

BURLINGTON
BOARD OF ELECTRIC COMMISSIONERS
585 Pine Street
Burlington, Vermont 05401

GABRIELLE STEBBINS, CHAIR
SCOTT MOODY, VICE CHAIR
JIM CHAGNON
ROBERT HERENDEEN
BETHANY WHITAKER

To be held at Burlington Electric Department (or)
Via Microsoft Teams

[+1 802-489-6254](tel:+18024896254)

Conference ID: 864 108 732#

AGENDA
Regular Meeting of the Board of Electric Commissioners
Wednesday, August 11, 2021- 5:30 p.m.

- | | |
|--|----------------|
| 1. Agenda | 5:30 (5 min.) |
| 2. Minutes of the July 14, 2021 Meeting | 5:40 (5 min) |
| 3. Public Forum | 5:45 (5 min.) |
| 4. Commissioners' Corner (Discussion) | 5:50 (5 min.) |
| 5. GM Update (Oral Update) | 5:55 (15min.) |
| 6. Net Zero Revenue Bond (Discussion & Vote) | 6:10 (15 min.) |
| 7. Commissioners' Check-In | 6:25 (5 min.) |

Attest:


Laurie Lemieux, Board Clerk

If anyone from the public wishes to speak during the public forum portion of the Commission Meeting and/or wishes to be present for the Meeting of the Board of Electric Commission via Microsoft Teams, please email llemieux@burlingtonelectric.com to receive a link to the meeting, or call (802) 489-6254, Conference ID: 864 108 732#

Note: Members of the public may speak during the Public Forum, or when recognized by the Chair during consideration of a specific agenda item.

TABLE OF CONTENTS
(for 08/11/21 meeting)

***** FYI *****

- Minutes of the July 14, 2021 Meeting
- July Monthly Report
- Dashboard
- Revenue Bond Information



MEMORANDUM

To: Burlington Board of Electric Commissioners
From: Darren Springer, General Manager
Date: August 6, 2021
Subject: **July 2021 Highlights of Department Activities**

General Manager

- District Energy – Ever-Green staff were in Burlington in late July for visits with UVM, UVMMC, The Intervale Center, and BED and VGS. The McNeil Joint Owners are discussing terms for the potential sale of thermal energy to the district energy system, and Ever-Green is continuing with operational planning with the potential customers. Discussions will soon turn, following some additional modeling, to the potential for customers (whether physically connected to the system or not) to buy-in to purchase district energy attributes/credits. BED may provide an update on our progress with Phase 3 to the Transportation Energy Utilities Committee of the City Council sometime in late September. We continue to anticipate bringing the Phase 3 work to a close sometime this Fall.
- Clean Heat Standard – BED engaged with the authors of a Clean Heat Standard proposal that has emerged from EAN’s pitch sessions as a possible legislative item, and possible recommendation from the Climate Council. This would put some type of renewable fuel requirement, similar to the electric sector’s Renewable Energy Standard, on fuel dealers and VGS. This could be a positive from a climate standpoint, and BED’s interest is in part relative to ensuring we retain all of our current regulatory tools that are supporting our Net Zero Energy effort, such as our Tier 3 incentives, in the process of a Clean Heat Standard design. We also want to ensure there is coordination between electric utility work with Tier 3 and potential fuel sector work with the new Clean Heat Standard. We’ll monitor this as it becomes more detailed.
- Rate Case – The PUC has formally opened an investigation into the rate increase request as expected, and the DPS has retained an outside consultant to assist in its review of our rate case proposal (with bill back to BED). The surcharge is now effective on customer bills as of August. Please encourage anyone who might be eligible to visit www.burlingtonelectric.com/rates to sign up for our energy assistance program.
- Act 151 – There is a proposal for decision from the PUC, not yet an order, that would approve our Act 151 filing. This could be an important development in helping to ensure continued strong customer incentives and has interplay with the revenue bond which we will discuss at the meeting on 8/11.

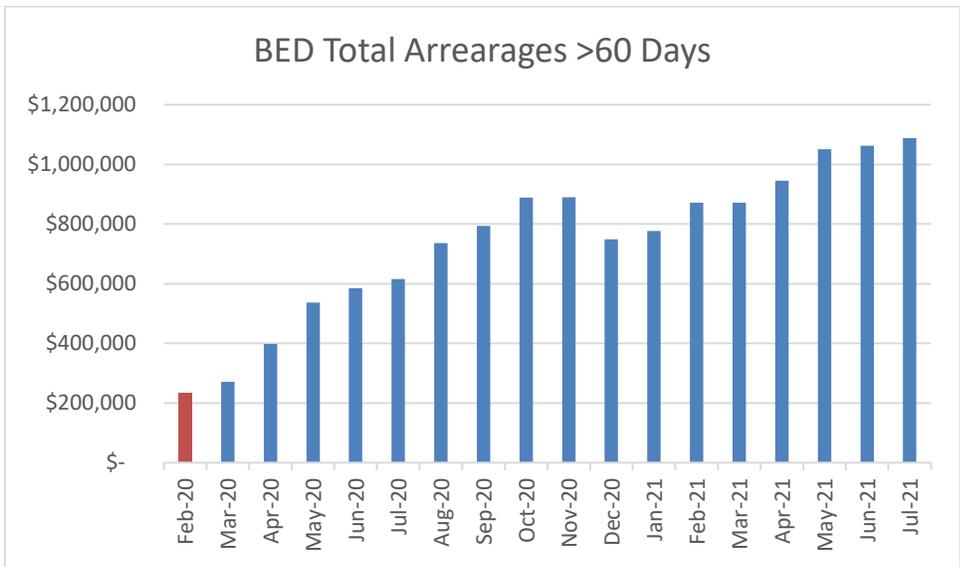
Center for Innovation - Emily Stebbins-Wheelock

- Recruiting for Director of Information Technology position; acting supervisor of Information Services, Finance & Accounting and Billing & Analytics staff.

- Overseeing implementation of Aug 1 tariff adjustment.
- Continued sponsorship of IT Forward implementations.
- Sponsoring internal team reviewing rebate process for efficiencies and effectiveness.
- Coordinating HR review of proposed performance review form and rollout plan.
- Liaison with DPS on State of Vermont COVID19 arrearage assistance program.
- Facilitating a white accountability group for City employees sponsored by the Racial Equity, Inclusion and Belonging (REIB) Office.

Finance & Accounting

- Monitoring receivables in response to COVID19: as of July 31, 2021, BED’s total non-current receivables had increased \$84,257 or 6% compared to the end of June 2021. Arrearages >60 days were \$1,087,941.



- Prepared billing determinant/revenue reconciliation for rate filing.
- Prepared 5-year capital plan, fall revenue bond proposal, and associated 5-year pro forma financial statements.
- Responded to Moody’s rating inquiries.
- Finalizing FY21 year-end and preparing deliverables for the audit.
- Exploring change to Tier 3 accounting with external auditor.
- Closed on \$790,000 capital lease for MDMS with Key Government Finance.

Billing & Analytics

- Monthly tracking of daily kWh sales by rate class to monitor impacts of COVID-19, with monthly update to Vermont state economists and DPS. Continuing to modify the hourly and monthly load forecasting models to account for the changing impacts of COVID-19.
- Preparing to implement 2021 rate case tariff adjustment and temporary energy assistance program in billing system.
- Billing determinant/revenue reconciliation for rate filing.

- Continued review and clean-up of leased light charges.
- Internal meetings on implementing new EV rates.
- As functional lead, reviewing OpenWay SR 7.0 upgrade and planning for meter firmware update in test environment.
- Functional lead for MDMS replacement and team member on Customer Portal replacement projects, with work on data integrations, data migration, continued discovery sessions, and data cleanup.
- Reviewing Operating Guidelines for potential changes.

Information Services

- Planning for IT Director transition.
- VELCO data center agreement drafting.
- Delivered firewall equipment to VELCO data center for secondary Internet connection.
- Continued work on installation of Data Center equipment.
- Completed installation and configuration of Lake Street NTP server.
- Continued work on setup for OpenWay 7 test system.
- Continued work on initial data extracts for CIS daily syncs and MDMS data conversion.
- Intune/ABM pilot of iPads underway.

Policy and Planning

- Made supplemental filings in rate case docket.
- Rate surcharge implementation work.
- Internal meetings on implementing new EV rates.
- VELCO data center agreement drafting.
- Long-term REC planning discussions.
- Explored proposals to change Tier 3 accounting with external auditor.
- Participated in McNeil video tour with Communications and met with ISO-NE interns on McNeil.
- Received Proposal for Decision in Act 151/DRP docket supporting proposed programs.
- Received Proposal for Decision in TEPF carryforward supporting District Energy Systems (DES) carryforward.
- Filed discovery responses in Global Foundries docket.
- No new Defeat the Peak events declared in July.
- Reached draft agreement for providing thermal energy from McNeil to DES.
- Preparation for potential fall revenue bond filing.
- Reviewing Operating Guidelines for potential changes with other BED departments.
- Continued Airport expansion discussions with GMP.
- Solar Test Center at McNeil site visits with developer (Encore).

Sustainability & Workforce Development

- Continued management of Ventilation Improvement Program, including the advancement of ventilation work in 5 non-profits and businesses.
- In collaboration with the Department of Permitting and Inspections' (DPI) Historic Preservation Division, completed Guide on NZE and Energy Efficiency in Historic Buildings.

- Launched new \$49,000 DEED contract to advance Property Energy Plans in residential housing as part of Burlington 2030 District.
- Along with Policy & Planning staff, supported UNH SI Fellow Kameice Francis’s work to create a guide for rental property owners on EV infrastructure installation.
- Met with Way to Go Vermont to advance safe pedestrian routes, including “shopping trolley” program.
- Supported Policy & Planning in conceptualizing a Burlington-based “replace your ride” program similar to the Energy Action Network’s statewide effort to replace older internal combustion engine vehicles with EVs or e-bikes.
- Conducted 4 presentations on BED and the City’s NZE by 2030 goal: (1) La Colabroativa, a Boston-based high school summer program; (2) Burlington High School’s Human Geography course; (3) Climate Ride, a non-profit committed to fundraising for climate mitigation causes; (4) Burlington City Art’s Summer Listen Up program.
- Participated in 2nd EAN Summit Planning committee meeting and attended first 1-89 TDM transit focus group, hosted by the Chittenden County Regional Planning Commission.
- Coordinated with DPI and VGS on outreach to multi-unit dwelling property owners about the updated minimum housing code to include weatherization.
- Continued “listening session” with weatherization/heat pump contractors as part of CEDO and BED’s “workforce development” working group to better understand the current workforce challenges and leverage points that will help advance Net Zero Energy.
- Continued involvement with EAN-inspired “Weatherization at Scale” workforce development subcommittee, including outreach to the weatherization community on their workforce development needs and curriculum development ideas to enable the State to meet decarbonization goals.
- In collaboration with IS team, continued to advance Energy Star Portfolio Manager auto-upload feature, which allows facilities managers and property owners to track usage over time and make informed financial and technological decisions around energy use.

Center for Safety and Risk Management – Paul Alexander

Safety

- Additional train trestle signage ordered identifying voltage. (480V plugs).
- Trialing new tool to open railcar doors (black railcars). Special fabricated reaction arm ordered and should be here in about 3 weeks.
- Conducted Pine Street safety meeting this month: ARC Flash review, IEEE standard updates and ARC Flash Field sheet review.
- Conducted quarterly McNeil Safety Committee meeting scheduled on July 20.
- McNeil Safety Committee approved McNeil Station Operators to become part of the FR clothing program.
- Participated in insurance inspection of McNeil with Zurich Engineering group.

Environmental

- Submitted quarterly RGGI compliance report for gas turbine.
- Regenerated demineralizer and condensate polisher systems.

- Completed the quarterly EPA emissions submittal and quarterly emissions report for the VTDEC.
- Conducted monthly wastewater sampling
- Trained Mike Flora on the weekly SPCC/SWPPP facility walkthrough.
- Conducted monthly Winooski One safety/environmental walkthrough.

Risk Management

- Claims Investigations 3 total (1 Power Outage, 2 Property).
- Review/submit C4S' 5-year bond projects to Finance.
- Complete 5 insurance applications for agent H&B
- Create remote access release (DDC) for C4I/Customer Care/IT.
- Coordinated and attended all day Zurich engineering on-site visit for property insurance renewal.

Purchasing/General Services

- Participated in the auditors count and verification on inventory at McNeil and Pine Street.
- Participated in a zoom call about moving away from Penta poles and what are the next steps.
- Participated in insurance walkthrough of McNeil with Zurich.

Center for Operations & Reliability – Munir Kasti

Engineering and Operations

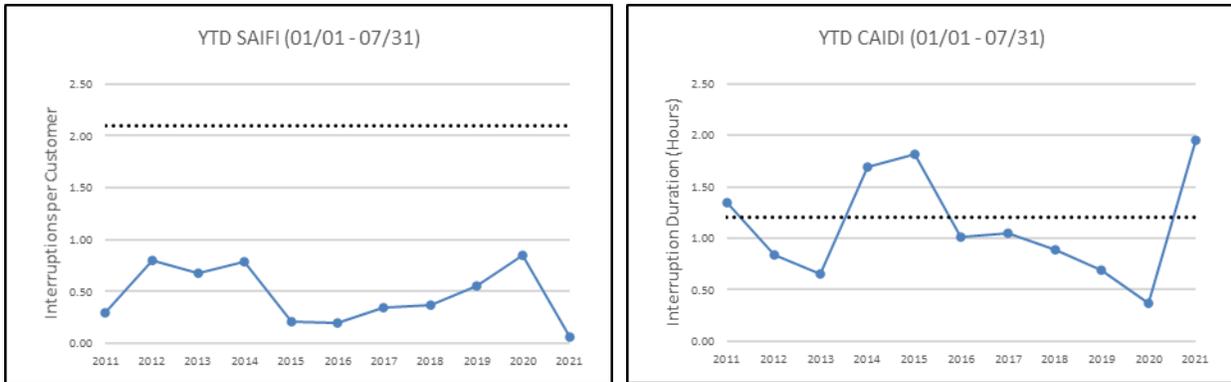
- Worked with factory representatives from S&C to correct issue with newly installed submersible switch at South Prospect and Pearl Streets.
- Performed numerous disconnect/reconnects requested by electricians.
- Installed new anchor and guywire on pole P352 at Shelburne Roundabout.
- Met with contractor to discuss scheduling an outage for the UVM Athletic facility project.
- Removed old poles on Starr Farm Beach.
- Assisted contractor performing battery load testing at the Gas Turbine building.
- Performed battery maintenance at substations and field devices.
- Performed breaker maintenance at Winooski One Hydro.
- Performed troubleshooting and made repairs to control on recloser 234R.
- Issued the RFP's for several projects:
 - Civil work for the electrical system rebuild at Scarff Avenue;
 - Civil work for the electrical system rebuild at Appletree Point Road;
 - New submersible switch to replace the failed switch at Battery and Pearl Streets;
 - New pad mounted switch to replace the failed switch at Main and South Prospect Streets;
 - New pad mounted capacitor bank to be installed at the UVM athletic facility vault; and
 - Inspection of all wooden poles.
- Issued the design and work order for the following projects:
 - Aerial reconductoring of the 1L4 circuit along North Avenue from Starr Farm Road to Northgate Road;
 - Street lighting upgrades on Shelburne Street from Home Avenue to Flynn Avenue;
 - Street lighting at a midblock crossing on Flynn Avenue; and
 - New service to 282 Intervale Road

- Replaced the SCADA video wall controller three (3) power supplies.

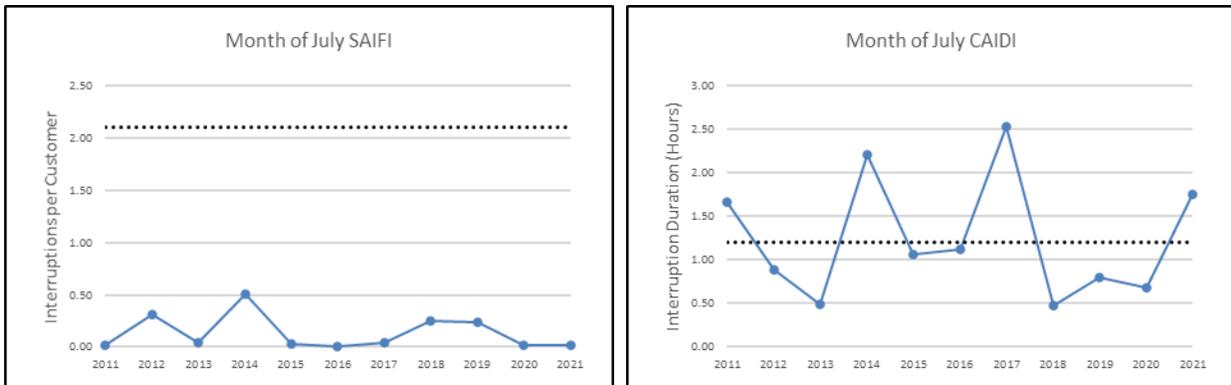
SAIFI & CAIDI Outage Metrics:

BED’s distribution system experienced 26 outages in July 2021 (7 unscheduled and 19 scheduled). BED’s SAIFI for the month of July was 0.02 interruptions per customer and CAIDI was 1.75 hours per interruption. BED’s YTD SAIFI is 0.06 interruptions per customer and YTD CAIDI is 1.95 hours per interruption. The higher monthly CAIDI metric is the result of three relatively large outages with long durations. Two of the outages were unscheduled and the result of a windstorm and one from an accident (car struck pole). The third outage contributing the most to the increase in CAIDI was to remove and repair the underground switch at Prospect and Pearl.

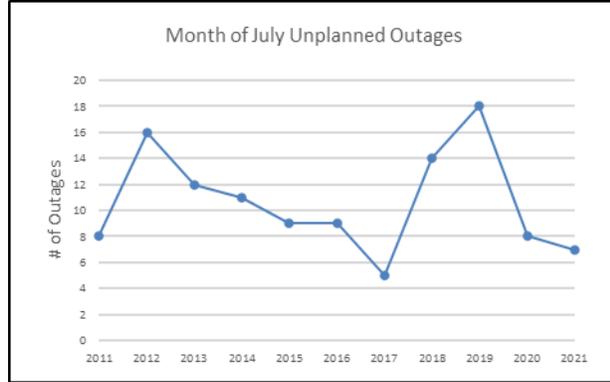
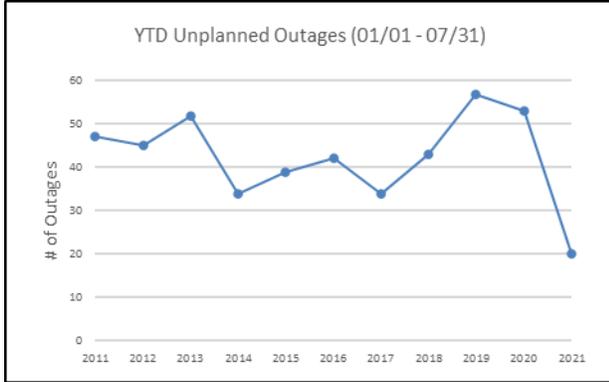
The following figure shows BED’s historical YTD SAIFI and CAIDI:



The following figure shows BED’s historical July SAIFI and CAIDI:



The following figure shows BED’s historical Unplanned Outages:



GENERATION

McNeil Generating Station, July 2021

Month Generation:	26,094.0 MWh
YTD Generation:	168,271 MWh
Month Capacity Factor:	70.1%
Month Availability:	70.8%
Hours of Operation:	530.6 Hours

McNeil has requested our annual overhaul be done from April 23, 2022 through May 8, 2020. This request was made to ISO, we are waiting for confirmation.

Winooski 1, July 2021

Month Generation:	2,051.67 MWH (115.26% of average)
YTD Generation:	14,660.724 MWH (74.044% of average)
Month Capacity Factor:	37.26 %
Month Availability:	99.8 %

There were 6 hours of no generation on 7/20/21 due to tiebreaker issues, along with a few hours that same evening due to a thunderstorm and tiebreaker opening.

Burlington Gas Turbine, July 2021

Month Generation:	87.016 MWh
YTD Generation:	217.710 MWh
Month Capacity Factor:	0.609%
Month Availability:	100.000%
Hours of Operation Unit A:	7.0
Hours of Operation Unit B:	7.0

There were 4 total operations of the asset during the month of July. The GT performed the annually required summer SCC audit during an open audit window in the month of July. There were two economic dispatched operations of the asset during the month where one of these operations had startup issues, but quick operator response resulted in a successful operation. The last operation was the result of a BED requested audit which was successful. The asset is fully functional and in service at

the end of the month.

Solar (Pine Street 107 kW)

Month Generation: 13 MWh (-22% from previous year)
 YTD Generation: 69 MWh
 Month Capacity Factor: 17%
 Month Availability: 100%

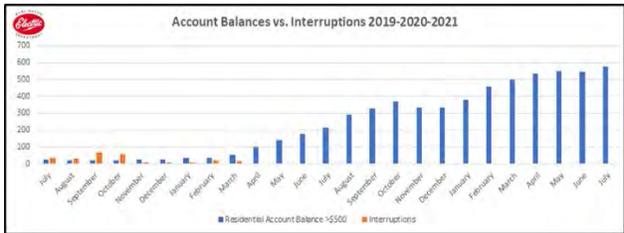
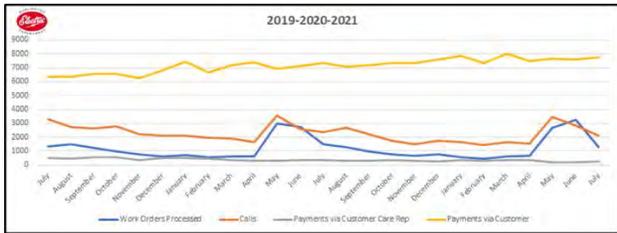
Solar (Airport 499 kW)

Month Generation: 67 MWh (-24% from previous year)
 YTD Generation: 361 MWh
 Month Capacity Factor: 18%
 Month Availability: 100%

Center for Customer Care & Energy Services – Mike Kanarick

Customer Care

- Call Answer Time (75% in 20 seconds): July 2021 81.6%, June 69.3%, May 65.8%, April 91.0%, March 89.1%, February 93.1%. July 2020 78.6%, June 74.8%, May 65.9%, April 86.9%, March 84.2%, February 84.1%. Call answer time up 3% from same time last year. Monthly # calls (2,116) down from nearly 3,000 in May and June, but still up from April # calls (1,554).
- July 2021 Stats: please see dashboard for additional metrics categories.



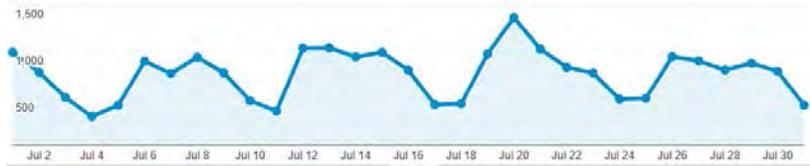
Communications and Marketing

- Temporary Energy Assistance Program to offset 7.5% rate increase: to help offset BED’s first-rate increase in 12 years that has begun to appear as a surcharge on customer bills this month, we are offering income-qualified customers temporary assistance in the form of a monthly bill credit through June 2022. Customers can learn about eligibility requirements and apply by visiting burlingtonelectric.com/rates.

- Vermont COVID-19 Arrearage Assistance Program (VCAAP II): The Vermont COVID-19 Arrearage Assistance Program (VCAAP) that was active last fall is back. VCAAP II provides financial support to residential (homeowners and renters) and commercial customers who may face disconnection of service because of past-due balances for their electric, landline telephone, natural gas, water, or sewer/wastewater charges. Vermonters must apply before October 25, 2021, and grants will be awarded on a first-come, first-served basis until funding runs out or the program ends. Customers may visit bit.ly/vtbills to apply. VCAAP 1.0 ended in mid-December 2020; BED was successful in securing for our customers \$345,437 (\$259,098 residential and \$86,339 commercial) in grants to help utility customers pay past due balances greater than 60 days.
- Vermont Emergency Rental Assistance Program (VERAP - erap.vsha.org): launched by State in April “to help alleviate income pressure on tenants and landlords and restore stability to the rental community.” VERAP will help tenant households with paying rent, as well as paying utility and home energy costs. The program had a slow start, but as of the end of July, BED had verified 109 of 244 program applicants, totaling more than \$60,269 (last month was 41 of 133 program applicants, totaling more than \$20,000) that will be coming to BED.
- E-billing Promo Partnership with VGS and Vermont Lake Monsters: after a year off during the pandemic, the BED-VGS-Lake Monsters partnership is back. E-billing saves \$18 per year per customer, with customers receiving two tickets and \$10 in Monster Money to spend at the ballpark. BED and VGS set up our tents at Centennial field at the July 21 and July 29 ball games and engaged with many BED customers. On July 21, GM Darren Springer threw the first pitch, clocked at close to 95 mph! More than 1,000 customers switched from paper to e-billing during our promo.
- North Avenue News: August column promotes the temporary energy assistance program for low-income customers, VCAAP II, VERAP, and 0% on-bill financing (OBF). Our August ad promotes 0% loans and OBF for various business upgrades and equipment replacements, letting our customers know that BED has \$500,000 in available funds to make 0%, fixed-rate loans with no money down, enabling businesses to repay the cost of energy efficiency improvements through OBF on their monthly electric bill, without any up-front, out-of-pocket expenses (burlingtonelectric.com/on-bill-financing).
- July 2021 Website and Facebook Highlights
 - We launched our new www.burlingtonelectric.com website last month, in July. The new site is built on the Wordpress platform and provides more security and easier updating and upgrading capabilities.
 - A steady/typical increase from June traffic.
 - Website traffic throughout year
 - Overall site-wide pageviews for July 2021 = 23,727
 - June = 25,159
 - May = 28,428
 - April = 22,745
 - March = 21,463
 - February = 18,773
 - January = 20,402
 - December 2020 = 18,797
 - November = 19,638
 - October = 20,661

- September = 23,850
- August = 26,709
- July = 23,169
- Unique homepage pageviews for July 2021 = 7,931
 - June = 7,484
 - May = 7,499
 - April = 5,404
 - March = 5,775
 - February = 5,165
 - January = 7,571
 - December 2020 = 5,561
 - November = 7,071
 - October = 5,844
 - September = 9,266
 - August = 7,883
 - July = 6,830

Full site traffic for July 2021



- Visitors by website page – please note that some of the columns indicate n/a as the page-specific URLs changed when we launched our new website. We will continue to track this information, which will become more meaningful each month.

page title	July 2021	June 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021	Dec 2020	Nov 2020	Oct 2020	Sept 2020	Aug 2020	July 2020	June 2020
Burlington Electric Department	9164	9085	9667	6884	7234	6550	7571	7130	7071	7497	9277	10863	8776	n/a
My Bill	3033	3295	3235	3087	3228	3046	3532	3308	2995	3258	3651	3566	3638	3578
Waste Wood Yard	1212	1160	1509	2034	1110	367	979	761	1756	1545	1303	1749	1442	1816
Report A Problem	153	135	93	60	88	80	80	121	76	140	721	903	83	980
Stop or Start Service	803	1079	2599	622	337	279	336	277	330	366	502	873	782	1059
E-billing	522	451	337	380	352	368	495	528	397	394	669	673	578	539
Contact Us	638	731	949	468	560	413	417	467	414	436	547	655	545	713
McNeil Generating Station	447	429	627	791	517	395	525	507	734	634	548	624	574	655
Heat Pumps	567	369	82	40	39	46	30	n/a	18	36	36	39	41	43
Rebates	621	795	n/a	n/a	n/a	n/a								
Rebate Center	679	319	n/a	n/a	n/a	n/a								
Green Stimulus	138	233	255	257	280	504	283	208	158	152	171	357	410	682
Stop or Start Service	803	1079	2599	622	337	279	336	277	330	366	502	873	782	1059
Leadership Team	228	240	212	198	308	218	286	207	193	190	269	250	225	224
Rates & Fees	143	247	310	184	212	218	161	140	139	190	190	240	229	218
Usage Tracker Registration	177	223	107	118	150	196	185	209	147	154	201	238	326	242
RFP	455	158	143	439	393	471	404	258	387	400	383	232	255	605
Residential Ways to Save	172	220	217	173	175	163	137	159	137	212	172	205	285	306
Electric Vehicles	245	332	247	258	246	218	210	190	208	296	219	199	186	209
E-Bikes	207	192	223	242	196	117	106	109	117	131	174	197	198	294
Net Zero Energy News	115	178	210	132	187	195	228	179	225	222	241	193	159	233
Electric Vehicles	245	332	247	258	246	218	210	190	208	296	219	199	186	209
COVID-19 Updates	397	540	335	275	332	301	349	337	323	281	83	185	94	217
Our Energy Portfolio	42	n/a	51	110	102	101	49	51	53	84	125	103	76	61
Electric Lawn Mowers & Leaf Blowers	184	229	408	312	176	79	131	70	157	101	88	113	186	205
RFP Detail	185	n/a	23	401	199	414	303	148	293	321	403	98	91	730
Defeat The Peak	22	155	11	17	20	35	n/a	n/a	10	20	n/a	35	232	533
Commercial Ways to Save	39	62	26	46	59	33	37	41	34	53	33	21	32	35

- Top Facebook posts.

- Big responses from boosted posts about our generous business loan program, BED job openings, and meeting with Senator Bernie Sanders.

07/09/2021 8:16 AM		2K	271 5
07/12/2021 9:40 AM		3.6K	157 3
07/01/2021 5:48 AM		2.7K	107 62

Blue: clicks / Red: comments, shares

Energy Services

UVM

- UVM Physical Plant Department Regular Monthly Check-in Meeting – BED Energy Services and Engineering teams met with UVM staff to discuss planned new construction projects, street lighting, and several energy efficiency upgrade projects.
- UVM Building Renovations and Expansions / Firestone Medical Research Building NC & Gutterson Athletic Facility Renovations (OCMC) – BED has been in touch with UVM facilities and engineering staff, and new documentation is now being made available for our analysis for these two projects that are now in-progress. We are beginning an analysis this month to find out the potential level of energy savings that might be available from the energy efficiency features in their design.
- UVM Southwick Hall / IT Server Room Cooling Retrofit – BED is working with the project coordinator to estimate a rebate for the installation of a high-efficiency cooling unit for this space, one with a built-in economizer instead of a standard unit without the economizer option. This project is similar to an earlier Waterman building replacement unit scope-of-work which was completed in 2020. BED is awaiting some additional information before committing to a rebate dollar amount.

UVMCC

- UVM Medical Center / Operating Room Re-Commissioning – A local engineering company is developing a proposal for re-commissioning of the hospital’s operating room HVAC systems. The effort is to maintain tight control of the space condition of these critical rooms, while minimizing energy use. BED has committed to contributing an incentive for the first phase of this investigative work, where we will hope to uncover potential energy savings measures.

Other Services

- Dealer.com / 444 Pine St. Facility Re-Lighting Project – BED has been contacted by Cox Automotive, who owns this local company, to re-initiate the lighting project which will replace existing lighting with the latest LED lighting technology. Covid restrictions were responsible for delaying the implementation which has been in the planning stages for 1 ½ to 2 years. The fixture installations are due to begin in August 2021. BED is awaiting the latest fixture specs, quantities, and wattage ratings so that the earlier custom lighting power density lighting measure can be re-evaluated against the latest CBES version 2020.
- Hannaford North Avenue Renovation – Over the last few months BED received preliminary information on a planned renovation project at the Hannaford’s North Avenue grocery store. Hannaford has enlisted VEIC to assist in obtaining energy efficiency rebates for all their stores

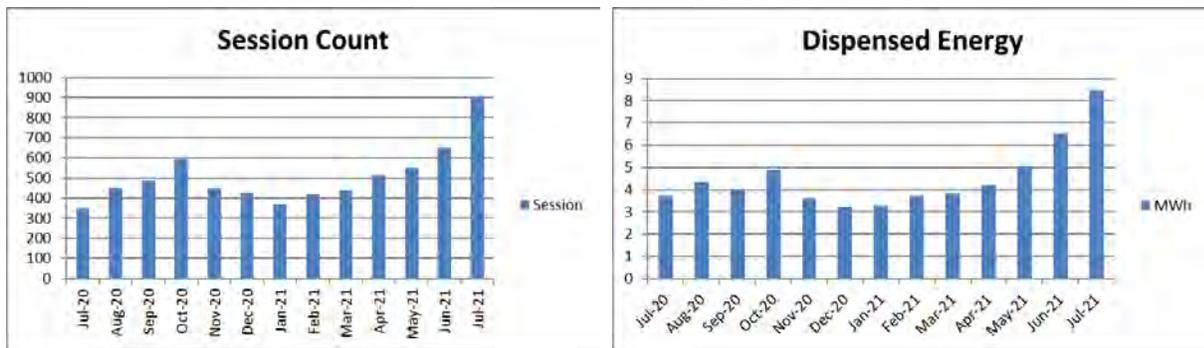
across the East Coast. It appears that some significant energy savings will result from some of the renovations, particularly in the area of converting open merchandiser designs into enclosed door coolers. Last month BED responded with additional suggestions that could increase the store's rebates. We are beginning to get feedback about our suggestions. Although some of the equipment for the project is becoming available on-site, the project is not scheduled to be fully completed until November 2021.

- Hickok and Boardman HVAC and Controls Upgrade – A major upgrade to the HVAC system for this multi-story office building was completed last month. A new central chiller and dry cooler were previously set in place and a complete upgrade to the building's DDC system was installed. The BED site visit is now complete, and web-access to the DDC will allow us to assist in confirming optimum scheduling, as well as proper sequence of operation. The committed incentive was paid to the owner and BED will continue to monitor the DDC to ensure that the building is operating in an efficient way consistent with the design intent.
- In a related issue, the owner has decided to pass for now on participating in a pilot project involving the installation of electro-chromic glass in high solar heat gain areas of the building.
- North Avenue Alliance Church HVAC Retro-fit – This customer has decided to go forward with a long-planned project which will replace an existing over-sized air-cooled chiller that has reached end-of-life with a smaller modulating chiller. It will also add VFD's to AHU supply and return fans, add CO2 sensors to implement demand control ventilation, and include a new BAS system which will control the new hardware to maximize the efficiency of its operation. BED has updated its rebate offer this month and included a 0% / No Fee On-Bill-Financing offer to assist with funding of the project. It appears the customer will not include the OBF loan in their planned financing package, but the incentive will be highly helpful in moving the project forward.
- Café Hot LED Lighting Retro-fit – BED was contacted by this customer to determine if a lighting rebate was available for LED T8-style "TLEDS", if purchased outside the Vermont lighting distribution 'Smartlight' rebate network. A total of 60 TLEDs were purchased. BED confirmed that a custom rebate is available, and this month and the incentive check was mailed to the customer.
- Cambrian Rise / Juniper House New Construction – This affordable 55+ multifamily is now being occupied. BED paid out last month the energy efficiency rebate that we committed to at the start of the project. We are now helping the owner to finalize the installation of an internal electrical sub-metering system which will help to verify, over time, the energy uses of various systems within the building.
- Cambrian Rise / Aurora New Construction – BED has been contacted by the owner and their engineering representative about three upcoming new condos envisioned to be constructed at Cambrian Rise: Buildings D, E and F. An agreement was negotiated last month between the owner, BED, and VGS to fund a preliminary energy model. Its purpose is to determine if energy savings for the project will justify the generation of a more detailed and extensive energy model in the future. This month we've worked with the modeler to further define the model 'baseline' building and how this preliminary modeling process will be structured. Results of the model are expected within the next one or two weeks.
- Citizen Cider NC HVAC Commissioning – After many months of effort, certain refrigeration and warehouse HVAC problems were investigated and the root causes found. This past month, the commissioning agent released a final report confirming that operational issues of this apple processing facility have been resolved. It further adds that there are some other opportunities that

have been identified where system reliability and efficiency can be improved further. BED will endeavor to have these items properly addressed before any further incentives are released.

Electric Vehicles

- The EVSE dispensed a total of 8.50 MWh and supported 904 sessions.
- The top 3 sales were 57, 64 & 64 kWh and occurred at College St. garage.
- The top 10 sessions (1.1% of total) accounted for 6.6% (561 kWh) of the total monthly sale. The ten sessions ranged from 47 kWh-64 kWh.
- The DC fast chargers accounted for 80 of the 904 sessions and dispensed 10% of the total energy. The Marketplace Garage station dispensed 1.7x as much energy as the Pine St. station and had twice as many sessions. Power cycling the Pine St. station restored functionality.
- The EVSE served 521 unique drivers.
- The handle locking mechanism failed on BE14 (175 Lakeside Ave.) ChargePoint is sending a replacement head at no cost. E&S Electric tested voltage at this location and confirmed that it was within spec.
- Below are the session count and another graph showing dispensed energy from the charging stations on a per month basis.



- **Number of EV and PHEV Rebates to Date – 286**
 All Electric Vehicle (New) - 150
 PHEV (New) - 97
 All Electric Vehicle (Used) - 18
 PHEV (Used) - 13
 All Electric Vehicle (\$50K plus) - 8
- Number of income-eligible EV participants to date – 41
- Number of customer loans with lending partners to date – 5
- Number of customers currently participating in the new EV Rate- 70
- Number of EV home charging stations rebates to date - 41

Electric Lawn Equipment to Date

- Number of e-mower rebates to date – 338 (8 commercial & 330 residential)
- Number of e-leaf blowers to date - 15

Heat Pump Installations to Date (since the September 2019 NZEC announcement)

- Number of heat pump hot water heaters to date – 15
- Number of space conditioning heat pumps to date (ductless and centrally ducted) – 417

Electric E-Bikes to Date

- Number of e-bike rebates to date – 243

Electric Induction Stove-tops to Date (new offering in Jan 2021)

- Number of induction Stove-tops rebates to date – 4

BED 2021-2022 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	July 2021 Actuals	June 2021 Actuals	May 2021 Actuals	Apr 2021 Actuals	Mar 2021 Actuals	Feb 2021 Actuals	Jan 2021 Actuals	2020 Yearly Actual	2019 Yearly Actual	2018 Yearly Actual
Engage Customers and Community											
Call answer time 75% within 20 seconds	75%	82%	69%	65%	91%	89%	93%	87%	avg 81%		
Delinquent accounts >\$500	0	578	545	552	535	500	458	378	avg 201		
Disconnects for non-payment	0	0	0	0	0	0	0	0	45		
# of residential weatherization completions	10	0	1	1	0	1	0	0	3	11	11
Weatherization completions in rental properties		0	0	-	-	0	0	0	0	TBD	TBD
# or % of homes or SF weatherized	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	0	0
Champ Challenge weatherization participants		0	0	0	0	0	0	0	1	TBD	TBD
# of commercial building with improved thermal envelopes		0	0	1	0	1	0	0	5	0	0
% of EEU charge from LMI customers spent on EE services for LMI customers	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
# of customers enrolled in DtP mailing list	TBD	694	693							523	
# of large customers participating in DtP		NA	12			NA		NA			
Strengthen Reliability											
SAIFI (AVG interruptions/customer) (annual target)	< 2.1	0.06	0.02	0.01	0.004	0.01	0.004	0.002	1.50	1.0300	0.43
CAIDI (AVG time in hrs to restore service) (annual target)	< 1.2	1.95	3.85	0.75	0.77	0.49	1.05	0.72	0.55	0.75	0.93
Distribution System Unplanned Outages (annual target)	82	7	3	0	1	3	2	4	90	98	78
McNeil Forced Outages	0	1	0	0	0	0	0	1	21	TBD	TBD
W1H Forced Outages	0	2	0	0	0	2	1	0	2	TBD	TBD
GT Forced Outages	0	0	0	0	0	1	0	1	3	TBD	TBD
Invest in Our People, Processes, and Technology											
Avg. # of days to fill positions under recruitment	120	64	60	47	65	35	77	62	179		
# of budgeted positions vacant	0	11	10	7	6	6	6	7	6	NA	NA

BED 2021-2022 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	July 2021 Actuals	June 2021 Actuals	May 2021 Actuals	Apr 2021 Actuals	Mar 2021 Actuals	Feb 2021 Actuals	Jan 2021 Actuals	2020 Yearly Actual	2019 Yearly Actual	2018 Yearly Actual
Innovate to Reach Net Zero Energy											
<i>Tier 3 Program</i>											
# of residential heat pump installs		58	32	25	30	7	14	24	203	10	0
# of commercial heat pump installs		0	0	1	0	0	0	0	13	0	0
# of residential hot water heat pump installs		2	0	2	1	0	0	1	6	4	0
# of commercial hot water heat pump installs		0	0	0	0	0	0	0	0	0	0
Heat pump rebates		58	36	26	30	7	14	25	212	0	0
Heat pump hot water heater rebates		2	0	2	1	0	1	1	3	0	0
LMI heat pump rebates		2	2	4	8	0	1	0	6	4	0
Heat pump technology installs in rental properties		2	2	3	0	0	2	0	9	TBD	TBD
LMI heat pump hot water heater rebates		0	0	0	-	0	1	0	0	1	0
EV rebates - new		15	6	10	4	7	4	6	14	36	44
EV rebates - pre-owned		0	0	0	1	0	1	1	8	2	0
LMI EV rebates	See NZE Roadmap Goals below	3	1	2	0	0	1	0	7	7	0
PHEV rebates - new		3	5	1	3	5	3	0	10	17	14
PHEV rebates - preowned		0	0	2	0	1	2	0	5	3	0
LMI PHEV rebates		2	1	0	0	0	1	0	6	2	1
Public EV chargers in BTV (total)		27 Ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	14	14
Public EV charger energy dispensed (kWh)		8,500	5,060	5,070	4,200	3,860	3,600	3,280	35,690	78,000	67,931
Home EV charging station rebates		1	5	3	0	3	3	2	20	12	0
EV rate charging customers (total)		65	65	60	56	52	49	47	40	28	4
Level 2 charger rebates		0	0	0	0	0	10	0	0	1	0
Level 1 charger rebates		0	0	0	0	0	0	0	1	0	0
E-bike rebates	0	35	19	0	8	0	1	36	65	62	
E-mower rebates	18	23	34	16	6	1	1	95	142	NA	
E-forklift rebates	0	0	0	0	0	0	0	0	0	0	
MWE of Tier 3 measures installed		1,964	3,127	2,135	1,339	1,557	818	2,064	35,112	3,342	
% Tier 3 obligation met with program measures	100%	87%	74%	53%	39%	30%	19%	14%	283%	31%	30%
<i>Net Zero Energy Roadmap Goals</i>											
# of solar net metering projects installed		5	2	1	1	1	5	5	24	33	52
No. of homes receiving NZE Home Roadmaps		1	0	0	0	1	1	0	7		
Residential heat pumps for space heating (no. of homes)	2020: 3963	NA	NA	NA	NA	NA	NA	NA	891	572	
Commercial heat pumps for space heating (SF floor space served)	2020: 1190	NA	NA	NA	NA	NA	NA	NA	1,304	374	
Residential heat pumps for water heating (no. of homes)	2020: 1466	NA	NA	NA	NA	NA	NA	NA	92	87	
Commercial heat pumps for water heating (SF floor space served)	2020: 263	NA	NA	NA	NA	NA	NA	NA	0	-	
EV registrations in BTV (light-duty)	2020: 548	NA	NA	NA	NA	NA	NA	NA	356	291	
Greenhouse gas emissions (1000 metric tons CO2)	2020: 190	NA	NA	NA	NA	NA	NA	NA	182	211	
Fossil fuel consumption (billion BTU)	2020: 3207	NA	NA	NA	NA	NA	NA	NA	3,142	3,619	
<i>Demand Response</i>											
# of Defeat the Peak events called		0	2	NA	NA	NA	NA	0%		4	
Average kW savings per DTP event		NA	460	NA	NA	NA	NA	NA	261	242	

BED 2021-2022 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	July 2021 Actuals	June 2021 Actuals	May 2021 Actuals	Apr 2021 Actuals	Mar 2021 Actuals	Feb 2021 Actuals	Jan 2021 Actuals	2020 Yearly Actual	2019 Yearly Actual	2018 Yearly Actual
Manage Budget and Risks Responsibly											
<i>Safety & Environmental</i>											
No. of workers' compensation/accidents per month	0	0	0	1	0	2	0	0	8		
Total Paid losses for workers' compensation accidents (for the month)	\$225,000 annual	\$8,109	\$43,320	\$7,042	\$2,809	\$8,289	\$2,768	\$1,868	\$ 165,402	\$38,288	\$ 255,273
Lost Time Incident Rate (days/year) (Dec numbers reflect annual results)	<= 3.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.93	0.89	1.89
Lost Time Severity Rate (days/year) (Dec numbers reflect annual results)	<= 71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	41.71	78.2	109.75
Lost work days per month	0	0	0	0	0	0	0	0	45		116
NOx reporting levels to EPA (Quarterly) (lbs/mmbtu)	<0.075	0.068	0.068	0.069	0.071	0.068	0.069	0.067	0.07		
# of reported spills, waste water incidents (monthly)	0	0	1	0	0	0	0	0	4		
Phosphorus levels to DEC in lbs (monthly/yearly total)	<0.8/37	0.116/1.489	0.034/1.373	0.048/1.339	0.17/1.291	0.631/1.121	0.192/0.192	0.334/1.81		1.169	
# of new power outage claims reported (monthly)	1	1	1	0	1	0	1	0	4		
# of new auto/property/other liability claims reported (monthly)	2	2	1	1	1	2	2	0	27		
<i>Purchasing & Facilities</i>											
# of Purchase Orders for Inventory (Target: avg for winter months)	42	56	37	30	32	53	28	90	593		
\$ value of Purchase Orders for Inv. (Target: avg dollars spent during winter)	\$78,000	\$98,535	\$105,330	\$65,173	\$31,021	\$139,566	\$193,052	\$91,356	975,531		
# of stock issued for Inventory (Target: avg during winter months)	320	420	406	265	501	272	334	315	4,545		
\$ value of stock issued for Inventory (Target: avg. during winter)	\$ 65,000	\$ 71,605	\$ 100,339	\$ 45,103	\$ 75,434	\$ 61,775	\$ 37,230	\$ 102,901	1,086,478		
# of posters pulled from poles monthly (Target: goal to remove each month)	58	237	205	185	221	176	72	165	627		
# of Spark Space and Auditorium setup/breakdowns monthly (Target: Covid impact)	3	6	9	4	4	8	1	1	87		
<i>Finance</i>											
Debt service coverage ratio	1.25		NA	4.05	4.47	3.89	4.01	3.56	NA-FY basis	NA	NA
Adjusted debt service coverage ratio	1.5		NA	1.01	1.15	0.96	1.02	0.86	NA-FY basis	NA	NA
Days unrestricted cash on hand	>90		NA	117	127	122	126	109	NA-FY basis	NA	NA
<i>Power Supply</i>											
McNeil generation (MWH) (100%)	per budget	26,094	18,302	15,925	17,407	35,682	32,549	22,312	192,696		
McNeil availability factor	100%	71%	93%	95%	76%	100%	100%	61%			
McNeil capacity factor	per budget	70%	51%	42.8%	48.3%	95.9%	96.9%	59.9%			
Winooski One generation (MWH)	per budget	2051	642	2,636	3,713	2,872	1,162	1,584	21,194		
Winooski One availability factor	100%	99.8%	100%	100%	96%	100%	90%	90%			
Winooski One capacity factor	per budget	37%	12%	48%	70%	52%	23%	29%			
Gas Turbine generation (MWH)	NA	87.0	32.6	15.4	18.5	29.4	17.8	16.9	441		
Gas Turbine availability factor	100%	100%	95%	100%	100%	99.9%	100%	99%			
Gas Turbine capacity factor	NA	0.61%	0.24%	0.09%	0.11%	0.17%	0.115%	0%			
BTV solar PV production (mWh)		542	644	642	525	548	190	107	5,182		
Cost of power supply - gross (\$000)			\$ 2,564	\$ 2,431	\$ 2,092	\$ 2,955	\$ 2,477	\$ 2,457	\$ 31,081		
Cost of power supply - net (\$000)			\$ 2,564	\$ 2,090	\$ 514	\$ 2,955	\$ 592	\$ 2,457	\$ 23,388		
Average cost of power supply - gross \$/KWH			\$0.090	\$0.097	\$0.086	\$0.111	\$0.095	\$0.089	\$0.100		
Average cost of power supply - net \$/KWH			\$0.090	\$0.084	\$0.021	\$0.111	\$0.023	\$0.089	\$0.076		

*****DRAFT*****
MINUTES OF REGULAR MEETING
BURLINGTON ELECTRIC COMMISSION

Wednesday, July 14, 2021, 5:30 pm

The regular meeting of the Burlington Electric Commission was convened at 5:31 pm on Wednesday, July 14, 2021 via Microsoft Teams Video Meeting.

Channel 17 was present via Microsoft Teams Video to record this meeting.

Commissioners Chagnon, Herendeen, Moody, Stebbins, and Whitaker participated via Microsoft Teams. Commissioner Whitaker left the meeting at 6:00 pm.

Staff members present via Microsoft Teams included Darren Springer, Paul Alexander, James Gibbons, Mike Kanarick, Munir Kasti, Laurie Lemieux (Board Clerk), Dave MacDonnell, and Emily Stebbins-Wheelock.

1. Election of Officers

Board Clerk Laurie Lemieux called the meeting to order at 5:31 p.m. The first meeting of the new fiscal year is the Burlington Electric Commission's organizational meeting, and the first order of business is to elect officers. The Board Clerk opened the floor for nominations for Chair of the Commission.

Commissioner Chagnon made a motion to nominate Commissioner Stebbins to continue serving as Chair of the Burlington Electric Commission; the nomination was seconded by Commissioner Moody. The Board Clerk asked if there were any other nominations. Hearing none, the Board Clerk asked the Commission to indicate support for Gabrielle Stebbins by way of roll call.

The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Moody. Aye
Commissioner Whitaker. Aye

Results: 4 Ayes with 0 Nays, the motion carries.

Of the 5 members, 4 votes were cast in support of Commissioner Stebbins, with Commissioner Stebbins abstaining. Commissioner Stebbins was elected Chair of the Commission. At this time Ms.

Lemieux turned the meeting over to Chair Stebbins.

Commissioner Stebbins opened the floor for nominations for Vice Chair of the Burlington Electric Commission. Commissioner Chagnon made a motion to nominate Commissioner Moody to continue serving as Vice Chair of the Burlington Electric Commission; the nomination was seconded by Commissioner Herendeen. Commissioner Stebbins asked if there were any other nominations. Hearing none, the Board Clerk asked the Commission to indicate support for Scott Moody by way of roll call.

The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Stebbins. Aye
Commissioner Whitaker. Aye

Results: 4 Ayes with 0 Nays, the motion carries.

Of the 5 members, 4 votes were cast in support of Commissioner Moody, with Commissioner Moody abstaining. Commissioner Moody was elected Vice Chair of the Commission.

Commissioner Chagnon nominated Laurie Lemieux as the Board Clerk for the Burlington Electric Commission; the nomination was seconded by Commissioner Whitaker.

The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Moody. Aye
Commissioner Stebbins. Aye
Commissioner Whitaker. Aye

Results: 5 Ayes with 0 Nays, the motion carries.

Of the 5 members, 5 votes were cast in support of Laurie Lemieux as the Board Clerk for the Burlington Electric Commission.

2. Agenda

There were no changes to the Agenda.

3. June 9, 2021 Meeting Minutes

Commissioner Herendeen made a motion to approve the minutes of the June 9, 2021 Commission Meeting; the motion was seconded by Commissioner Chagnon.

The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Moody. Aye
Commissioner Stebbins. Aye
Commissioner Whitaker. Aye

Results: 5 Ayes with 0 Nays, the motion carries.

4. Public Forum

Mr. Jamie Hand was present for the meeting.

5. Commissioners' Corner

Commissioner Herendeen stated that it was great to see that the YMCA met the standards set by the energy efficiency model and that the YMCA now has received the full rebate. Also, Commissioner Herendeen stated that he was very impressed by the new updated Burlington Electric Department website and remarked that it is very user friendly.

Commissioner Stebbins thanked Mike Kanarick and the team for working with a resident regarding concerns with the utility poles surrounding their property, stating that there are a lot of regulations and requirements that are outside of BED's control, and customer requests are not always possible. Commissioner Stebbins further stated that she appreciated that the team worked with the customer to determine how to reposition the lighting so it was not directly falling on the property, but focused more on the road.

Mr. Kanarick stated that this was a team effort and thanked Andy Elliston, Enis Sehovic, and Munir Kasti in the Engineering Department for working with the residents to come to a resolution.

Commissioner Whitaker complimented the BED Team for the E-bike charging map which indicates where all the charging stations are in the City and stated that it is a great resource.

Typically, the Burlington Electric Commission does not meet in August, but Mr. Springer stated that we would benefit from having a meeting next month. Bringing a revenue bond to the voters in November will require approval by the Commission before presenting the bond to the City Council

for its approval in September or October. The BED Team would like to give the Commission enough time to provide feedback and input with an anticipated vote at the August meeting.

The Commissioners agreed, and Commissioner Stebbins and Mr. Springer will meet in early August to discuss budget and finance issues, allowing the August meeting to focus on the revenue bond.

During the August meeting, the Commission also may discuss how the Team wants to return to in-person or hybrid Commission Meetings in September depending on health and household vaccination status.

Commissioner Stebbins stated that the Commission packets are normally sent out a few days before the meeting and asked that, due to the important information scheduled for the August meeting, the packets be sent out with ample time to review and provide feedback.

Also, the revenue bond is extremely important, and Commissioner Stebbins asked Mr. Springer to give a brief update during his GM Update during this meeting.

6. GM Update

Mr. Springer stated that BED is sponsoring a night at the ballpark for customers who sign up for e-billing. When a customer signs up, BED provides them with 2 free Lake Monsters tickets plus \$10 in Monster Money to spend at the ballpark. When customers arrive at the park, they are directed to the BED tent so we can give them the ballpark cash and interact with our customers, sharing energy efficiency and Net Zero Energy information. The two ballgames from which customers can choose are on July 21 and July 29. Also on July 29, BED is hosting employee night at the ballpark. Mr. Springer invited the Commissioners who are interested in attending to please let Laurie Lemieux know, and she will arrange for tickets.

Effective July 6, BED offices are reopened for customers and all employees, and a new Remote Work Pilot Program is operational, allowing for remote work options for employees where applicable. During the Pilot, we'll evaluate different approaches to a hybrid office/remote work set-up, giving each division flexibility to design rotations and schedules that meet their needs. We'll document through employee surveys reduction in vehicle miles traveled and seek to lead by example given how important reduced driving was to our 2020 NZE Roadmap update results.

On July 8, Mayor Weinberger signed a new ordinance that will require new construction projects to include a primary heating system that is renewable, designed to meet at least 85 percent of the building's heating needs. Many renewable heating options would qualify, including heat pumps, geothermal, advanced wood heating, biodiesel, renewable gas, and district heating. This proposal was part of an effort from BED and Department of Permitting and Inspections to advance policy that is implementable now, while the broader Charter Change effort will resume next year in the Legislature. There is an exemption available for the ordinance if a building developer believes complying would be a hardship, but it will involve comparing the least expensive renewable option

compared to a conventional option (including a \$100 per ton carbon price) over a 25-year period for capital and operating.

The rate case was filed with the PUC, and the surcharge will appear on bills in August as planned. We anticipate the process will continue at the PUC throughout the remainder of 2021. July bills will include an insert letter from me explaining why we are pursuing a rate case, and an important message on the bill itself. We've also created a web landing page for the rate case and for customers to sign up for the energy assistance program.

District energy discussions continue on multiple fronts, including with the McNeil Joint Owners on a weekly basis. Ever-Green continues operational work with UVMMC, and VGS and BED are engaged in regulatory discussions. We had good news that, in response to our application, Senator Leahy has submitted a request for Congressionally directed funding to support district energy in Burlington as part of his requests for the Energy & Water Appropriations legislation. This is the first step in a legislative process, but if ultimately successful, this funding would be critical in helping to make the project even more economical and support the inclusion of an electric boiler to run at certain times when McNeil is offline, providing additional carbon reduction and fossil fuel reduction from the project.

Mr. Springer stated that we are in the process of assembling information for Moody's as part of the periodic review that it does for us. We have looked at the potential iterations of the revenue bond and will share with you the details that would accompany the request for consideration and vote. We are investigating whether we should look for authorization for a single amount or ask for funding in portions to help spread the spending over a longer period of time. We also are looking at BED's capacity to move some capital projects alongside our conventional capital project program, what the spending would look like, and what the workforce capacity would look like to move those projects forward. Also, incentives are included, and we are examining how we may be able to front load, through the revenue bond, some of the spending on Tier 3 incentives without it being a significant impact on a given year's budget because it will be repaid as part of a debt service model and align the revenues that return to us from these Tier 3 projects. Also included are the electric grid upgrades that would help us facilitate additional electrification, Mr. Kasti and Mr. Gibbons have been working on this dating back to the IRP. Also with the revenue bond, we would look at upgrading our technology systems due to their key role in our Net Zero initiatives.

Commissioner Herendeen asked if Mr. Springer had a rough dollar number for the revenue bond. Mr. Springer stated that we are looking at a range of \$15M on the lower end and perhaps as high as \$30M on the upper end. That \$30M likely would require multiple authorizations because of the way it works. You have a limited number of years in which to spend down the proceeds from a given revenue bond. In that case, we may be looking at a scenario that would stretch over a longer period of time, whereas if we did a single revenue bond, it might be a four-year period.

Mr. Springer stated that this is an overview of what the BED Team is considering and that there will be more detailed information forthcoming.

Mr. Gibbons stated that the solar test center at McNeil is moving into the permitting stage. There have been site visits with Encore and UVM, and Mr. Gibbons stated that UVM was also a recipient of funds secured by Senator Leahy related to research around that solar test center.

Mr. Springer wanted to recognize that there is a lot of important work going on, particularly in the Finance and Policy and Planning areas, including the revenue bond, the rate case filing, the audit, which is beginning, and the work for the Moody's periodic review. Those two areas in particular have a lot going on, and the teams are doing excellent work. Mr. Springer noted that this work is being done without a Finance Director, with Ms. Stebbins-Wheelock filling in as the acting director. Also, included in the monthly report, we announced that Sue Fritz will be leaving BED and moving on to a new position. We have posted for a new IT Director, and once we are farther along in that hiring process, we will post again for a Finance Director.

Ms. Stebbins-Wheelock stated that we posted for the Finance Director several months ago and decided at that time not to proceed with interviews based on the pool of applicants. We posted for this position in the middle of the pandemic, and we are unsure if we would have received a different response during a different point in time. We are hopeful that, as we are coming out of the pandemic and Vermont is doing very well, people now are thinking more about these types of positions, and we may have a different type of response for the Finance Director position.

Financials

Ms. Stebbins-Wheelock presented a graph showing the monthly impacts of COVID-19 on BED loads from March 2020 through the end of June 2021. In June 2021, BED's loads continued the pattern seen throughout the pandemic; residential sales were 6% higher, commercial sales were 6.3% lower, and overall system loads were approximately 3.2% lower than budgeted projections. Despite the lifting of statewide pandemic restrictions in June, several large employers have not yet returned their employees to the office, and we believe this is a major reason that commercial cooling loads are still trending below baseline levels.

Ms. Stebbins-Wheelock reviewed the budget-versus-actual results for the month of May FY21. May ended with a net loss of \$596K compared to the budgeted net income of \$1,620M, largely due to the timing of REC revenues that were received in April instead of in May as budgeted.

On the revenue side, sales to customers were 3% or \$106K below budget due to COVID-19 impacts, and other revenues were \$45K less than budget. Power supply revenues were \$2.2M less than budget due to timing. Total power supply revenues for FY21 are forecast to be only \$55K less than budgeted, despite below-budget Winooski One generation.

Power supply expenses in May were under budget by \$184K. Transmission expenses were again higher than budget by \$76K. Operating expense in May was higher than budget by \$45K.

Other income was less than budget by \$32K due to less customer contributions to capital projects.

FY21 year-to-date, the Department reports an actual net income of \$1.3M compared to budget of \$2.3M, or \$992K less than budget.

As of May, the Department has spent 60% of the capital budget. Commissioner Stebbins commented that the capital spending level appears lower than is typically the case. Ms. Stebbins-Wheelock and Mr. Kasti responded that the Department has seen capital project delays and deferrals in part due to customer-driven decisions and in part due to supply chain challenges, which have delayed the arrival of materials and equipment necessary for some projects.

As of the 12 months ending May 2021, the Department has an operating cash balance of \$8.058M and 117 days cash on hand, the debt service coverage ratio is 4.05, and the adjusted debt service coverage ratio remains below target at 1.01.

Ms. Stebbins-Wheelock shared that the Department is currently forecasting to end FY21 at a net loss of approximately \$763K (including an estimated \$1M unbudgeted pension liability expense) and an ADSCR of 0.88. The Department ended FY21 with a strong cash position of 105 days cash on hand as of June 30, 2021.

2021-22 Strategic Direction

Mr. Springer reviewed the three changes from the Strategic Direction version that was discussed at the last meeting based on feedback from the Commission.

- Added the word “*sustainable*” in the Mission Statement;
- Replaced “*eventually eliminating fossil fuel usage*” to “*eliminating fossil fuel usage*” in the 2030 Vision Section;
- Added the statement “*customer and community-based projects*” in #1 under the section Innovate to Reach Net Zero Energy.

Commissioner Stebbins suggested changing this statement to “*customer-owned and community-based projects*” with the understanding that the Commission will continue to support the power supply team to continue looking at clean energy projects for Burlington Electric. The Commission agreed to making this change.

Commissioner Herendeen suggested changing the statement in #3 under section Strength Reliability to add the word “staff” in the “*Take steps to ensure reliable operations through succession planning*” which will read “*Take steps to ensure reliable operations through staff succession planning*”. The Commission agreed to making this change.

Noted at this time that Commissioner Whitaker left the meeting at 6:00 pm due to a prior commitment.

Commissioner Herendeen made a motion to adopt the 2021-22 Strategic Direction as amended; the

motion was seconded by Commissioner Chagnon. The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Moody. Aye
Commissioner Stebbins. Aye

Results: 4 Ayes with 0 Nays, the motion carries.

Commissioners' Check-In

There were no Commissioner check-ins.

Commissioner Moody made a motion to adjourn; the motion was seconded by Commissioner Chagnon.

The Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

Commissioner Chagnon. Aye
Commissioner Herendeen. Aye
Commissioner Moody. Aye
Commissioner Stebbins. Aye

Results: 4 Ayes with 0 Nays, the motion carries.

The meeting of the Burlington Electric Commission adjourned at 6:56 p.m.

Attest:



Laurie Lemieux, Board Clerk



MEMORANDUM

To: Burlington Electric Commission

From: Darren Springer, General Manager
Emily Stebbins-Wheelock, Manager of Strategy and Innovation
James Gibbons, Director of Policy & Planning

Date: August 5, 2021

Subject: Net Zero Energy Revenue Bond

Burlington Electric Department (BED) is pleased to provide this proposal to the Electric Commission, and with its recommendation to the City Council, to place a Net Zero Energy Revenue Bond question on the November ballot for consideration by the voters of Burlington. The idea behind the Net Zero Energy Revenue Bond is to provide a financing mechanism to accelerate our progress as a community relative to our Net Zero Energy Roadmap¹ goals and do so in a way that mitigates what would otherwise be cost pressures on BED's annual budgets.

Our 2030 Net Zero Energy goal is one of the most ambitious local climate goals anywhere in the nation, and recent national reporting has highlighted a gap in financing that exists for cities to meet their climate goals.² BED's efforts alone will not be enough to achieve the Net Zero Energy goal, because this is a true community goal and requires partnerships, participation by the community, and complementary policies and funding at all levels of government.³ However, BED can play an important role in accelerating progress through some of the tools we have available, including incentive funding. BED also plays an important role in supporting grid and technology system upgrades that will be necessary as we adopt strategic electrification technologies such as heat pumps and electric vehicles at greater rates.

¹ www.burlingtonelectric.com/nze

² <https://www.smartcitiesdive.com/news/cities-behind-climate-goals-brookings-report/603708/>

³ Many of those efforts are underway, through City policy changes such as rental weatherization standards and primary renewable heating requirements for new construction, and use of a \$100 per ton carbon price in evaluating City fleet purchases. Partnerships such as the work with a variety of organizations on district energy in Burlington are also critical. State funding for climate-related initiatives could also support Burlington's Net Zero Energy goals, and at the federal level infrastructure legislation and a proposal for strengthening federal fuel economy standards for vehicles are under active consideration and would also potentially support additional progress. Notably absent, at the moment, is any carbon price for thermal or transportation fuels at the state, regional, or national level.

Burlington Electric Department
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Phone 802.658.0300

In presenting this idea, we draw on the energy efficiency revenue bond from 1990 (\$11.3 million), which was the foundation from which BED and our customers have since invested a total of over \$70 million in energy efficiency, helping to save BED customers over \$10 million annually on electric bills and contributing to Burlington using less electricity today as a community than we did in 1989, the year prior to the revenue bond.

BED is requesting authorization for total issuance of \$20 million that would be expended over the course of partial year FY22, FY23-24, and partial year FY25. BED will further explore additional financing options to support our capital needs and Net Zero Energy progress beyond FY25 during the course of the next several years.

Net Zero Energy Revenue Bond Areas of Focus

The revenue bond, if approved, would fund three key areas of investment, all of which are expected to qualify for tax-exempt revenue bond financing based on our conversations with bond counsel:

- **Technology Systems Upgrades** – BED is actively updating our technology systems through our IT Forward program, and as part of that we plan to update our Customer and Financial Information Systems (CIS and FIS). Combined with updates already in progress to our Meter Data Management System, these new systems will give BED new capabilities to offer innovative rates and enhanced service for customers to support Net Zero Energy. This includes additional dynamic pricing options and expansion of our end-use rates (such as currently in place for electric vehicle charging) to other technologies such as heat pumps. Smart rate designs can help save customers money, encourage more customers to switch from fossil fuel to electric, and help mitigate grid impacts and peak demand impacts as we move toward strategic electrification. Our current systems rely too heavily on manual processes, and the new systems will help us automate and innovate our rate designs and service delivery for the future. The CIS and FIS would be included in the revenue bond funding.
- **Grid Upgrades** – As part of BED’s Integrated Resource Plan (IRP)⁴ in 2020, we examined a Net Zero Energy scenario reflecting growing loads resulting from greater strategic electrification. This included mapping a scenario where the electric grid was upgraded in Burlington to accommodate 102.8 megawatts of capacity. (For reference, typical summer peaks in BED service territory are around 60-65 megawatts today.) Ultimately, the Net Zero Energy scenario could require upgrades sufficient to meet up to 140 megawatts of capacity, but 102.8 megawatts was selected as an interim scenario.

The IRP included a list of grid upgrade projects, estimated in 2019 dollars to cost between \$19-24 million to help reach the 102.8 megawatt scenario. The revenue bond proposal includes funding for some of these Net Zero Energy-related grid upgrades as well as some necessary upgrades for continued reliability of our current distribution system, as BED currently lacks sufficient financing capacity annually to fully support our capital program. General Obligation (GO) bonds through the City currently provide \$3 million annually, and our annual capital program (net of customer contributions) is averaging closer to \$8 million annually, meaning without new financing capacity there is additional pressure on our annual budget and cash position to fully fund capital projects. The revenue bond helps address this gap over the next several years.

⁴ https://www.burlingtonelectric.com/sites/default/files/IRP2020/8_NZE_PrefPath.pdf

- **Generation and Net Zero Energy Capital Projects** – Finally, the revenue bond would support generation plant upgrades, including a BED proposal to convert the gas turbine peaker plant located on the waterfront to run on renewable biodiesel instead of oil, necessary maintenance of the McNeil Generating Station, and replacement of the Winooski One Hydro rubber dam. It would also support Net Zero Energy capital projects including the purchase of BED’s first-ever electric bucket truck and investment in new electric vehicle charging stations.

In addition to the above-mentioned projects, the revenue bond, by displacing some of BED’s reliance on GO bonds that are issued at \$3 million annually, can free up some of that capacity to support accelerated adoption of customer strategic electrification incentives.

- **Customer Strategic Electrification (Tier 3) Incentives** – BED has offered customer incentives for strategic electrification, such as switching to heat pumps, electric vehicles, and other electric technologies, since 2017. We are pleased to report that our customer uptake of these programs, measured against our annual goals under Vermont’s Renewable Energy Standard Tier 3, is growing steadily. In 2020 we tripled our state goal⁵, and in 2021 we are again on track to outpace our Tier 3 goal. This progress is partly attributable to BED’s Green Stimulus, launched during the pandemic to provide increased incentive levels for customers and maintained in 2021. We have seen adoption rates for heat pumps, for example, dramatically increase during the period the Green Stimulus has been available. Further, pending PUC approval of BED’s Act 151 proposed programs, there may be an opportunity to continue Green Stimulus incentive levels beyond 2021 for heat pumps and electric vehicles, providing continued support for higher adoption rates of these technologies.

This progress is a positive in terms of our climate and Net Zero Energy goals, as we need more customers to adopt clean energy technologies to reduce emissions in the thermal and ground transportation sectors. However, from a BED financial standpoint, we currently fund these incentives through our annual operating budget. There is revenue return from strategic electrification technologies, in the form of increased sales, but it occurs over a longer period of time than a given fiscal year, in the case of a heat pump perhaps 12-15 years. By funding our customer strategic electrification incentives through the GO bond and moving our payment of them to a debt service model, we can better align outlays from the utility with the revenue returned from customers in the form of increased sales. BED would propose to treat any excess Tier 3 credits in this scenario as regulatory assets (essentially accelerated meeting of our future Tier 3 obligations), and “bank” them consistent with the Vermont Renewable Energy Standard for use and expense in a later year. This will allow BED to support accelerated progress on Net Zero Energy in the critical period leading up to 2030 without a corresponding concern of a disproportionate impact on a given fiscal year budget or annual net income. It also makes it materially less likely we would have to make a choice between turning down a large customer project in order to maintain our prescriptive programs for all customers while managing annual budget impacts. For planning purposes we are assuming an incentive adoption rate that is double what is required under current state Renewable Energy Standard provisions.

⁵[https://go.boarddocs.com/vt/burlingtonvt/Board.nsf/files/BZZGAC42D79B/\\$file/NZE%20update%202021%20FINAL%204.12.2021.pdf](https://go.boarddocs.com/vt/burlingtonvt/Board.nsf/files/BZZGAC42D79B/$file/NZE%20update%202021%20FINAL%204.12.2021.pdf) (slide 16)

Revenue Bond and Financial Metrics

BED targets A rating metrics for our credit rating and reports on our metrics monthly to the Burlington Electric Commission. These include metrics related to days cash on hand, adjusted debt service coverage ratio, and revenue bond covenant debt coverage ratio. BED has consistently held metrics at or above A rating for days cash on hand and debt coverage ratio, with only the adjusted debt service coverage ratio being lower than that level over the last several years. That began in FY19 with a set of one-time factors along with flat/declining sales to customers that reduced that ratio, although we saw some improvement relative to FY19 in FY20 despite the significant pandemic impacts that occurred in the final quarter of FY20.

Going forward, our proposed 7.5 percent rate change in FY22 will support some further improvement in the adjusted debt service coverage ratio, while we maintain a projected days cash on hand above 90 in the FY22 budget. Part of maintaining that cash balance, while continuing to fund needed capital projects and supporting Net Zero Energy projects and incentives, is an underlying assumption in FY22 that we could issue a revenue bond to support projects in the second half of the fiscal year. Over the next several years, given our continued need to invest in capital projects both for reliability and for Net Zero Energy, and to fund strategic electrification incentives beyond state requirements to accelerate progress toward our local Net Zero Energy goal in Burlington, the revenue bond becomes a critically important source of funding that mitigates what would otherwise be significant upward rate pressure.

While we anticipate needing more frequent rate adjustments in the coming years, we expect those to be more moderate than the 7.5 percent adjustment pursued in FY22, which came after 12 years of no rate increases and a major pandemic that created millions of dollars of revenue loss. However, if we removed the revenue bond as a funding source, we would face a choice of either dramatically reducing capital investment and curtailing incentive funding, or needing much larger rate increases to fund our projects while maintaining A rating metrics for days cash on hand. For FY23, as an illustrative example, absent the revenue bond funding, if we still attempted to fund both our capital needs (including Net Zero grid and technology upgrades) and accelerated incentive adoption, it would require an 18.47 percent rate increase to do all of that while maintaining a 90 days cash on hand metric.

FY23 Projected Rate Pressure *(assuming 90 Days Cash on Hand and full funding of NZE and BED capital projects)*

Financing	Rate Pressure
Without Revenue Bond	+18.47%

Again, this is just illustrative of how much rate pressure would exist without the revenue bond if we still sought to fund the same projects based on current forecasts. It is not an actual rate case proposal for FY23, which would take many other factors into consideration. However, in this context, and with interest rates still at relative historic lows, the revenue bond offers a way to invest in our system and free up GO bond capacity to support our strategic electrification programs while significantly reducing upward rate pressure and maintaining strong credit ratings metrics, a true win-win scenario for our customers and community.

Capital Plan

Below are the revenue bond funding allocations by project category and attached to this memo please find the full project list.

Net Zero Revenue Bond Projects	FY22	FY23	FY24	FY25	Total
Generation	\$ 277,604	\$ 869,730	\$ 375,000	\$ 1,320,000	\$ 2,842,334
Distribution	\$ 1,093,910	\$ 3,478,948	\$ 6,000,478	\$ 3,530,624	\$ 14,103,959
General Plant		\$ 574,900	\$ 150,000		\$ 724,900
IT	\$ 1,067,874	\$ 1,811,556	\$ 1,043,308	\$ 50,000	\$ 3,972,738
Other-Demand Response, Charging Infrastructure	\$ 191,756	\$ 212,023	\$ 250,220	\$ 305,757	\$ 959,756
Total	\$ 2,631,144	\$ 6,947,157	\$ 7,819,006	\$ 2,603,190	\$ 20,000,498

Conclusion

BED believes the Net Zero Energy revenue bond proposal is a fiscally responsible and innovative means of financing needed capital improvements and freeing up GO bond capacity to support accelerated strategic electrification incentive adoption to bolster our community's progress toward our Net Zero Energy climate goal, support the capital needs of BED, and ensure the continued efficient and economical operations of BED. Using the GO bond proceeds to capitalize and inventory Tier 3 activities will reduce upward rate pressure that would otherwise exist for our customers if the pace of strategic electrification program is going to outstrip the compliance obligation particularly in early years. Burlington's precedent of issuing a revenue bond for energy efficiency in 1990, and our subsequent success with efficiency programs, provides a strong foundation upon which to pursue this new Net Zero Energy revenue bond. Given our ambitious 2030 goal, and our desire to maintain strong financial metrics and affordable rates for our customers, this financing option provides the best avenue moving forward.

Please note, if the Commission advances this item to the City Council, and the Council ultimately places the item on the November ballot and voters approve it, there would be subsequent Commission and Council process required prior to BED actually issuing revenue bonds. Today's requested action by the Commission is just to recommend to the City Council that it approve placing the revenue bond ballot question before voters in November, such that BED would, if that question is successful, be able to issue bonds subsequently as described above.

Potential Revenue Bond Projects, FY22-FY25

Assume revenue bond spending can occur from December 2021 (following vote and resolution authorizing spending pre-issuance) thru March 2025 (3 years from bond issuance)

Project	Plant	FY22	FY23	FY24	FY25
Direct Current Fast Charger (Level 3)	Other-Demand I	\$85,497	\$87,634	\$89,825	\$92,071
Packetized Energy	Other-Demand I	\$52,343	\$69,125	\$103,750	\$155,625
Public Level 2 EV Charges	Other-Demand I	\$33,133	\$33,962	\$34,811	\$35,681
P&P R&D	Other-Demand I	\$20,783	\$21,302	\$21,835	\$22,381
IT Forward - CIS Replacement	IT	\$932,816	\$1,231,488		
IT Forward - FIS Replacement	IT		\$473,152	\$1,043,308	
Replace SGRs with Pole Mount Routers	IT	135,058	106,916		
Upgrade Smart Grid Collection Engine to Riva platform	IT				\$50,000
Grid Services Control Room	General Plant		\$426,400	\$150,000	
WinOne Unit 3 Bearing Replacement	Generation		\$124,730		
WinOne Large Inflatable Dam	Generation				\$1,100,000
GT Rosemount Transmitters	Generation	\$15,899			
GT Biodiesel Conversion	Generation		\$325,000		
McNeil Elevator Geared Equipment & Controls (50%)	Generation	\$24,994			
McNeil ESP Mechanical Field Rebuild	Generation	\$225,228	\$220,000		\$220,000
McNeil GSU Transformer (50%)	Generation	\$11,483			
McNeil West Boiler Grate Overhaul	Generation		\$200,000		
McNeil Relay Switch Gear Upgrade	Generation			\$375,000	
Electric Bucket Truck	General Plant		\$148,500		
Scarff Ave Rebuild (electrical work only, spring 2022)	Distribution	\$98,445			
SCADA Networking Upgrade	Distribution	\$296,134			
Rebuild Appletree Point Aerial Circuit (Pole P3412 to Pole P3434) from 4.16 KV to 13.8 KV	Distribution	\$261,469			
Replace Switch (756,757,758,730-Battery/Pearl St)	Distribution	\$205,334			
Replace Switch (303, 307,308,309-Main/S Prospect)	Distribution	\$137,355			
Replace Recloser 252R	Distribution	\$48,033			
Upgrade manual switch #227S at Pole P1980 (Park Street & Manhattan Drive) to SCADA operated switch	Distribution	\$47,140			
Upgrade 2L5 Circuit (1000 mcm CU & Conduits from UH#248-330S) (NZE #3)	Distribution		\$997,872		
Replace the electrical system at Lyman Avenue	Distribution		\$807,828		
Rebuild the aerial circuit at Starr Farm Rd and Sunset Cliff (Pole P3706-P3723) from 4.16 KV to 13.8 KV	Distribution		\$438,297		
Upgrade 2L5 Circuit from 350 Cu to 1000 cu (119S to College Sub)	Distribution		\$293,080		
Upgrade 2L5 Circuit from 350 Cu to 1000 cu (215S to 744S)	Distribution		\$227,212		
Field Device Network Upgrades	Distribution		\$202,833		
Buell St - Convert to 3-Phase from P1348 to P1322	Distribution		\$98,384		
Replace Switch # 910S/911S (Votey) 10/1995	Distribution		\$52,815		
Replace Switch # 322S/323S/324S (Main Street & University Height)	Distribution		\$134,475		
Rebuild Edgemoor Dr Phase 3	Distribution		\$85,880		
Replace Switch # 724S/725S (Milot - College Street) 10/1996	Distribution		\$67,791		
Upgrade the manual switches #407S at Pole P2001 (Park Street & Pearl Street) to SCADA operated switches	Distribution		\$49,821		
SCADA Network Switches Replacements	Distribution		\$22,660	\$46,680	
Replace SCADA video wall	Distribution			\$280,000	
SCADA upgrade (rough estimate)	Distribution			\$1,200,000	\$300,000
Rebuild the secondary wires on Shelburne Road from pole P323 (Prospect Parkway) to P338 (Alfred Street)	Distribution			\$18,065	
Install (9) conduit duct bank from UH#173 to UH#175 on Cherry Street	Distribution			\$295,261	
Install new cables on St. Paul Street from Bank Street to Cherry Street	Distribution			\$67,893	
Replace UG direct buried services on Summit Ridge	Distribution			\$161,553	
Replace the underground system at Deforest Road	Distribution			\$350,000	
Replace Switch # 305S/325S/326S (Main Street Reservoir)	Distribution			\$145,139	
Replace Switch # 817S/912S/913S (Main Street Reservoir)	Distribution			\$124,715	
Replace Switch #709S/710S (Battery Street between College Street & Main Street) 11/96	Distribution				\$45,898

Extend 1L2 to North Avenue & transfer load from 1L4 to 1L2 (NZE #1 by 2024)	Distribution	\$1,429,402	\$1,551,833		
2L5 Replace Cable P2349 to 913S	Distribution	\$615,155			
Convert Ethan Allen Pkwy northern area (fed underground from pole P2977) to 3-phase and balance the loads. Extend new phase (Phase C) from riser pole P4193 to HH#41. This phase picks up load connected west of HH#41. Load on James Ave, Hope St, and Faith St remain on existing cable, now connected to Phase A at riser pole P4193. Extend new cable from P4193 to HH#44 (Phase B). All load fed out of HH#44 is moved to this new cable and Phase B. The existing cable is transferred to Phase A at riser pole P4193.	Distribution	\$499,735			
2L5 Replace Cable 913S to UH#248	Distribution	\$492,960			
Heineberg Rd upgrade to 556AL from P3097 to P4193	Distribution	\$191,856			
Ethan Allen Pkwy P2942 to P2959 convert to 2-Phase (BA). Load past P2959 move to Phase B. Other loads remain on what is now Phase A (moved from Phase C at P2942)	Distribution	\$82,065			
Replace Submersible Switch 711S/748S/749S (Bank and St Paul Streets)	Distribution		\$43,135		
Replace underground cables along Battery Street (1978)	Distribution		\$435,043		
Replace Switch # 716S/728S/729S (Lake Street) 9/97	Distribution		\$52,123		
Replace Sub#7 328S/602S/704S/740S switch	Distribution		\$236,093		
Replace underground system along Pine Street from College Street to St. Paul Street 1983	Distribution		\$289,336		
Replace direct buried underground cables along Oakledge Drive	Distribution		\$48,933		
Replace UG at Harbor Watch (1984)	Distribution		\$31,244		
Replace livefront transformer #2355 (Pearl Street - Courthouse)	Distribution		\$55,207		
Phase Load Balancing Steps	Distribution		\$31,648		
Replace overloaded transformers	Distribution		\$187,570		
Replace Secondaries/Services	Distribution		\$150,858		
Upgrade existing/add new capacitors	Distribution		\$71,702		
Extend 2L1 Circuit to pick up load off 1L1 Circuit (NZE #2)	Distribution				
Transfer load between 1L1 to 1L4	Distribution				
Install 4-Way Padmount or Submersible Switch (1002S, 1003S, 1004S, 1005S) at Starr Farm Rd & North Ave	Distribution				
1L2 extended to Starr Farm Rd 4-way switch (3800' – 556 OH, 190' 1000CU UG) and then to Barley Rd (700' 1000CU UG). Load at Barley Rd shifted to 1L2.	Distribution				
1L1 and 1L4 tapped into Starr Farm Rd 4-way switch. 1L1 extended to all Northgate Apartment feeds and load transferred to 1L1 (2290' – 556 OH). Xfmr#5000, Xfmr#5052, Xfmr#5059, and Xfmr#5165,5014,5164 moved to 1L1 circuit.	Distribution				
Project Totals		\$2,631,144	\$6,947,157	\$7,819,006	\$5,206,381
Revenue Bond Funding Totals (FY25 @ 50%)		\$20,000,498	\$2,631,144	\$6,947,157	\$7,819,006
			\$7,819,006		\$2,603,190