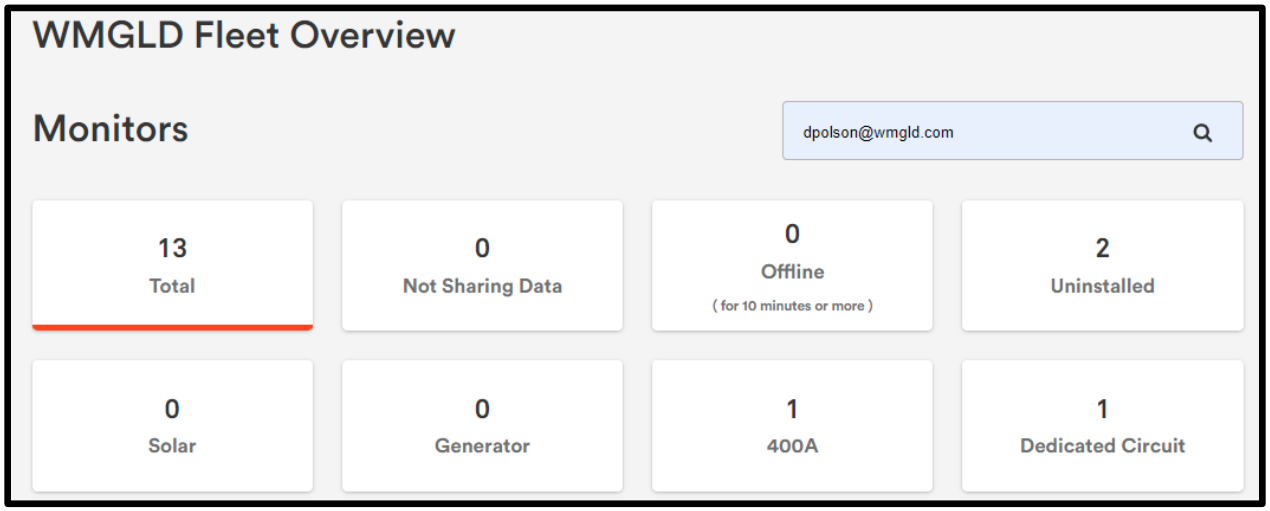






WMGLD Monitors

December 2021 Summary



Status	Job ID	Serial Number	Install Date	Address	Production (Yesterday)	Consumption (Yesterday)
UP		N038001783	01/10/2021		---	27.78 kWh
UP		N041002835	11/11/2020		---	16.86 kWh
UP		N033000112	10/29/2020		---	20.15 kWh
UP		N124030199	12/27/2021		---	18.79 kWh
UP		N034000028	11/03/2020		---	21.09 kWh
UP		N006000968	06/07/2021		---	48.03 kWh
UP		N040002162	01/06/2021		---	16.35 kWh
UP		N032000433	11/07/2020		---	42.96 kWh
UP		N042030177	05/15/2021		---	19.79 kWh
UP		N033000569	11/02/2020		---	20.92 kWh
UP		N034000045	11/02/2020		---	11.03 kWh
PENDING		N011000399	---		---	---
PENDING		N035000244	---		---	---

DPW Solar – Water Department Building
December 2021

Wakefield DPW Building | Peak Power: 20 kWp

SUNPOWER
by BlueSel Home Solar
www.BlueSel.com

System Performance

Current Power	Energy today	Energy this month	Lifetime energy
1.56 kW	5.59 kWh	794.9 kWh	38.48 MWh

Environmental Benefits

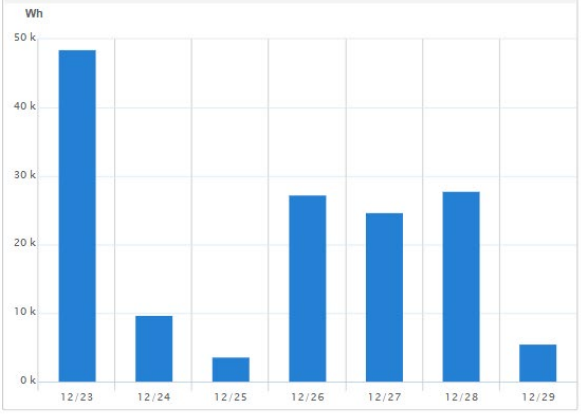
CO2 Emission Saved
59,582.85 lb

Equivalent Trees Planted
450.2

Power and Energy

Energy in the past 7 days

12/23/2021 - 12/29/2021



Cloudy
38 °F
Feels like 35 °F
Wind NW, 4 MPH
Humidity 82 %
Sunrise at 07:14
Sunset at 16:20

Wednesday	Thursday	Friday
37 - 36 °F Cloudy	43 - 39 °F Cloudy	43 - 39 °F 30% Chance of Rain

Last update: 12/29/2021 10:53 AM

solaredge

System Performance

Current Power	Energy today	Energy this month	Lifetime energy
1.53 kW	5.65 kWh	794.96 kWh	38.48 MWh

Environmental Benefits

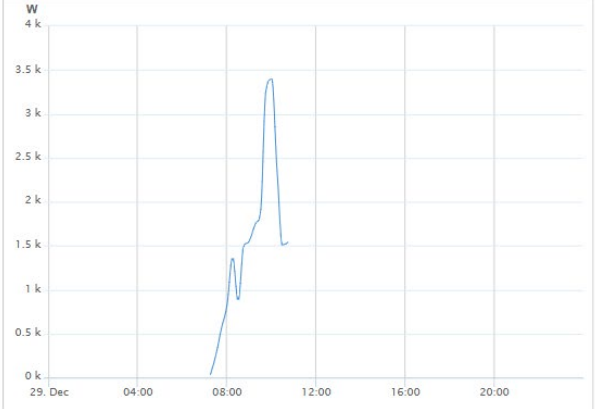
CO2 Emission Saved
59,582.95 lb

Equivalent Trees Planted
450.2

Power and Energy

Power Today

12/29/2021



Last update: 12/29/2021 10:55 AM

solaredge

General Manager's Report

The following is the General Managers Report for December 2021

Engineering and Operations Report

Major New Customer Projects: (1,000 +/- new residential housing units)

- **Water St. at Delcarmine -** New 23 unit residential building, building in progress, convert OH to UG ***Working***
- **581-583 Salem St. –** New 19-unit apartment build – ***Working***
- **525-527 Salem St** – New 22-unit building – ***On-Hold***
- **404 Lowell St**. – 8 Residential units – ***Working***
- **Hopkins Street @ Tarrant Lane** - Project approved by the town 173 apartments 4 buildings proposed – ***Working***
- **610 Salem St** – 20 Residential units – ***Permitting Phase***
- **200 Quannapowitt** – 385 Apartments / 3 buildings / parking garage – ***Permitting and Planning Phase*** *(number units reduced by the ZBA)*
    - **Building Demolition/Disconnect -** Q3/Q4 2022
    - **Temporary Power -** Q2/2023
    - **Permanent Power-** 2024
    - **Full Occupancy:** Q3 2025
- **Foundry Street phase 2** – 58 unit condo complex and commercial space – ***Permitting Phase***
- **127 Nahant St.** – 26 Residential units proposed – ***Planning stage***
- **1000 Main Street** – 30 Residential units proposed – ***Planning stage***

Gas Department

- The gas main installation by contractors on Lowell and Vernon Streets and on Cedar and Emerson Streets is complete. Services and tie overs are continued on Lowell and Vernon St.

- 1203 meters have been replaced so far this year. There are no remaining meters left to replace.

- There are currently 2099 inside gas services and 3013 outside services. 123 services have been moved outside this year.

- Leaks Class 1 – 0* **Class 2 – 0** Class 3 –66
  *(1 - Class 1 Leaks this month)

Financial Reports

Monthly Financials for through October and Consumption Reports through November are enclosed.

Board of Commissioners
January 5, 2022
Agenda Item No. D-1

Project Updates

COVID 19
The department was reopened on May 3. 35 of our 43 employees have been vaccinated. (One newly vaccinated this month) On December 27, 2021, the Town adopted an updated Covid policy which the Department has been following It requires still weekly testing for non-vaccinated personnel and has modified quarantine times for close contacts for non vaccinated and non booster personnel.

Solar Projects:

- 480 North Ave. (228.76 kW DC total) – Finalizing the Contract
  - Building system – 108 kW DC
  - Community Solar – 120 kW DC
- 1 Wakefield Ave –rebidding Q1 of 2022
  - Building system – 33 kW DC

4kv to 13.8kv conversions:

- West Water St, Richardson and Foster St area (ckt 397-02) – Preparing to convert from 4kv 397-02 to 13.8kv - 1302 / 0005 in Progress - Verizon completed – ***Work in progress***
- Tuttle St., Chestnut St, Murray, Avon St., Emerson from 4kv to 13.8kv (ckt 397-02 to 1302) – ***Work in progress***
- 397-04 Ballister St area convert to 1302/0005 – ***(Transformers ordered)***.
- Converting portions of ckt 9 on Water to ckt 443-W32 – ***(on hold)***

Town Projects:

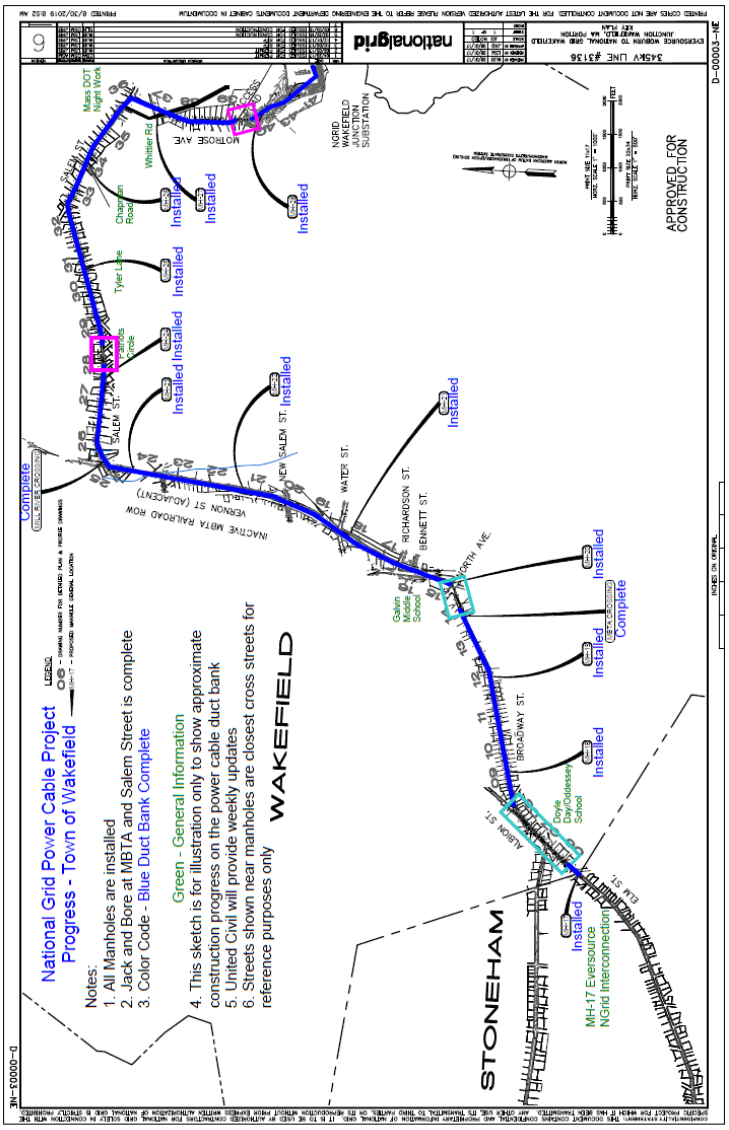
- **Albion Street** – Town is upgrading drains, water, street paving, sidewalks & 18 streel lights.
  - Town has selected and ordered the new lights for Albion St. – ***Installation of new Street lights COMPLETED***

NGrid 345kv Project Update NGRID

Project Schedule Update

United Civil / NGrid plan on working on Salem & Montrose this winter as much as possible.

PINK: 2021/2022 Work Zones - Day Work - Salem St. & Montrose Ave. - LEDGE - Winter Months
Blue: 2022 Work Zones - Day Work - Broadway St. - Rough Duration 1.5 months - Albion - 3 months



No votes required at this time - Discussion only

Board of Commissioners
January 5, 2022
Agenda Item No. D-2

Wakefield Community Solar Project

There are two community solar pricing options. Both set a minimum buy in amount, by kw, % of output or # of panels.

One sets a capital charge per month and also applies a credit for the percentage of output on a monthly basis. The capital charge would remain in place for a fixed period of time (7 to 10 years) while the credit would remain for the life of the project.

The other sets a fixed price per kwh for the output percentage. It is typically a premium over market today but if prices continue to rise, may represent a savings relative to market energy.

No votes required at this time - Discussion only

Board of Commissioners
January 5, 2022
Agenda Item No. D-3

Payment in Lieu of Taxes

WMGLD pays the Town of Wakefield an annual Payment in Lieu of Taxes. In 2016, the Town and the Finance Committee asked for a review of the PILOT payment formula and sought to have and understanding of the payment they could anticipate going forward. The WMGLD Board had a study performed by Energy New England which looked at the PILOT payment formulas used by many of the municipal electric departments and the various amounts paid. The study showed the Wakefield was among the highest in terms of cents per kwh and in terms of overall dollar amount contributed. The Board also recognized the need to provide the Town with an expected amount for planning purposes. The Board also recognized that the amount paid to date was a combination of

methods and that it would be best set a fixed amount at its current FY2016 level and increase the amount annually by 1.5% for the next 5 years. The 1.5% was used as proxy for anticipated growth. It was also noted that the Department would be assuming risk that sales would continue to grow and the Town would continually see an increase in the annual payment. Considering that there was no way to predict Covid and its impacts, the department has not seen the anticipated growth.

The Municipal Electric Association of Massachusetts commissioned its own study of PILOT payments in all 40 municipals last year. The results were consistent with the ENE study of 2016 in terms of our cents per kwh and overall dollar contributions.

It is important to consider the other significant contributions the Department makes to the Town each year such as the installation of EV chargers, the installation of solar on the water department roof and the significant unplanned upgrades on Albion Street over the past three years.

The Department is recommending that the Board vote to continue the PILOT payment formula growing the amount by 1.5% for an additional five years through FY2027.

No votes required at this time - Discussion only

Board of Commissioners
January 5, 2022
Agenda Item No. D-4

Winter Gas and Electric Supply

Per our discussions with Sprague and MMWEC over the past two months, winter commodity prices have been higher than prior years and volatile. There has been some downward pressure on prices over the past two week because the start of winter has been mild. It is unclear whether this will continue in the coming weeks. Staff will continue to monitor and adjust the fuel charge and the cost of gas charge if necessary.

No votes required at this time - Discussion

Board of Commissioners
January 5, 2022
Agenda Item No. D-5

January Strategic Planning Meeting

The Board has scheduled a Strategic Planning Meeting for Wednesday, January 26, 2022. Comments submitted by Commissioners are enclosed with the goal of establishing an agenda for the January meeting.

No votes required at this time - Discussion

Board of Commissioners
January 5, 2022
Agenda Item No. E-1

FERC Order 2222

FERC Order 2222 allows distributed energy resource aggregations (DERAs) to fully participate in the ISO New England Markets. MMWEC has supported this order with ISO New England. Advanced Energy Economy has filed proposed seven amendments to FERC Order. The ISO New England and the Public Power Sector are opposed to these amendments. Materials from MMWEC and the ISO are included.

No votes required at this time - Discussion

Executive Session. If needed

APPENDICIES

Wakefield Municipal Gas and Light Department
Comparative Balance Sheet - Electric Fund

	10/31/2020		10/31/2021	
ASSETS				
Sinking Fund - Self Insurance	$ 179,818.77		$ 180,044.10	
Depreciation Fund	182,821.53		182,958.69	
Consumer Deposits	878,111.61		883,037.24	
Total Investments	***1,240,751.91***		***1,246,040.03***	
Operating Cash	13,143,060.83		13,713,499.66	
Depreciation Fund	2,721.82		2,723.16	
Consumer Deposits	303,990.28		279,574.65	
Petty Cash	525.00		525.00	
Total Cash	***13,450,297.93***		***13,996,322.47***	
Accounts Receivable-Rates	3,432,619.61		3,268,891.72	
Accounts Receivable-Other	2,071,771.16		1,619,225.55	
Inventory	631,925.53		646,244.55	
Prepayments Miscellaneous	1,144,722.58		1,099,603.26	
Prepayments Power	3,690,950.67		4,288,684.79	
Other Deferred Debits	1,122,550.27		977,187.33	
Total Other Assets	***12,094,539.82***		***11,899,837.20***	
Total Current Assets		***26,785,589.66***		***27,142,199.70***
Distribution Plant	20,347,190.71		19,438,917.31	
General Plant	1,576,511.22		1,391,054.52	
Net Fixed Assets		***21,923,701.93***		***20,829,971.83***
Total Assets		***$ 48,709,291.59***		***$ 47,972,171.53***
LIABILITIES AND EQUITY				
Accounts Payable	$ 59,119.68		$ 412,967.05	
Consumer Deposits	1,182,101.89		1,162,611.89	
Other Accrued Liabilities	16,492.12		3,528.61	
Reserve for Uncollectable Accounts	218,397.21		127,607.01	
Total Current Liabilities	***1,476,110.90***		***1,706,714.56***	
Compensated Absences	467,256.96		429,177.54	
MMWEC Pooled Loan Debt	13,208,429.74		11,214,278.61	
OPEB Liability	1,936,702.25		1,231,362.25	
Pension Liability	7,743,000.00		7,743,000.00	
Total Long Term Liabilities	***23,355,388.95***		***20,617,818.40***	
Total Liabilities		***24,831,499.85***		***22,324,532.96***
Retained Earnings	10,396,846.32		11,438,502.40	
Year to Date Income	1,543,731.61		1,009,237.03	
Sinking Fund Reserve-Self Ins	179,818.77		180,044.10	
Contribution in Aid of Construction	3,705,337.66		3,705,337.66	
Investment in Fixed Assets	8,052,057.38		9,314,517.38	
Total Equity		***23,877,791.74***		***25,647,638.57***
Total Liabilities and Equity		***$ 48,709,291.59***		***$ 47,972,171.53***

Wakefield Municipal Gas and Light Department
Income Statement - Electric Fund
For the Four Months Ending, October 31, 2021

	CURRENT MONTH		YEAR TO DATE	
	FY 2021	FY 2022	FY 2021	FY 2022
Energy Revenue (Net of Discounts)				
Residential Sales	$ 959,816.93	$ 1,026,381.51	$ 5,317,800.91	$ 5,172,286.51
Commercial Sales	903,403.68	917,557.80	3,874,376.43	3,940,309.90
Street Lighting	15,678.00	15,678.00	62,707.00	62,707.00
Municipal Sales	87,845.33	111,400.55	359,049.19	441,019.48
Private Area Lighting	7,363.00	7,366.93	29,489.63	29,444.30
Green Choice Revenue	-	725.69	-	2,146.11
Total Energy Revenue	***1,974,106.94***	***2,079,110.48***	***9,643,423.16***	***9,647,913.30***
Other Revenues				
Unbilled Revenue	-	-	-	-
Interest Income-Consumer Deposits	444.15	270.38	2,217.31	1,454.01
Interest Income-Depreciation Fund	11.75	11.75	46.65	46.67
Interest Income-Self Ins Sinking Fund	34.14	14.15	169.07	57.45
Interest Income-MMWEC	716.96	(2,051.10)	3,271.87	(624.72)
Income (Exp) - Merchandise & Jobbing	(37,175.63)	(4,315.16)	(25,424.66)	(25,551.22)
Other Revenues	30.25	100.00	530.25	100.00
Sales Tax	49,766.63	48,545.70	216,739.78	210,338.42
Conservation Charge	8,152.99	15,581.08	42,884.62	69,714.88
Reconnect Fees	350.00	200.00	350.00	1,250.00
Comcast & RCN Pole Fees	-	-	69,501.20	-
Insurance Reimbursements	-	-	-	3,056.41
Other Electric Revenue	(373.71)	612.55	475.05	6,405.02
Total Other Revenue	***21,957.53***	***58,969.35***	***310,761.14***	***266,246.92***
Total Revenue	***1,996,064.47***	***2,138,079.83***	***9,954,184.30***	***9,914,160.22***
Power Costs				
Purchased Power	(985,575.50)	(1,020,833.24)	(4,887,930.15)	(5,221,327.42)
Power Expense Generation	(9,982.13)	(8,664.65)	(40,575.44)	(35,325.37)
Power Expense Battery	(6,975.96)	(6,533.95)	(28,120.60)	(26,359.69)
Total Power Costs	***(1,002,533.59)***	***(1,036,031.84)***	***(4,956,626.19)***	***(5,283,012.48)***
Gross Profit	***$ 993,530.88***	***$ 1,102,047.99***	***$ 4,997,558.11***	***$ 4,631,147.74***
Operating Expenses				
Miscellaneous Operating Expenses				
Depreciation Expense	(491,460.95)	(240,062.49)	(961,742.36)	(960,249.96)
Sales Tax	(49,766.63)	(48,545.70)	(216,739.78)	(210,338.42)
Interest Expense-Consumer Deposits	(2,017.06)	(369.45)	(8,029.31)	(1,506.70)
Interest Expense-MMWEC	(19,972.22)	(18,421.64)	(84,614.00)	(77,187.67)
Total Misc Operating Expenses	***(563,216.86)***	***(307,399.28)***	***(1,271,125.45)***	***(1,249,282.75)***
Distribution Expenses				
Operations Supervision and Engineering	(12,622.61)	(14,635.84)	(62,387.71)	(94,788.73)
Operations Labor	5,463.52	15,815.97	5,124.48	62,976.06
Substation Salaries and Expense	(46,702.97)	(41,658.45)	(168,712.25)	(225,938.20)
Customer Installation Expenses	240.80	(443.79)	(20,778.20)	(2,441.73)
Miscellaneous Distribution Expenses	(69,720.19)	(48,164.27)	(216,313.16)	(204,018.08)
Total Distribution Expenses	***(123,341.45)***	***(89,086.38)***	***(463,066.84)***	***(464,210.68)***

Wakefield Municipal Gas and Light Department
Income Statement - Electric Fund
For the Four Months Ending, October 31, 2021

	CURRENT MONTH		YEAR TO DATE	
	FY 2021	FY 2022	FY 2021	FY 2022
Maintenance Expenses				
Maintenance Supervision and Engineering	(17,553.38)	(16,988.80)	(64,200.76)	(69,654.08)
Maintenance of Station Equipment	(584.01)	(172.50)	(1,351.09)	(172.50)
Maintenance of Other Equipment	-	-	(3,877.02)	(942.44)
Maintenance of Overhead Lines	(28,063.57)	(81,551.18)	(202,641.37)	(385,312.27)
Maintenance of Underground Lines	-	-	(8,081.63)	(2,220.25)
Maintenance of Line Transformers	-	-	-	(5,630.00)
Maintenance of Street Lighting	-	(217.89)	(201.25)	(476.28)
Maintenance of Meters	240.80	(443.79)	719.80	(2,441.73)
Maintenance of Other Distribution Plant	(3,398.68)	(1,216.82)	(16,121.12)	(5,212.69)
Total Maintenance Expenses	***(49,358.84)***	***(100,590.98)***	***(295,754.44)***	***(472,062.24)***
Customer Account Expense				
Meter Reading Expense	(4,131.83)	(3,331.84)	(37,370.54)	(13,332.35)
Customer Records & Collection Exp	(58,257.16)	(61,528.47)	(215,070.62)	(237,278.04)
Total Customer Account Exp	***(62,388.99)***	***(64,860.31)***	***(252,441.16)***	***(250,610.39)***
Administrative and General Expenses				
Community Relations & Advertising	-	(773.70)	(399.00)	(5,032.71)
Administrative Salaries and Expense	(17,088.77)	(14,556.35)	(60,916.95)	(65,067.15)
Business Mgr and Accting Salaries and Exp	(16,906.19)	(21,709.83)	(54,633.52)	(77,011.20)
MIS Salaries and Expense	(76,244.23)	(20,308.00)	(94,464.85)	(96,193.05)
Outside Services	(10,500.00)	(12,000.00)	(12,375.00)	(15,750.00)
Conservation & Rebates	(31,059.88)	(21,276.96)	(77,351.76)	(107,871.39)
Property Insurance	(5,375.08)	(4,707.42)	(21,500.36)	(18,829.64)
Injuries and Damages	(4,603.38)	(6,271.76)	(18,667.90)	(25,087.04)
Employee Pensions and Benefits	(138,941.94)	(125,418.51)	(584,774.91)	(509,095.10)
Miscellaneous General Expenses	89.86	(168.66)	(28,620.56)	(6,084.24)
Maintenance of General Plant	(6,020.36)	(2,522.25)	(34,388.08)	(47,639.96)
Total Admin & General Expenses	***(306,649.97)***	***(229,713.44)***	***(988,092.89)***	***(973,661.48)***
Net Income (Loss) Before Surplus Adjustments	***$ (111,425.23)***	***$ 310,397.60***	***$ 1,727,077.33***	***$ 1,221,320.20***
Surplus Adjustments				
Additions				
Sale of Scrap	-	20,936.76	-	20,936.76
MMWEC Refund	-	-	46,343.35	-
Total Additions to Surplus	***-***	***20,936.76***	***46,343.35***	***20,936.76***
Subtractions				
Interest on Sinking Fund	34.14	14.15	169.07	57.45
Payment in Lieu of Taxes	57,380.00	58,240.63	229,520.00	232,962.48
Plant Removal Costs	-	-	-	-
Total Subtractions from Surplus	***57,414.14***	***58,254.78***	***229,689.07***	***233,019.93***
Net Income (Loss)	***$ (168,839.37)***	***$ 273,079.58***	***$ 1,543,731.61***	***$ 1,009,237.03***

Wakefield Municipal Gas and Light Department
Comparative Balance Sheet - Gas Fund

	10/31/2020		10/31/2021	
ASSETS				
Sinking Fund - Self Insurance	$ 179,818.77		$ 180,044.10	
Consumer Deposits	96,436.94		96,984.25	
Total Investments	***276,255.71***		***277,028.35***	
Operating Cash	(15,217,988.97)		(16,722,621.40)	
Consumer Deposits	195,207.74		202,600.43	
Petty Cash	175.00		175.00	
Total Cash	***(15,022,606.23)***		***(16,519,845.97)***	
Accounts Receivable-Rates	491,181.42		390,783.16	
Inventory	434,874.02		603,176.14	
Prepayments Miscellaneous	167,155.08		169,208.02	
Other Deferred Debits	371,037.13		333,233.12	
Total Other Assets	***1,464,247.65***		***1,496,400.44***	
Total Current Assets		***(13,282,102.87)***		***(14,746,417.18)***
Distribution Plant	23,641,688.92		25,393,667.12	
General Plant	483,276.03		445,187.00	
Net Fixed Assets		***24,124,964.95***		***25,838,854.12***
Total Assets		***$ 10,842,862.08***		***$ 11,092,436.94***
LIABILITIES AND EQUITY				
Accounts Payable	$ (9,835.95)		$ 91,098.93	
Consumer Deposits	291,644.68		299,584.68	
Other Accrued Liabilities	6,813.73		875.06	
Reserve for Uncollectable Accounts	218,397.21		127,607.01	
Total Current Liabilities	***507,019.67***		***519,165.68***	
Compensated Absences	267,026.80		271,895.82	
OPEB Liability	544,080.75		308,967.75	
Pension Liability	2,581,000.00		2,581,000.00	
Total Long Term Liabilities	***3,392,107.55***		***3,161,863.57***	
Total Liabilities		***3,899,127.22***		***3,681,029.25***
Retained Earnings	(16,102,248.00)		(17,120,848.96)	
Year to Date Income (Loss)	(899,857.58)		(1,051,631.12)	
Sinking Fund Reserve-Self Ins	179,818.77		180,044.10	
Contribution in Aid of Construction	13,600.00		13,600.00	
Investment in Fixed Assets	23,752,421.67		25,390,243.67	
Total Equity		***6,943,734.86***		***7,411,407.69***
Total Liabilities and Equity		***$ 10,842,862.08***		***$ 11,092,436.94***

Wakefield Municipal Gas and Light Department
Income Statement - Gas Fund
For the Four Months Ending, October 31, 2021

	CURRENT MONTH		YEAR TO DATE	
	FY 2021	FY 2022	FY 2021	FY 2022
Energy Revenue (Net of Discounts)				
Residential Sales	$221,732.05	$192,145.12	$688,228.52	$670,020.76
Commercial Sales	63,588.64	66,605.55	200,184.93	229,280.38
Municipal Sales	20,990.46	9,479.47	32,921.51	20,689.11
Total Energy Revenue	***306,311.15***	***268,230.14***	***921,334.96***	***919,990.25***
Other Revenues				
Unbilled Revenue	-	-	-	-
Interest Income-Consumer Deposits	49.36	30.05	246.40	161.57
Interest Income-Self Ins Sinking Fund	34.14	14.16	169.06	57.46
Income from Merchandise & Jobbing	42,185.04	-	49,093.35	5,000.00
Special Gas Charges	-	-	650.60	
Sales Tax	2,959.22	2,901.40	10,074.76	10,549.33
Reconnect Fees	-	-	-	-
Insurance Reimbursements	-	-	-	-
Other Gas Revenue	71.61	99.03	(119.30)	715.65
Total Other Revenue	***45,299.37***	***3,044.64***	***60,114.87***	***16,484.01***
Total Revenue	***351,610.52***	***271,274.78***	***981,449.83***	***936,474.26***
Gas Purchased	***(193,141.70)***	***(220,976.47)***	***(471,761.15)***	***(604,455.71)***
Gross Profit	***$ 158,468.82***	***$ 50,298.31***	***$ 509,688.68***	***$ 332,018.55***
Operating Expenses				
Miscellaneous Operating Expenses				
Depreciation Expense	94,264.89	(163,872.56)	(627,041.88)	(655,490.24)
Sales Tax	(2,959.22)	(2,901.40)	(10,074.76)	(10,549.33)
Interest Expense-Consumer Deposits	(504.27)	(92.36)	(2,007.33)	(376.67)
Total Misc Operating Expenses	***90,801.40***	***(166,866.32)***	***(639,123.97)***	***(666,416.24)***
Distribution Expenses				
Operations Supervision and Engineering	(16,528.44)	(17,907.93)	(63,670.81)	(82,207.49)
Station Labor and Expenses	(16,111.86)	(15,279.55)	(60,802.52)	(61,530.85)
Mains and Service	4,360.90	9,809.88	(22,430.48)	37,133.24
Customer Installation Expenses	(12,233.18)	(13,828.22)	(40,995.03)	(74,626.54)
Miscellaneous Plant Expenses	(39,740.74)	(3,982.27)	(47,075.46)	(27,143.09)
Total Distribution Expenses	***(80,253.32)***	***(41,188.09)***	***(234,974.30)***	***(208,374.73)***
Maintenance Expenses				
Maintenance of Mains	(7,491.76)	(41,656.83)	(83,099.69)	(142,630.37)
Maintenance of Meters and House Regulators	(1,908.70)	(145.00)	(5,312.21)	(3,822.00)
Maintenance of Other Equipment	(1,262.78)	(232.50)	(17,254.51)	(6,712.16)
Total Maintenance Expenses	***(10,663.24)***	***(42,034.33)***	***(105,666.41)***	***(153,164.53)***
Customer Account Expense				
Meter Reading Expense	(1,377.28)	(1,110.60)	(12,456.84)	(5,539.47)
Customer Record and Collection Expenses	(21,419.03)	(20,369.46)	(78,801.11)	(78,769.19)
Total Customer Account Expenses	***(22,796.31)***	***(21,480.06)***	***(91,257.95)***	***(84,308.66)***

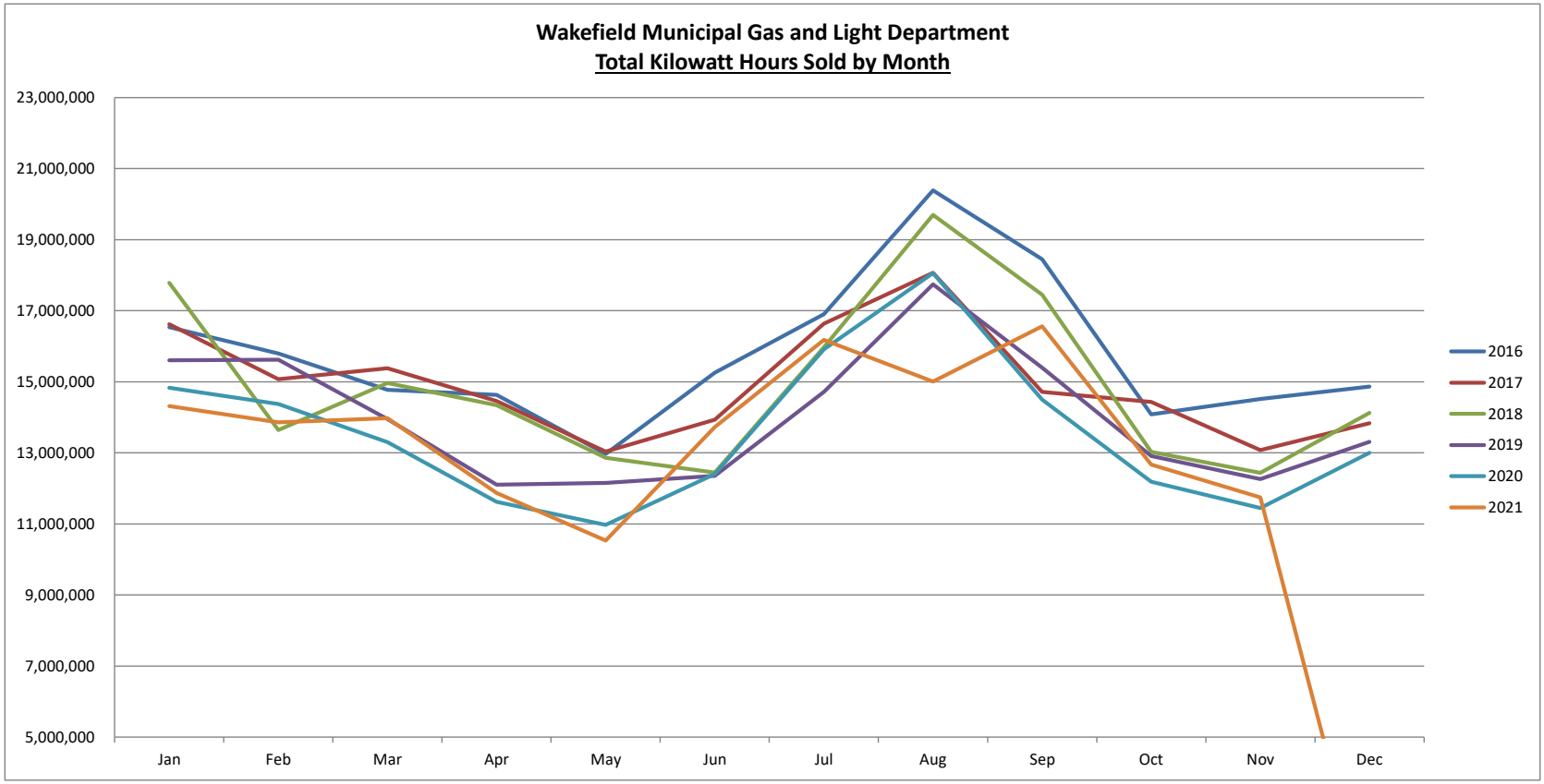
Wakefield Municipal Gas and Light Department
Income Statement - Gas Fund
For the Four Months Ending, October 31, 2021

	CURRENT MONTH		YEAR TO DATE	
	FY 2021	FY 2022	FY 2021	FY 2022
Administrative and General Expenses				
Advertising	-	-	(221.00)	-
Administrative Salaries and Expense	(5,496.25)	(4,652.11)	(19,505.64)	(18,896.33)
Business Mgr and Accting Salaries and Exp	(5,132.39)	(6,895.01)	(18,629.16)	(23,974.78)
MIS Salaries and Expense	(25,414.74)	(6,769.32)	(31,488.28)	(32,064.30)
Outside Services	(3,500.00)	(4,000.00)	(5,725.00)	(5,250.00)
Property Insurance	(329.08)	(288.17)	(1,316.36)	(1,152.64)
Injuries and Damages	(1,143.61)	(2,700.75)	(5,278.99)	(9,447.50)
Employee Pensions and Benefits	(39,292.56)	(23,765.28)	(160,110.35)	(86,186.64)
Miscellaneous General Expenses	31.27	(809.54)	(11,856.38)	(821.71)
Maintenance of General Plant	(1,874.23)	(840.75)	(7,716.77)	(15,879.99)
Total Admin & General Expenses	***(82,151.59)***	***(50,720.93)***	***(261,847.93)***	***(193,673.89)***
Net Income (Loss) Before Surplus Adjustments	***$53,405.76***	***($271,991.42)***	***($823,181.88)***	***($973,919.50)***
Surplus Adjustments				
Additions	-	-	-	-
	-	-	-	-
Subtractions				
Interest on sinking fund investment	34.14	14.16	169.06	57.46
Payment in Lieu of Taxes	19,126.67	19,413.54	76,506.64	77,654.16
Plant Removal Costs	-	-	-	-
Total Subtractions from Surplus	***19,160.81***	***19,427.70***	***76,675.70***	***77,711.62***
Net Income (Loss)	***$34,244.95***	***($291,419.12)***	***($899,857.58)***	***($1,051,631.12)***

Wakefield Municipal Gas and Light Department

Total Kilowatt Hours Sold by Month

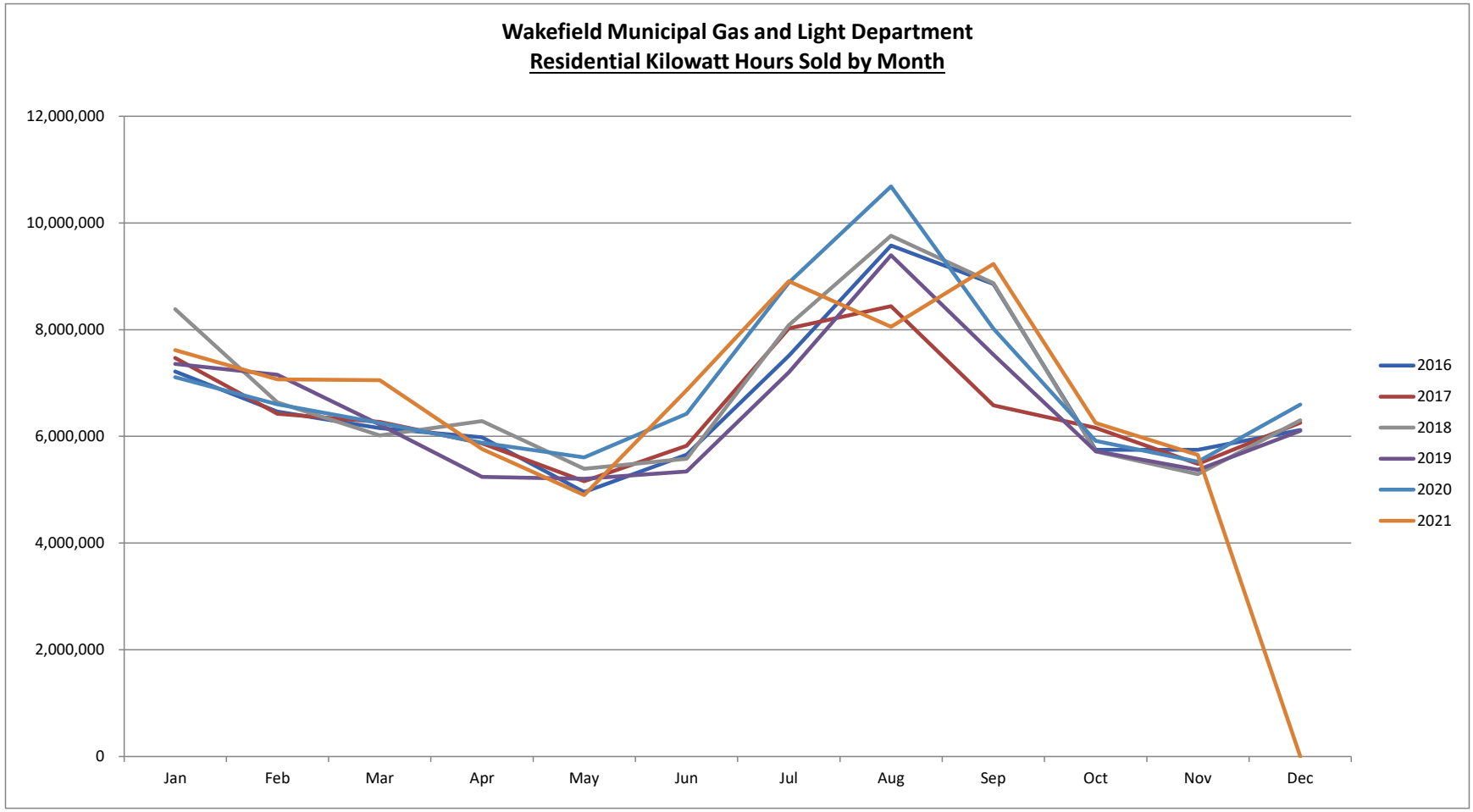
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	18,740,892	17,690,022	16,080,730	15,466,811	14,598,701	14,223,390	17,889,206	18,246,969	20,317,312	14,434,902	13,189,867	14,852,037	180,878,802	195,730,839
2016	16,533,974	15,797,950	14,772,758	14,634,278	12,966,436	15,255,131	16,901,222	20,390,535	18,447,864	14,084,731	14,517,900	14,862,522	174,302,779	189,165,301
2017	16,621,327	15,070,229	15,380,671	14,453,301	13,037,016	13,930,871	16,639,208	18,069,872	14,713,966	14,432,674	13,077,414	13,830,767	165,426,549	179,257,316
2018	17,781,658	13,643,198	14,968,016	14,337,800	12,863,470	12,441,286	15,974,013	19,698,047	17,452,170	13,030,487	12,439,795	14,124,456	164,629,940	178,754,396
2019	15,603,457	15,622,295	13,945,735	12,101,427	12,149,665	12,351,319	14,712,024	17,745,521	15,394,404	12,913,523	12,257,655	13,307,183	154,797,025	168,104,208
2020	14,828,122	14,373,838	13,299,621	11,620,258	10,978,443	12,406,390	15,909,116	18,062,379	14,494,332	12,189,623	11,444,845	12,998,123	149,606,967	162,605,090
2021	14,315,035	13,860,939	13,975,661	11,872,008	10,531,822	13,728,211	16,181,525	15,008,717	16,563,996	12,671,184	11,747,642	0	150,456,740	150,456,740



Wakefield Municipal Gas and Light Department

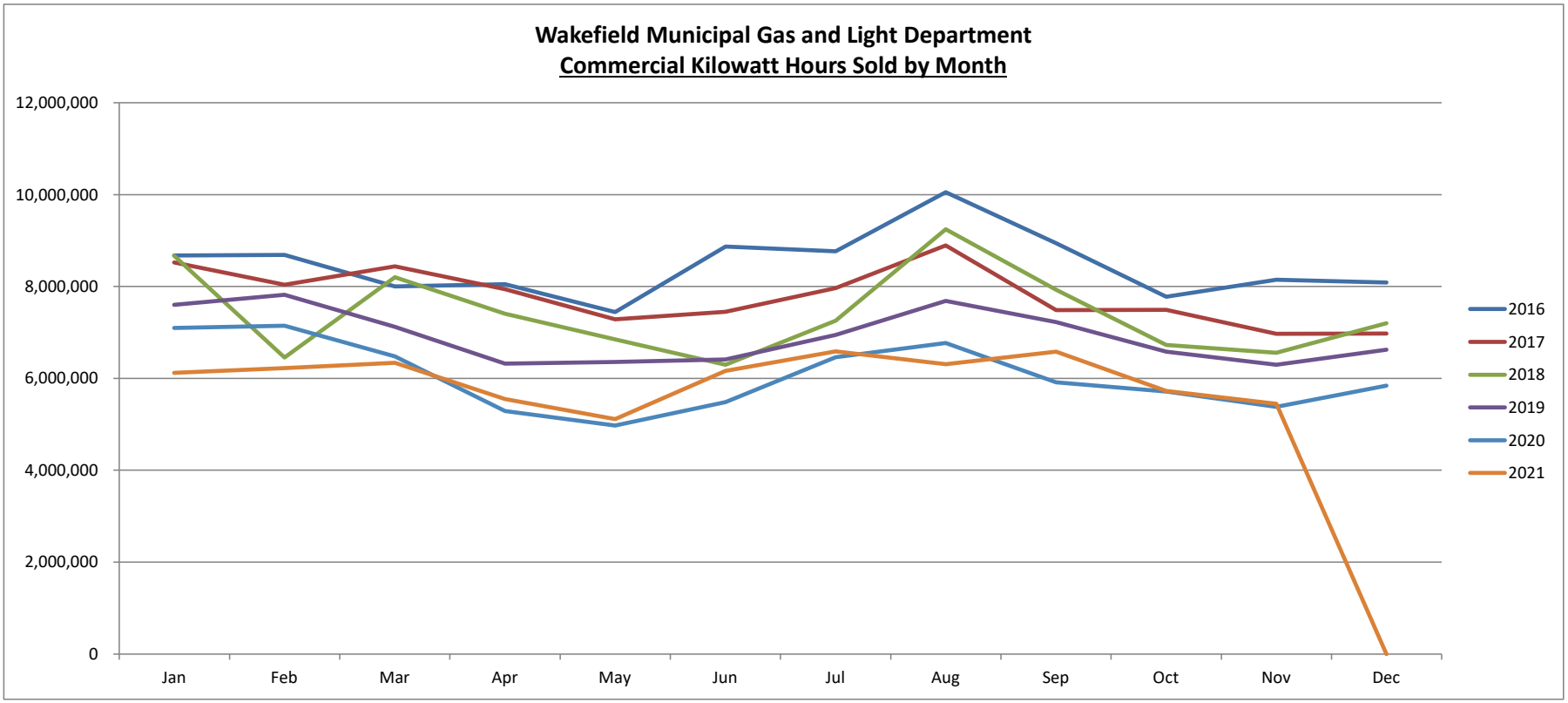
Residential Kilowatt Hours Sold by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	8,178,424	7,676,232	6,887,656	6,114,348	5,604,983	5,522,641	7,546,631	8,356,952	9,266,873	6,082,228	5,246,984	5,899,584	76,483,952	82,383,536
2016	7,213,246	6,462,572	6,152,141	5,983,207	4,954,943	5,656,308	7,510,425	9,575,466	8,857,734	5,745,728	5,748,680	6,120,760	73,860,450	79,981,210
2017	7,467,150	6,424,129	6,270,260	5,869,151	5,160,098	5,826,264	8,024,557	8,439,346	6,581,965	6,158,377	5,483,264	6,253,864	71,704,561	77,958,425
2018	8,381,831	6,634,709	6,019,617	6,286,768	5,394,451	5,580,611	8,081,951	9,761,016	8,872,178	5,715,595	5,291,009	6,301,934	76,019,736	82,321,670
2019	7,355,946	7,154,845	6,221,898	5,239,541	5,205,792	5,339,985	7,199,576	9,395,819	7,528,296	5,721,653	5,370,353	6,105,033	71,733,704	77,838,737
2020	7,106,825	6,598,732	6,252,606	5,879,621	5,608,073	6,424,574	8,879,896	10,682,850	8,020,241	5,915,271	5,522,660	6,595,284	76,891,349	83,486,633
2021	7,615,309	7,068,224	7,051,410	5,762,053	4,899,949	6,865,329	8,905,241	8,053,329	9,234,642	6,252,471	5,651,391	0	77,359,348	77,359,348



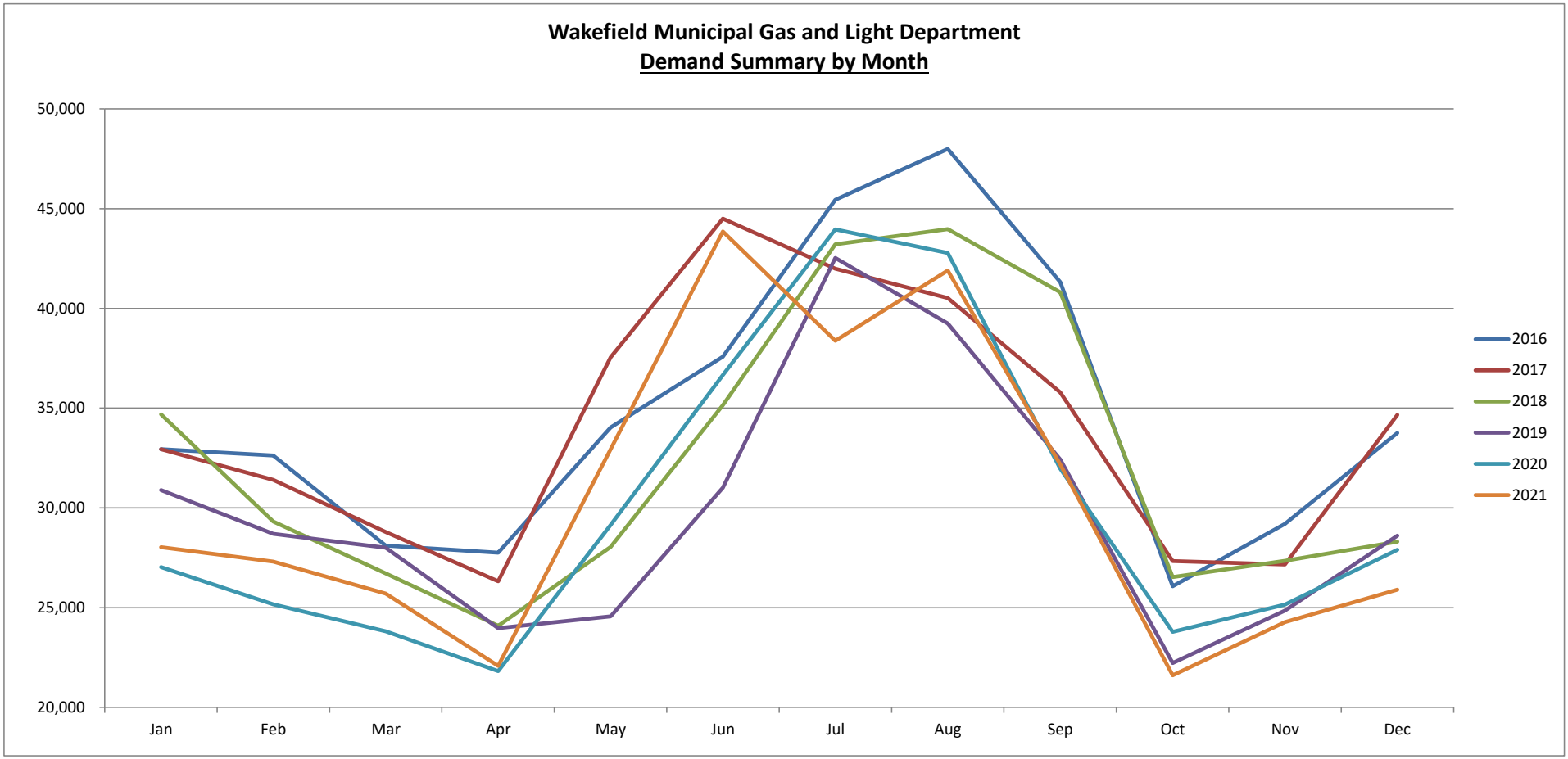
Wakefield Municipal Gas and Light Department
Commercial Kilowatt Hours Sold by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	9,967,369	9,469,303	8,613,429	8,821,582	8,262,753	8,094,609	9,621,561	9,232,271	10,201,316	7,791,890	7,309,757	8,355,668	97,385,840	105,741,508
2016	8,673,865	8,689,011	7,999,923	8,051,075	7,445,033	8,872,760	8,766,522	10,055,972	8,941,165	7,779,242	8,150,450	8,087,516	93,425,018	101,512,534
2017	8,523,398	8,036,867	8,440,054	7,944,183	7,284,920	7,449,910	7,967,311	8,893,548	7,485,167	7,489,927	6,972,575	6,974,940	86,487,860	93,462,800
2018	8,672,072	6,454,777	8,202,783	7,408,045	6,850,856	6,298,357	7,254,302	9,246,878	7,926,678	6,730,578	6,558,328	7,202,785	81,603,654	88,806,439
2019	7,598,845	7,821,861	7,121,215	6,321,095	6,359,892	6,410,293	6,948,166	7,687,622	7,224,317	6,582,051	6,298,066	6,622,414	76,373,423	82,995,837
2020	7,099,814	7,145,647	6,479,516	5,287,598	4,976,694	5,480,761	6,462,708	6,769,061	5,912,086	5,713,612	5,380,420	5,840,667	66,707,917	72,548,584
2021	6,120,226	6,226,617	6,338,424	5,549,735	5,114,423	6,164,934	6,586,022	6,310,111	6,582,920	5,727,081	5,444,897	0	66,165,390	66,165,390



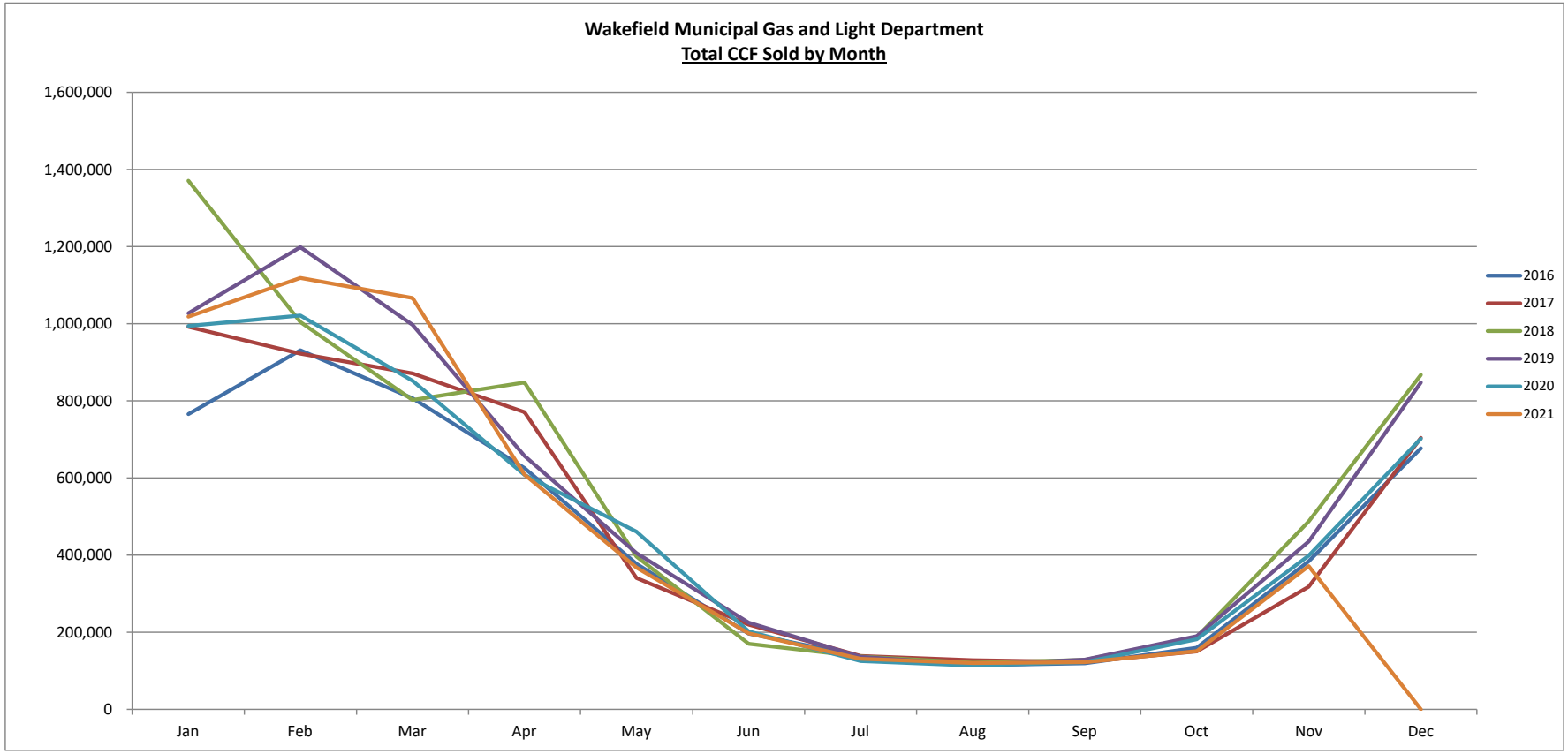
Wakefield Municipal Gas and Light Department
Demand Summary by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	32,943	32,626	28,103	27,751	34,030	37,581	45,442	47,999	41,318	26,069	29,200	33,750
2017	32,945	31,399	28,795	26,326	37,549	44,504	41,984	40,522	35,784	27,334	27,166	34,658
2018	34,692	29,316	26,712	24,091	28,039	35,145	43,210	43,982	40,807	26,527	27,350	28,308
2019	30,896	28,694	28,005	23,973	24,561	31,013	42,538	39,245	32,423	22,226	24,847	28,610
2020	27,031	25,166	23,806	21,823	29,147	36,658	43,966	42,773	31,971	23,789	25,149	27,898
2021	28,023	27,300	25,704	22,075	32,944	43,864	38,381	41,900	32,172	21,605	24,276	25,905



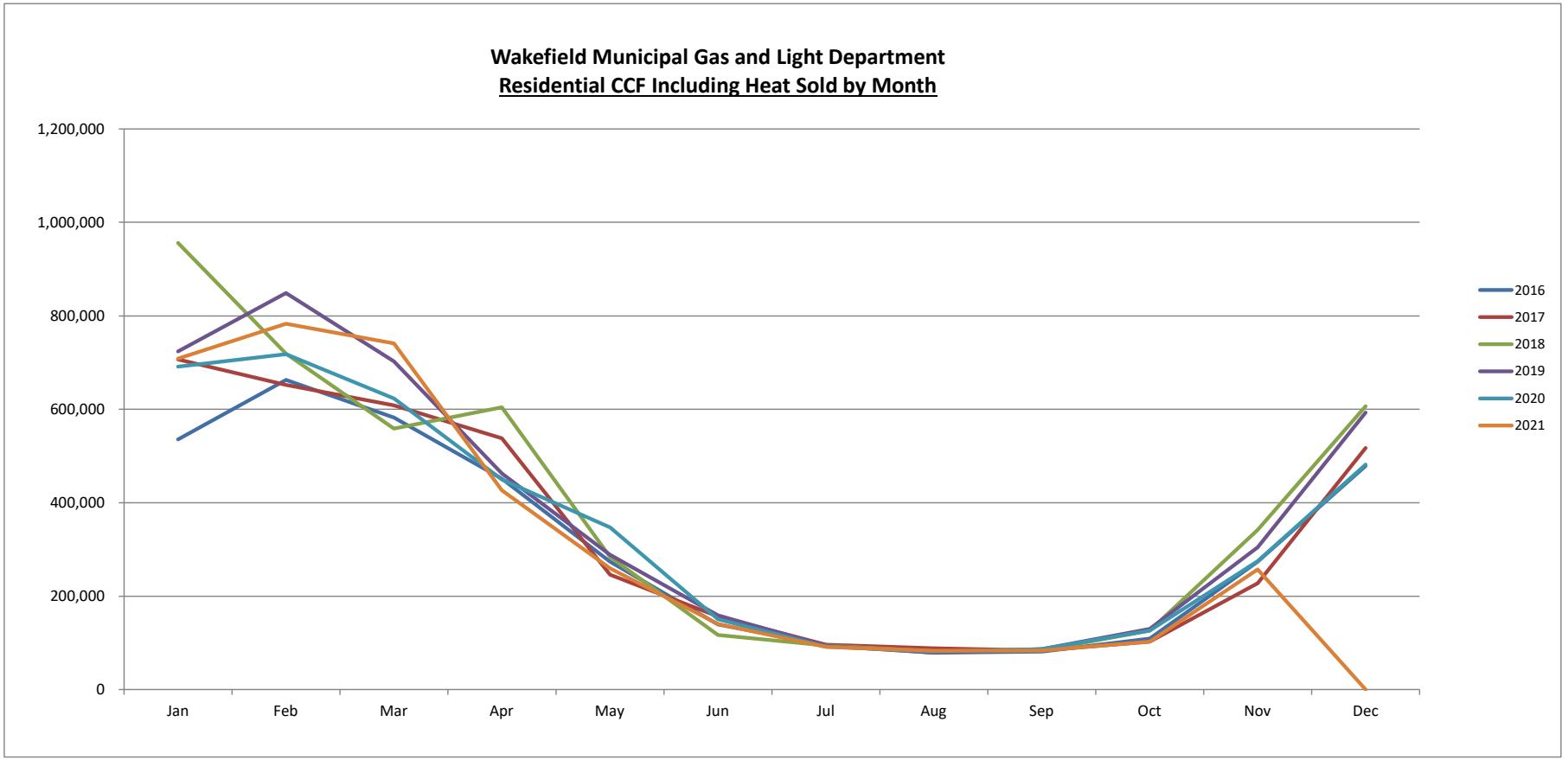
Wakefield Municipal Gas and Light Department
Total CCF Sold by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	1,009,763	1,262,240	1,132,746	790,303	376,704	162,785	143,849	113,013	124,003	165,477	321,060	533,054	5,601,943	6,134,997
2016	765,531	931,089	806,477	625,895	377,396	196,282	137,576	114,295	119,858	159,642	383,967	676,788	4,618,008	5,294,796
2017	992,147	922,194	871,001	770,881	341,035	219,847	138,513	127,619	122,846	150,433	318,338	704,061	4,974,854	5,678,915
2018	1,370,550	1,004,477	802,171	848,137	396,183	170,309	137,249	120,845	127,950	187,532	487,660	867,528	5,653,063	6,520,591
2019	1,027,554	1,198,806	997,533	657,267	405,201	224,983	136,083	116,142	129,215	189,712	435,624	847,819	5,518,120	6,365,939
2020	994,568	1,020,971	852,440	608,122	461,181	202,283	125,139	113,927	122,475	182,071	398,894	701,805	5,082,071	5,783,876
2021	1,018,323	1,118,751	1,067,083	609,268	368,207	197,298	131,406	120,133	122,771	151,033	371,698	0	5,275,971	5,275,971



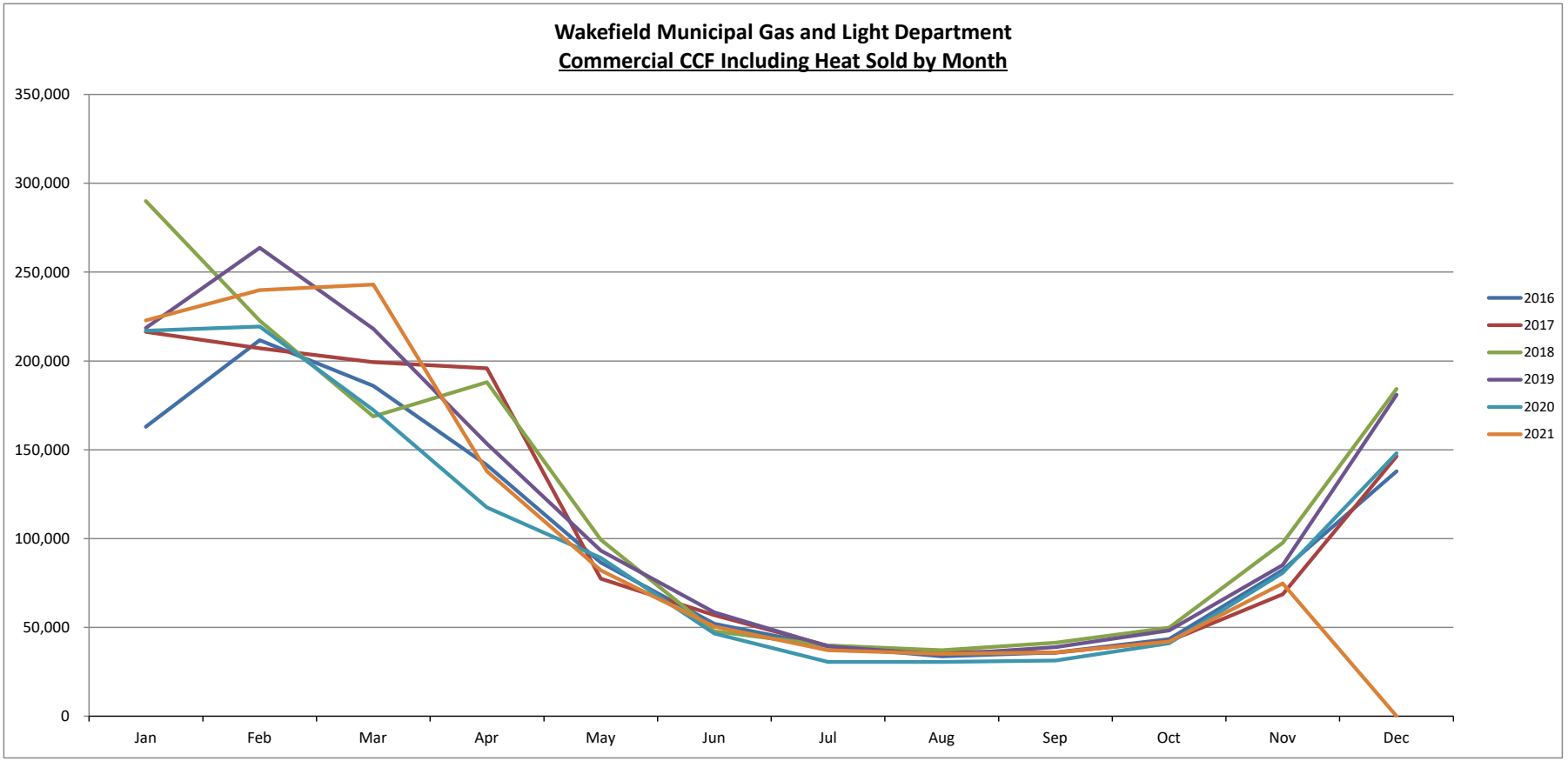
Wakefield Municipal Gas and Light Department
Residential CCF Including Heat Sold by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	709,258	882,366	804,314	567,283	271,108	114,243	102,782	78,644	86,567	113,195	226,095	377,416	3,955,855	4,333,271
2016	535,549	662,659	582,337	451,806	273,729	139,457	95,766	78,465	81,548	109,253	273,630	478,948	3,284,199	3,763,147
2017	706,641	652,293	608,703	537,827	246,194	156,746	96,121	88,308	83,699	102,620	227,364	517,605	3,506,516	4,024,121
2018	955,996	719,247	559,069	604,296	284,006	117,101	94,578	81,483	83,489	126,051	341,704	606,524	3,967,020	4,573,544
2019	723,933	849,023	702,875	462,667	288,440	158,602	93,767	78,965	86,479	129,638	304,511	593,201	3,878,900	4,472,101
2020	691,648	718,153	623,618	449,871	347,517	150,699	92,145	81,363	86,869	126,324	274,836	481,957	3,643,043	4,125,000
2021	708,777	783,101	741,456	426,617	259,753	140,299	91,521	82,849	83,867	102,659	257,514	0	3,678,413	3,678,413



Wakefield Municipal Gas and Light Department
Commercial CCF Including Heat Sold by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date Thru Nov	Annual Total
2015	211,670	280,348	255,703	184,532	88,149	42,594	37,791	32,329	34,412	42,841	69,578	114,429	1,279,947	1,394,376
2016	163,042	211,741	186,069	141,396	86,581	52,156	39,363	33,659	36,024	43,452	82,379	138,006	1,075,862	1,213,868
2017	216,460	207,247	199,361	195,882	77,406	56,935	39,707	36,467	35,684	42,359	68,622	146,446	1,176,130	1,322,576
2018	290,000	222,668	168,757	188,150	99,393	47,799	39,904	37,080	41,507	49,921	97,681	184,325	1,282,860	1,467,185
2019	218,646	263,667	218,111	153,398	93,310	58,477	39,440	34,670	38,851	48,314	85,137	181,045	1,252,021	1,433,066
2020	217,069	219,428	172,432	117,609	89,169	46,614	30,586	30,645	31,361	41,120	80,742	148,067	1,076,775	1,224,842
2021	222,839	240,034	243,002	138,014	82,144	50,536	37,188	35,214	35,946	42,039	74,865	0	1,201,821	1,201,821



Utility Name	Number of Customers	Annual Peak Demand	Annual Sales ($)	Annual Sales (kWh)	PILOT to Town		$/kwh	PILOT Calculation/Formula
ASHBURNHAM	3,099	7.0	$4,389,251	33,807,135	$69,275	$	0.002	$0.002 x KWh sold
BELMONT	11,685	33.7	$23,600,861	122,462,589	$650,000	$	0.005	It is a flat rate right now but I recently came across an old memo where it appears it was based off of the greater of $650k or 50% of net profit back in 2007 when they equaled each other.
BOYLSTON	2,297	8.2	$3,845,610	32,785,005	$0	$	-	None
BRAINTREE	17,000	81.0	$61,000,000	330,180,135	$1,000,000	$	0.003	Negotiated. $1M +$500K for Watson
CHESTER								
CHICOPEE	26,261	96.5	$58,511,661	454,426,108	$740,000	$	0.002	Fixed
CONCORD	8,300	37.7	$29,111,600	168,979,485	$452,000	$	0.003	annual kilowatthour sales as well as unbilled sales and is multiplied by 2.75 mills per kwh or $2750 per million kilowatt hours sold
DANVERS	13,299	80.0	$36,122,793	292,761,434	$963,490	$	0.003	0.3221% total kWh sales in 2020 going up to 0.3750% total kWh sales in 2021
GEORGETOWN	3,471	12.3	$8,689,846	49,059,147	$49,059	$	0.001	$1 per Mwh sold
GROTON	5,011	17.0	$10,121,110	71,189,849	$39,200	$	0.001	None
GROVELAND	3,006	10.1	$5,634,000	34,025,646	$40,000	$	0.001	Fixed
HINGHAM								
HOLDEN								
HOLYOKE	17,700	70.0	$45,000,000	303,000,000	$1,194,569	$	0.003	Base PILOT: $763,629, Hydro PILOT: $408,320, Solar PILOT: $22,620 (See Note)
HUDSON	13,353	52.0	$25,380,645	220,293,946	$295,000	$	0.001	Depreciated value of property in town multiply by tax rate
HULL	6,228	14.3	$7,908,073	46,415,452	$283,000	$	0.006	$200,000.00 + Street Light usage (~$32,000.00) + traffic light maintenance ($25,000.00) + Install and remove banners and baseball field nets for town ($20,000.00) + CODE RED software ($6,000.00).
IPSWICH	7,200	26.5	$16,500,000	108,000,000	$325,000	$	0.003	($0.002953/kWh)*(total kWh sales)
LITTLETON	7,500	50.0	$31,000,000	240,000,000	$760,000	$	0.003	None
MANSFIELD	10,362	50.4	$25,590,398	205,571,756	$745,030	$	0.004	Net Book Value (GAAP) times Commercial Tax Rate
MARBLEHEAD	10,181	31.9	$17,400,000	100,624,517	$330,000	$	0.003	2 X ten-year average residential tax rate multiplied by the sum of: the net plant value less land and buildings, and the MMLD portion of the assessed real estate value that is under its custody and control
MERRIMAC								
MIDDLEBOROUGH	17,123	61.9	$38,628,738	262,919,293	$525,839	$	0.002	Based on $0.002/kwh
MIDDLETON	3,780	23.0	$14,898,000	94,659,744	$230,000	$	0.002	$0.0015/kwh sold plus 5% of net income
NO. ATTLEBORO	13,473	52.1	$30,137,652	217,318,679	$330,000	$	0.002	(Modified Net Plant Value) X (Current Year C&I Tax Rate)
NORWOOD								
PAXTON	1,954	5.7	$3,500,000	22,814,964	$0	$	-	
PEABODY	26,500	130.0	$71,000,000	497,700,000	$480,000	$	0.001	$40K per month
PRINCETON								
READING	29,720	145.0	$91,822,764	675,536,970	$2,400,000	$	0.004	$.00375/kwh for Reading plus 2% of net plant divided by load per town
ROWLEY	3,088	12.3	$7,700,000	44,000,000	$31,851	$	0.001	Based on streetlighting charge
RUSSELL								
SHREWSBURY	15,898	54.0	$13,752,956	110,229,822	$240,000	$	0.002	Fixed
SOUTH HADLEY	8,000	27.2	$14,143,000	107,788,000	$180,000	$	0.002	Based on the MLB/management's estimate of the cost of services provided by the Town to SHELD and SHELD employees
STERLING	3,940	12.4	$8,761,632	63,000,000	$0	$	-	$40k/yr of energy improvements to muni buildings, directed by the E C and SMLD, provided an avg energy savings of 15% to the muni buildings, also paid to have engineers design new HVAC systems in the Town Hall and Library, now both off oil and all electric with tremendous savings, we exceed the $40k in many years but the results have been terrific.
TAUNTON	38,450	147.3	$94,053,212	693,456,000	$2,895,000	$	0.005	None
TEMPLETON	3,648	11.4	$6,889,264	52,333,182	$81,987	$	0.001	None
WAKEFIELD	13,136	45.0	$26,167,000	162,606,000	$918,000	$	0.006	Fixed with 1.5% escalator
WELLESLEY	10,172	68.0	$12,586,769	237,180,900	$1,000,000	$	0.004	Fixed
WEST BOYLSTON	3,723	11.7	$8,136,944	56,596,159	$0	$	-	$0.00 x 0 = $0.00
WESTFIELD	18,023	75.5	$48,032,010	353,662,000	$589,124	$	0.002	70% of the book value of General Plant (DPU 389 to 399) * commercial tax rate (less $60k traffic light maintenance)
	12			14	6	2		

Note: For Holyoke, Base PILOT represents historical PILOT payments made prior to the 2001 Hydro acquisition plus negotiated adjustments in 2008 and 2020. The Hydro Asset based PILOT is equal to the commercial tax equivalent that a taxable entity would pay on the hydro assets.
The Solar PILOT is based on a payment of $5,000 per MW DC installed capacity for solar projects on HG&E property.

Natural Gas Supply Update from Sprague. 12/30/2021

Happy New Year !

Hope this will provide you with some cocktail hour conversation at the New Year's parties. Likely no one will make it to the ball drop if you break these out.

Prices in Northeast are under pressure again with lack of weather in the near term and LNG seemingly well supplied. Both Repsol and Excelon were known sellers into the weekend's sloppy trade. Intel has Repsol (Canaport) expecting a vessel ~Jan 6 so they could be selling to ensure space is available as they were quiet in December. Also the Exemplar is at dock off the coast of MA. waiting for any spike to flood AGT with more… yay

Hub	Begin ...	End Date	Strip	+/-	Sell	B Qty	Bid	Offer	O Qty	Buy	Last	Change	Settlement
Algonquin	1Feb22	28Feb22	Feb22	+	Hit	2500	9.0000	14.0000	2500	Lift			15.5300
Algonquin	1Mar22	31Mar22	Mar22	+	Hit	2500	4.6000	5.4000	2500	Lift	4.8000	(1.6775)	6.4775
Algonquin	1Nov22	31Mar23	Nov22-Mar23	+	Hit	2500	7.5000	9.1000	2500	Lift			9.2410

2.500 MMBtu daily

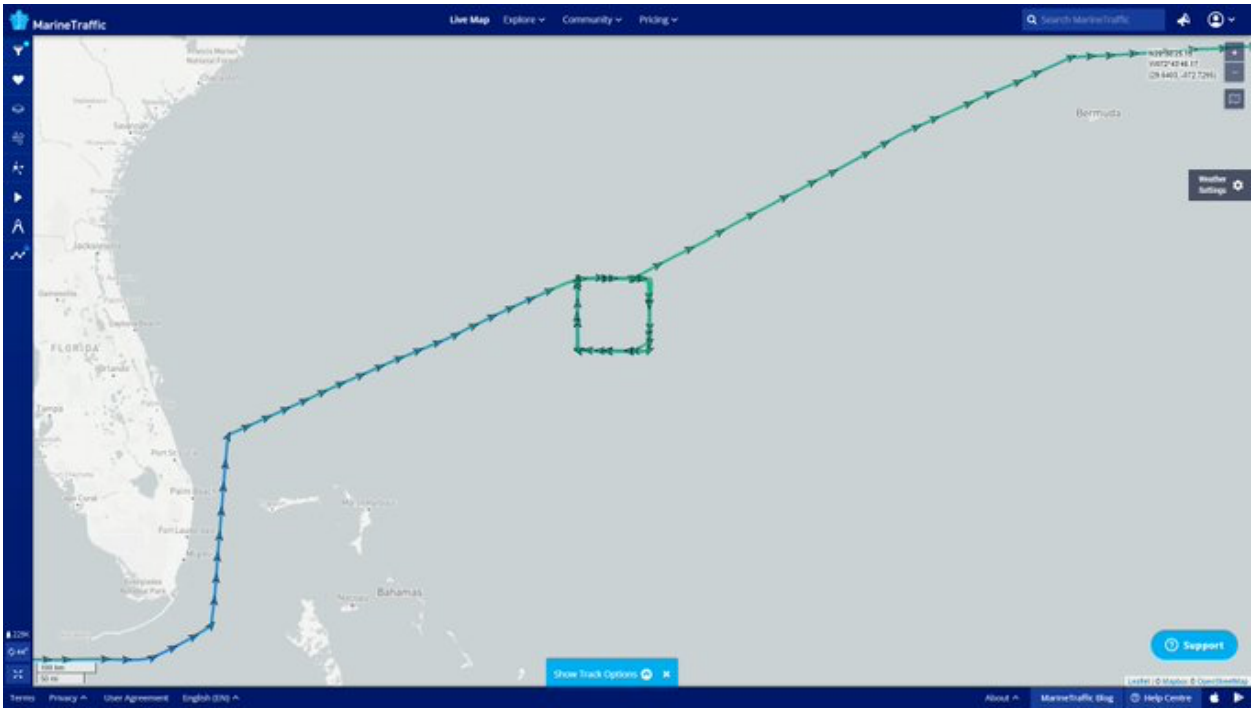
EUROPEAN ENERGY CRISIS: In a spectacular reversal, European natural gas benchmark prices (Dutch TTF) have fallen €100 per MWh in just 10 days, from a peak of €187.78 per MWh on Dec 21 to a low today of €85.8 per MWh
Several factors behind the drop: LNG armada heading toward Europe; milder-than-seasonal winter over the last few days and into the New Year; demand destruction among energy-intensive industries, and also the impact of margin calls around Dec 20-23 period.

U.S. LNG Update: 20 cargoes with undeclared destinations on a path to Europe

I do not have extensive (aka any) global LNG trade knowledge but these next couple scenarios are wild. Last I knew shipping rates were $250k/day in the Atlantic and $300k/day in the Pacific.

This one is pretty extreme: An LNG vessel in the Pacific sharply changed course from China and is likely headed to Europe, according to Kpler

A totally bizarre incident involving an LNG tanker departing the US. The NOHSHU MARU (9796781) headed out to into the Atlantic and did three square laps, totaling 720 nautical miles, before continuing her journey. She was heading to Japan, but EU seems to want that cargo more**.**



Subject: Thoughts on Agenda for January Strategic Meeting
Date: Friday, December 10, 2021 at 9:19:51 AM Eastern Standard Time
From: Jennifer Kallay
To: Peter Dion

Hi Pete,

It was helpful to hear the December Board meeting discussion regarding agenda ideas for the January Strategic Meeting. Based on what I heard, it seems helpful to have a high level discussion to start the meeting and then a more detailed discussion on a topic which requires more thought and development. I heard broad interest in developing a multifamily building EV policy.

As a result, here is what I would recommend as an agenda:
- Review of the purpose and structure of the meeting and the agenda (it seems that the purpose should be to kick off a new/more complex planning initiative or effort)
- WMGLD overview of decarbonization efforts since the last strategic planning meeting and lessons learned (what have we done, what worked well and why, what was more challenging and why)
- Group discussion of what these lessons learned and other factors suggest about MLP decarbonization role and focus moving forward. Discussion of how this role and focus supports/complements federal, state, and other town efforts.
- Focused discussion on one element of MLP role/focus for further development: Multifamily building EV policy development (can include EV specific rate, engineering/interconnection standards, zoning/permitting changes, etc.)

Please let me know if you have questions,

Jenn Kallay

STRATEGIC PLANNING SESSION 1-26-2022

My near-term concern is that I don't see much help for electric distribution systems in the massive spending bills being approved. There is spending for decarbonization, electric transmission, social equity and justice etc. but no mention of upgrading the distribution system to handle the expected load growth. (Infrastructure $1.2T, American Recovery Act $1.9T, Build Back Better $2.2T, Mass. $4B share of Federal Aid). For example, there is a nation-wide network of EV chargers included in the bills but nothing for community EV charging.

If the electric ratepayer will be responsible to shoulder a significant share of the cost for decarbonization in the building and transportation sectors what is our financial exposure? What will we need to do to maintain a reliable, resilient and affordable system?

I believe the Board of Commissioners' efforts should be focused on the near term as it relates to the distribution system accommodating electric vehicles, heat pumps, solar panels, and battery storage etc., issues that relate more to the load side of the meter versus the grid supply side.

Electric Power Research Institute (EPRI) has done much good work in what an electric utility company will/may look like in the future. They see an energy rich, capacity poor future with all the non-baseload sources being added to the grid. We must wait for future technology to provide firm answers for things such as long-term electric storage, the role of nuclear power, carbon capture and green hydrogen, etc.

I do not see any benefit in our Board taking on the task of creating a pathway to decarbonize the utility sector by 2050. The technical potential, viability and affordability of obtaining the ultimate prize of decarbonization is simply beyond our scope at this time.

After several years of drafting climate bills that were eventually signed into Massachusetts law on March 26 of this year, it appears we are left to sort out the timing and impact of the prescribed remedies. Somewhere between the aspirational "electrify everything" and sluggish customer acceptance of new and expensive technology lies our reality.

Electric Vehicles: Massachusetts has five-million registered vehicles of which 40,000, less than 1% are EV's. Contrast this to the goal of ending the manufacturing of internal combustion engine vehicles by 2030-2035 and you can see our hurdle.

Heat Pumps: Massachusetts has close to three-million homes and plans to move 100,000 homes per year off oil and gas heat; in 2020, the actual number moved was 461 homes.

Solar Panels: Stalled due to confusion over the rollout of new incentives.

Grid supply: Quebec Hydro, offshore wind, hydrogen, etc. all appear to be more in the greater than 10 years out range while nuclear Power has returned to the table for discussion.

I am looking forward to hearing responses from the other Commissioners as well as welcoming what they would like to discuss. Please feel free to share my comments.

Philip Courcy

Gas and Light Commissioner

Subject: Re: FERC Order 2222 POE Sector Postion
Date: Monday, January 3, 2022 at 8:53:44 AM Eastern Standard Time
From: Brian Thomson
To: Peter Dion
CC: Matthew Ide
Attachments: a08b_i_mc_2021_11_09_10_iso_memo_on_aee_amendments_order_2222.pdf

Good morning Pete,

One thing I forgot to mention is that the AEE amendments failed to pass in the MC. AEE will likely ask for a vote at the PC this Thursday.

Last I heard they are pulling at least one of the amendments, so it won't be the full seven amendments voted on at the MC.

Sent from my iPhone

> On Dec 30, 2021, at 2:33 PM, Brian Thomson <BThomson@mmwec.org> wrote:
>
> Hi Pete,
>
> Sorry that the FERC Order 2222 stuff is so technical. If you don't follow it closely (and I know you don't have time to do that) it can be hard to decipher.
>
> Don't hesitate to give me a call anytime between now and your Monday Board meeting if you need me to explain further.

Publicly Owned Entity Sector FERC Order 2222 Stance

MMWEC supported the ISO-NE FERC Order 2222 compliance filing, but voted in opposition to the proposed Advanced Energy Economy (AEE) amendments. We arrived at its position after extensive discussions with the other Publicly Owned Entity (POE) sector members and careful review of the ISO memo (attached). It is important to also remember that if MMWEC, or even the entire POE sector, had voted in favor of all the AEE proposed amendments, they still would have failed to pass.

The ISO memo goes through each of AEE's seven proposed amendments and gives a detailed description of why they are problematic.

- One of the AEE proposed amendments could have resulted in demand response resources artificially increasing their baseline energy use, and therefore getting payments for services they did not provide. In 2007, there were facilities that did just this.
- One of the AEE proposed amendments would have allowed Demand Response

Resources (DRRs) to measure their output at the device level. But if the facility (i.e. a factory or home) they were physically located at increased its usage at the same time that the demand reduction happened, no benefits would have accrued to the system. For example if I 1 MW generator were dispatched but the factory where it is located increased its energy use by 1 MW, there would be no benefit. For this reason the ISO preferred to measure the DRR at the retail delivery point (customer meter).

- One of the amendments would have created third party meter readers, but the ISO opines that it does not have the authority to make such a change. That authority lies with the transmission owners.
- One of the AEE proposed amendments would allow DRRs not dispatched for energy to provide reserves. Other ISOs allow this treatment. But this ignores that fact that other ISOs do not provide DRRs with the ability to specify operating criteria (min run time, max run time, min startup time, min notification time) which are necessary as part of their energy offers. It is not possible to maintain the considerable advantages that DRRs get from specifying their operating criteria as energy market participants and let them provide reserves when not dispatched for energy.

To sum up, we did not vote in favor of the AEE's proposed amendments because the ISO believed that they would result in DRRs getting paid even if they were not providing benefits to the system, would have required tariff changes that are the purview of the transmission owners (not the ISO), and believe that the advantages of having DRR fully participate in energy markets was more valuable than having them participate as reserves.

Brian Thomson
Senior Project Manager for Regulatory Services
MMWEC
327 Moody Street
Ludlow, MA 01056

Office: 413-308-1326

Subject: FERC Order 2222 Advocacy Campaign
Date: Friday, December 10, 2021 at 9:28:50 AM Eastern Standard Time
From: Brian Thomson
To: Ron DeCurzio, Jason Viadero, Kate Roy, Matthew Ide, Brian Quinn

Dear Member Managers,

Advanced Energy Economy (AEE), a trade group that represents clean energy companies, is mounting an advocacy campaign that may reach you or members or your board. AEE's communications could leave the impression that publicly owned entities are opposed to FERC Order 2222, which allows distributed energy resource aggregations (DERAs) to fully participate in the ISO New England Markets. We disagree with the impression that the publicly owned entity sector is opposed to the FERC Order.

At Wednesday's Markets Committee, MMWEC along with the rest of the public power sector, voted in favor of the ISO's proposed tariff changes that will allow the implementation of FERC Order 2222. AEE offered a set of amendments to the ISO's proposal, most of which were opposed by MMWEC, the rest of the public power sector, the ISO, and many other stakeholders. Among the many objections raised where changes to metering rules that would make it hard to judge the performance of the participating DERs. The ISO was concerned that this could have presented opportunities for gaming. There is historical precedent for this, with facilities in Maine intentionally distorting their energy baseline, enabling them to receive payment for services they did not provide.

While we remain open to further discussion with AEE on their proposals, and could potentially support at least one of them at the Participants Committee next month, we are not able to rule out the ISO's gaming concerns for the other amendments. It is our sincere belief that DERAs have a place in New England as we evolve toward a decarbonized future, but we don't think it is in consumers' interest to ignore the possibility of participants getting payment without providing services.

Again, we wanted to provide you with a heads up in case you are contacted regarding this matter. If you have any questions and would like to discuss further, please do not hesitate to contact me.

Brian Thomson
Senior Project Manager for Regulatory Services
MMWEC
327 Moody Street
Ludlow, MA 01056

Office: 413-308-1326

To: NEPOOL Markets Committee

From: ISO New England ("the ISO")

Date: November 4, 2021

Subject: Response to Advanced Energy Economy's Amendments to ISO New England's Order No. 2222 Compliance Proposal

Background and General Response

At the NEPOOL Markets Committee meeting on October 14, 2021, Advanced Energy Economy ("AEE"), represented by individual Market Participants, proposed several amendments to the ISO's proposed compliance approach to Order No. 2222, which concerns the participation of distributed energy resources ("DERs") and distributed energy resource aggregations ("DERAs") in wholesale markets. Draft Tariff changes reflecting the proposed amendments were later circulated for the ISO's review.

The ISO appreciates AEE's feedback and has carefully evaluated each proposed amendment. In reviewing the proposed amendments, the ISO observed that all of the amendments, save for the amendment concerning the periodic review of the success of the DERA models (Amendment 5), affects the ISO's existing rules related to the provision of demand response and associated metering location provisions. However, Order No. 2222 at P118 says that:

> We clarify that, because demand response falls under the definition of distributed energy resource, an aggregator of demand response could participate as a distributed energy resource aggregator. However, ***this final rule does not affect existing demand response rules.*** (Emphasis added).

Given that AEE's proposed amendments affect the ISO's existing rules related to demand response, the ISO views them as out-of-scope with respect to the Order No. 2222 compliance proposal being developed. A significant amount of analysis, stakeholder consideration, and implementation effort went into the ISO's existing approach to demand response and the Commission did not find in Order No. 2222 that the ISO's existing demand response rules were unjust or unreasonable.

While the ISO appreciates that AEE may have a different perspective on the ISO's current demand response rules, regardless of the ISO's concerns with the scope of AEE's proposals, it could not support the amendments based on the substantial record and experience that the New England region has with respect to the issues raised by the amendments. The remainder of this memo summarizes the substantive concerns identified by the ISO with respect to each amendment.

Amendment 1a: Add-back baseline methodology

AEE proposes that the ISO adopt a baseline methodology, which AEE states the NYISO will use for their demand response program. This method is viewed as preserving a high baseline level for demand response resources ("DRRs") that respond frequently to dispatch (e.g., every day) by allowing the load reduction of a DRR to be added to the observed, metered load of a DRR during a dispatch. The reconstituted gross load is then used to establish the DRR's baseline going forward.

Under the ISO's current, FERC-approved baseline methodology, meter data from days on which a DRR was not dispatched is used to establish the baseline. If a DRR is dispatched frequently, such as every day, there may be no meter data from days on which the DRR was not dispatched to establish the baseline, or the meter data used to establish the baseline could be from a different month, season or even year. To ensure that there is some data from the current season upon which to establish a baseline representing the DRR's current load shape, the ISO's methodology uses some data from days on which a DRR was dispatched to establish the baseline should the DRR be dispatched on many consecutive days.

The ISO's current baseline methodology was informed by events that occurred in 2007 in which facilities participating in the then effective Day-Ahead Load Response Program ("DALRP") extracted payments for load reductions that they were, in fact, not making. These facilities accomplished this result by establishing an artificially high baseline, clearing in the DALRP by offering at the minimum offer price, and allowing load to return to normal levels. This approach allowed participants to obtain demand response payments for normal load levels. And by clearing every day thereafter by offering at the minimum offer price allowed by the DALRP at the time, the baseline became static and remained at a high level, which allowed payments for apparent, rather than real, load reductions to continue indefinitely. This behavior necessitated a change in the program rules in which normal load levels outside of DRR dispatch could be periodically observed, which then can be used to determine a reliable baseline.[1]

The AEE amendments would, in the view of the ISO, facilitate demand reduction payments for normal load levels, which the changes proposed by the ISO in Docket No. ER08-538-000 and in every demand response program change made since that time sought to avoid.[2] For example, the AEE amendment to Section

[1] *See* ISO New England Inc., Docket No. ER08-538-000, Filing of Changes to Day-Ahead Load Response Program (February 5, 2008), accepted by the Commission in ISO New England Inc., Order Accepting Tariff Revisions, 123 FERC ¶ 61,021 (2008).

[2] The memo found at the following link describes the analysis conducted by ISO-NE to establish the baseline methodology currently required under Section III.8.2 of the Tariff – https://www.iso-ne.com/static-assets/documents/2015/08/a03_iso_memo_08_24_15.docx. Through the course of its analysis, ISO-NE analyzed multiple options and the current methodology was chosen given its performance with respect to accuracy, bias, and variability, its ability to estimate baselines for different day-types, and its ease of administration. The memo summarizes the issues, analyses conducted, and recommendations – it also includes links to all of the materials presented to stakeholders at the time and all of the analysis conducted, which were filed with the Commission in support of ISO-NE's proposed revisions to its demand response model in Docket No. ER16-167-000 (https://www.iso-ne.com/static-assets/documents/2015/10/er16-167-000_part_1.pdf), which the Commission accepted by Letter Order on December 23, 2015.

III.1.10.1A(e)(iii) would allow a DRR to offer at any price, including "a price that is below the Demand Reduction Threshold Price in effect for the Operating Day." This means that a DRR could offer at $0/MWh or lower (e.g., down to the offer floor price of -$150/MWh),[3] which would guarantee that the resource would clear and be dispatched. And if a DRR is dispatched, the AEE amendment to Section III.8.4.1(b) would add back to actual metered load the amount dispatched by the ISO to establish the resource's baseline going forward. This strategic offering behavior could continue forever, which would freeze the baseline at a high level and create the same situations as those described in Docket No. ER08-538-000. Under this approach, the DRR's actual load outside of a dispatch would never be observed, or if observed at some point, could be from a different month, season, or year. Further, the AEE approach would allow a DRR to increase load to an abnormally high level for a short amount of time so as to establish a high baseline, and then freeze that high baseline in place by clearing everyday thereafter by offering at a very low price.

Finally, the AEE amendment to Section III.1.10.1A(e)(iii) allows a DRR to offer and be dispatched at price levels for which the Market Participant knows it will not receive any payment. Since the apparent demand reduction produced under these circumstances is not in response to an increase in electric energy prices or to an incentive payment designed to induce lower consumption of electric energy, the apparent demand reduction does not appear to meet the Commission's definition of demand response.[4]

Amendment 1b: Allow generation to count as load reduction

AEE proposes that the ISO allow load reductions produced by a behind-the-meter generator to be measured at the generator. This is contrary to the ISO's current rules, which requires load reductions produced by a DRR be measured at the retail delivery point ("RDP"). As part of the ISO's Order No. 745 compliance filing, the ISO proposed that each customer facility providing demand response be metered at its RDP.[5] The ISO

[3] According to Section III.1.10.1A(e)(iii) of the AEE Amendments:

> [A]ny price specified below the Demand Reduction Threshold price in effect for the Operating Day that clears in the Day-Ahead and Real-Time Energy Markets will result in the Demand Response Resources and Distributed Energy Resources associated with a Demand Response Distributed Energy Resource Aggregation using the Demand Response Add-Back Baseline shall receive *no settlement payments* for either the Day-Ahead or Real-Time Energy Market. (Emphasis added).

The language does not specify what happens if a resource is dispatched to reduce load at negative prices. Since the language says that the resource receives no settlement payments should this occur, it could be construed that a resource that reduces load when LMPs are negative would receive no charges as delivery of a service at negative prices can be interpreted to be a negative settlement payment.

[4] Demand response is defined by the FERC as a reduction in the consumption of electric energy by customers from their expected consumption *in response to an increase in the price of electric energy or to incentive payments* designed to induce lower consumption of electric energy. 18 CFR 35.28(b)(4) (2010) (emphasis added).

[5] *See* ISO New England Inc., Docket No. ER11-4336-000, Order No. 745 Compliance Filing (August 19, 2011), Filing Letter p. 5.

argued that demand response performance should always be measured at the RDP, which effectively is the DRR's point of interconnection with the New England Control Area and the point at which the ISO observes a DRR's contribution to balancing supply and demand *on the grid*.[6] For example, assume a facility that increases its behind-the-meter generator output by 1 MW also increases 1 MW of its consumption simultaneously when dispatched. If the ISO were to measure demand response by metering the generator alone, it would conclude that 1 MW of demand reduction was provided. But if the ISO measures at the RDP, it would conclude that 0 MW were provided as demand from the perspective of the grid would not have changed.

The ISO's Order No. 745 proposal was opposed by a coalition of demand response providers and an industrial energy consumer group. These parties wanted to be able to measure demand response performance by directly metering behind-the-meter generation, which is what AEE's proposed revision to Section III.8.2A would allow. The Commission considered the evidence presented and found that the ISO's approach to be the preferred one. In ISO New England, Order Denying Rehearing, 139 FERC ¶ 61,116 (2012) at P12, the Commission said:

> The Commission explained in the Compliance Order that, in the context of discussing ISO-NE's settlement system as it relates to demand response, the impact a customer has on the grid is what determines how the ISO will operate the grid. *Measuring demand response at the retail delivery point allows ISO-NE to effectively manage the grid because this point accurately reflects the load's impact on the New England transmission system.* As we stated in Order No. 745-A, from the perspective of the grid, the manner in which a customer is able to produce a load reduction in the wholesale market from its validly established baseline (whether by shifting production, using internal generation, consuming less electricity, or other means) does not change the effect or value of the reduction to the wholesale grid. (Emphasis added)

The ISO has not seen sufficient evidence presented by AEE for making a change to this approach in the context of the Order No. 2222 compliance.

Amendment 2: Allow submetered load to participate as demand response

AEE proposes that the ISO allow load reductions from a DER to be measured against a baseline at an "Alternative Point of Load Reduction", which is defined by AEE in its proposed revision to Section I.2.2 as "a load meter behind the Retail Delivery Point…." However, this approach ignores the Commission's finding

[6] Additionally, ISO-NE stated that metering at the RDP was necessary to address additional issues including: 1) if demand response were measured at a point other than the retail delivery point, the danger of double-counting the amount used to balance supply and demand in real time is greatly enhanced; 2) all retail delivery points have revenue-quality meters installed, operated, and maintained by the customer's utility distribution company. In many cases, the same meter could be used to measure the demand response (or generation) provided by a customer to the grid, thus minimizing costs; and 3) because the meter at the retail delivery point is read by the utility distribution company for retail billing purposes, the meter data recorded by the utility can be used by the ISO to verify the meter data submitted by demand response providers to the ISO for settlement purposes. *See,* ISO New England Inc., Docket No. ER11-4336-000, Order No. 745 Compliance Filing (August 19, 2011), Yoshimura Testimony, pp. 18-27.

cited above in response to Amendment 1b. Restated again here, the Commission found that *"[m]easuring demand response at the retail delivery point allows ISO-NE to effectively manage the grid because this point accurately reflects the load's impact on the New England transmission system."* Again, AEE has not presented sufficient evidence that this approach needs to be modified in the context of the Order No. 2222 compliance.

Amendment 3: Allow DER Aggregators to meter the injection, withdrawal and the load reduction of all DERs within each DER Aggregation

AEE proposes that the ISO allow a third-party, such as the DER Aggregator, to meter the energy injections, withdrawals, and/or the demand reductions of DERs. Under the ISO's current rules for DRRs (and proposed rules for DRDERAs), non-utility third parties perform the metering for demand reductions. Since the ISO does not propose to change any of its demand response rules through its Order No. 2222 compliance filing, AEE's amendments to Sections I.2.2, and III.6.4 with respect to the use of third parties to meter demand reductions are unnecessary.

However, the metering of generation and load, which is used for Energy Market accounting in New England, is distinct from the metering of demand reductions. With respect to the metering of generation and load in New England, the Participating Transmission Owners ("PTOs") are responsible for providing the metering of all Generator Assets, Load Assets, and Tie Line Assets participating in the New England wholesale markets.

For resources participating in the New England energy, capacity and ancillary services markets (including distribution-connected assets), the Host Participant or Host Utility,[7] or its Assigned Meter Reader,[8] are responsible under Section 5.2 of M-28 for: (1) reporting of interval energy quantities for Load Assets, Generator Assets, and Tie Line Assets; (2) reporting of meter reconciliation data for use in resettlement process for Load Assets, Tie-Line Assets, and Generator Assets; and (3) prompt reporting of any discovered metering, calculating, or reporting errors with respect to an asset to the ISO and the Market Participant(s) owning or having rights to the asset.

The Tariff allows the responsible Host Utility to designate an agent in the form of an Assigned Meter Reader – i.e., a third-party – to help fulfill its meter reading responsibilities. Thus, third-party metering is already permitted in New England. Because the PTO retains the responsibility for providing the metering of Generator Assets, Load Assets, and Tie Line Assets in its footprint, they would also be responsible for retaining and coordinating with any third-party used to help meet the PTOs meter reading responsibilities.

[7] Defined in Tariff, Section I.2.2 as "a Market Participant or a Governance Participant transmission or distribution provider that reconciles the loads within the metering domain with OP-18 compliant metering[.]"

[8] Defined in Tariff, Section I.2.2 as the entity that "reports to the ISO the hourly and monthly MWh associated with the Asset. These MWh are used for settlement. The Assigned Meter Reader may designate an agent to help fulfill its Assigned Meter Reader responsibilities; however, the Assigned Meter Reader remains functionally responsible to the ISO." The Assigned Meter Reader is most often the distribution utility in a particular metering domain.

Since the PTOs are responsible for providing the metering of all Generator Assets, Load Assets, and Tie Line Assets, the PTOs would need to establish the requirements for the use of third-party meter readers so that they could continue to meet their obligations in reporting the load and generation within their respective footprints for Energy Market settlement purposes. The ISO is not in a position to certify third-party meter readers since meter reading jurisdiction in New England falls to the Host Utilities. Also, it would be inefficient for the ISO to administer such requirements as it has no expertise in meter reading and would need to develop procedures accounting for each PTO's meter reading processes.

Amendment 4a: Remove the requirement for DRRs and DRDERAs to clear in the energy market to provide spinning reserves

In support of Amendment 4a, AEE asserts that no other ISO requires load to be dispatched for energy in order to provide spinning reserves. This argument, however, fails to consider that this requirement is related to the DRR dispatch approach taken by the ISO, which affords DRRs with significant benefits. In New England, DRRs are subject to the "commitment" process similar to that of Generator Assets. The commitment process affords DRRs with specific benefits, such as the ability to specify a notification time, start-up time, minimum reduction time, minimum time between reductions (minimum down time), etc., in its Energy Market Offers. The inter-temporal constraints specified by a DRR in its offer would be honored in the dispatch algorithm. This result was achieved by treating DRRs *as an alternative to a generation resource* by modelling demand response as a proxy or virtual generator using the ISO's existing generator commitment and dispatch system. This approach was in response to Order No. 745 in which the Commission concluded:

> [W]hen a demand response resource participating in an organized wholesale energy market administered by an RTO or ISO *has the capability to balance supply and demand as an alternative to a generation resource* and when dispatch of that demand response resource is cost-effective as determined by the net benefits test described herein, that demand response resource must be compensated for the service it provides to the energy market at the market price for energy, referred to as the locational marginal price (LMP). *See* Order No. 745 at P2 (emphasis added).

Generators that have been dispatched and have satisfied their notification and start-up time can be designated to provide TMSR. Since DRRs are modeled as a direct alternative to Generator Assets, both sets of resources are treated similarly in the commitment and dispatch process. Allowing a DRR that has not been dispatched to provide TMSR would extend different and more favorable treatment to DRRs relative to Generator Assets. It would also require a change to the way DRRs are designated to provide reserves given that the same dispatch and reserve designation infrastructure used for Generator Assets was also used for DRRs.

Even if the ISO were to consider the AEE proposed amendment in spite of these concerns, since practically all DRRs currently bid notification and start-up times greater than zero in their Energy Market Offers, making this change would create little to no benefit.

Further, such changes to the existing demand response program rules and infrastructure are unnecessary. New technologies with technical characteristics in which they are always in a dispatched state – such as dispatchable loads or those with batteries that can move to different dispatch points (both charging and discharging) instantaneously – are able to participate under the new aggregated CSF model that the ISO is proposing for Order No. 2222 compliance. This model was specifically developed to allow such new technologies to sell products associated with that technical capability – such as TMSR – to the New England Markets in a manner that is consistent with other resources with similar characteristics and capabilities.

Amendment 4b: Allow submetering for DERs providing regulation service

AEE proposes that the ISO telemeter regulation service provided by a behind-the-meter DER at the device. The telemetering location of ATRRs is not currently specified in the ISO New England Governing Documents. The ISO's general practice is to telemeter regulation service at the resource's point of interconnection with the grid; for an end-use customer facility, the telemetering location would be at the RDP. This requirement better ensures the measurement of service provided to the grid. For example, take a large facility with two large compressor motors that operate air conditioning or refrigeration equipment in which only one motor participates in the wholesale market. The motor participating in the wholesale market could be dispatched down to reduce load, but the other motor at the facility that is not in the market may increase its load so that the facility can maintain a constant temperature, which negates the service provided by the motor participating in the market. In this instance, telemetering at the device would result in a payment even though no service may have been provided to the grid.

However, given the novelty of services provided by new technologies such as batteries, the ISO is testing different approaches so that it can observe and gain experience with these technologies. In one approach, an aggregation of residential homes with batteries is providing regulation service in which service is measured from the RDP of each home.[9] In other limited circumstances, regulation service has been telemetered at the battery to the extent the Market Participant demonstrates that all of the other devices at the facility function independently from the battery. Further, the Market Participant must collect and make available to the ISO upon request revenue quality interval meter data for both the ATRR device and the RDP to enable the ISO to assess the accuracy of the ATRR telemetry data.

AEE's amendments to Sections III.6.4, III.14.2(c), and III.14.2A propose that the ISO permanently adopt an approach in which any facility with a regulating device be telemetered at the device. Further, AEE proposes that no revenue quality interval meter data be provided as a check on the telemetry provided from the device. Finally, AEE proposes that the Market Participant not be required to demonstrate that all of the other devices at the facility function independently from the regulating device – only an attestation is required. The ISO is uncomfortable with this proposal as it would not be feasible to review potentially thousands of facilities (e.g., residential customers with a Tesla Powerwall and/or an EV) all claiming that the devices at the facility are acting independently of regulating device and relying entirely on an attestation of

[9] *See* https://greenmountainpower.com/network-of-powerwall-batteries-delivers-first-in-new-england-benefit-for-customers/.

the Market Participant, and where there would be no data against which to assess the accuracy of the telemetry data submitted by the Market Participant.[10]

Accordingly, the ISO plans to maintain the current approach to telemetering ATRRs at the RDP or point of interconnection with arrangements made on a case-by-case basis, and to evaluate whether updates to OP-18 should be made in the future (likely in 2022), which would apply to all ATRRs, not just to the ones participating in the market as part of a DERA.

Amendment 5: Periodically review the success of the DERA models

AEE proposes that the ISO Tariff should require that the Internal Market Monitor ("IMM") periodically evaluate the effectiveness of the ISO's DERA model by determining the extent to which the new DERA models are being used, and whether they have reduced barriers to DER participation in the New England Markets.

During the discussion at the October 2021 Markets Committee meeting, certain stakeholders noted that it would not be a good idea to put such a requirement in the Tariff. If such a requirement were in the Tariff, an evaluation would be required even if it was not needed or if there was insufficient experience or data upon which to conduct an evaluation. The ISO agrees with these stakeholders. A required review requirement, particularly one that just focuses on the "success in removing barriers to the participation of DERAs in the capacity, energy, and ancillary service markets administered by ISO-NE,"[11] as proposed by AEE is problematic. First, it is unclear what "success" in this context means. Second, any report of the IMM should not be limited to examining elimination of market barriers. Lack of participation may not be the result of a market barrier. Rather lack of participation could be due to retail program participation that prohibits wholesale market participation, or otherwise makes such wholesale market participation uneconomic. Finally, such a periodic requirement may introduce an element of uncertainty to Market Participants that itself discourages participation – for example, if Market Participants think that the upcoming IMM report could result in major changes in the future, they might be discouraged from participating in the market, or may delay participation in anticipation of more favorable, future treatment.

In the future should stakeholders believe that the ISO's Order No. 2222 compliance implementation requires any changes, such concerns should be brought through the NEPOOL stakeholder process for consideration together with proposals to modify the ISO's participation model.

[10] Note that metering or telemetering wholesale service at the RDP allows the submitted data to be compared to the utility distribution company's revenue quality meter data used for retail billing purposes.

[11] *See* AEE proposed change to Section III.A.17.2.5.

Looking forward to 2022

WMGLD RECENTLY DISTRIBUTED its popular historical calendar during a drive-through pick up at the North Ave. business office. WMGLD Office Manager Sylvia Vaccaro, (right), had an opportunity to meet customers as she distributed the 2022 calendar. Theresa and Bob McLaughlin picked up their 2022 historical calendar during the drive-through pick up. Bob provided a photo of Rex Trailer that appears in the calendar. A limited number of calendars are available at the WMGLD business office at 480 North Avenue, the Lucius Beebe Memorial Library, the Wakefield Town Hall, and the John J. McCarthy Senior Center while supplies last.