

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 (and)
Via Microsoft Teams
[+1 802-489-6254](tel:+18024896254)
Conference ID: 361 667 284#

AGENDA
Regular Meeting of the Board of Electric Commissioners
Wednesday, September 14, 2022– 5:30 p.m.

- | | |
|---|----------------|
| 1. Agenda | 5:30 (5 min.) |
| 2. Minutes of the July 13, 2022 Meeting | 5:35 (5 min) |
| 3. Public Forum | 5:40 (5 min.) |
| 4. Street Lighting Update (Discussion): A. Elliston | 5:45 (15 min.) |
| 5. Commissioners' Corner (Discussion) | 6:00 (10 min.) |
| 6. GM Update (Oral Update) | 6:10 (10min.) |
| 7. Financials: July FY23 (E. Stebbins-Wheelock) | 6:20 (10 min.) |
| 8. Customer Satisfaction Survey Presentation (M. Moser) | 6:30 (20 min.) |
| 9. Commissioners' Check-In | 6:50 (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: 361 667 284#

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 09/14/2022 meeting)

***** FYI *****

- Minutes of the July 13, 2021 Meeting
- August Monthly Report
- Dashboard

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



MEMORANDUM

To: Burlington Board of Electric Commissioners
From: Darren Springer, General Manager
Date: September 9, 2022
Subject: **August 2022 Highlights of Department Activities**

General Manager

- **Charter Change Next Steps** – The BED and DPI teams held a stakeholder meeting to take initial feedback and are still meeting separately with other stakeholders and working with Building Electrification Institute as well. This is a complex policy-making undertaking, and we are working to focus efforts on the largest energy users in existing buildings, and craft something that is practical and achievable.
- **NZE Festival**– The first-ever Net Zero Energy festival is coming up Saturday, September 17th. We have run ads for it in Seven Days and the Seven Days Kids Magazine, promoted it on social media, Front Porch Forum, and Find and Go Seek. We will have a DJ and live music, kids activities with VEEP, touch-a-truck and power town with our line crew, EV, and E-bike test rides in partnership with SunCommon and Sierra Club, heat pump and solar and EV vendors, fossil-fuel free food trucks and drinks, raffles, CHAMP, and much more!
- **District Energy** – Ever-Green had a site visit to Burlington in late August and continues to work to engineer and design the project with an eye towards getting updated construction pricing this fall. Headwinds in certain areas persist, including finance rates, and volatile energy markets.
- **Employee Appreciation Lunch** – The lunch is scheduled for October 12th and will be held at McNeil this year. Please let Laurie know if you are interested in joining us.
- **EAN 2022 Progress Report** - <https://www.eanvt.org/2022-ean-report/> - Energy Action Network came out with its 2022 progress report for the state, and there are some interesting findings and data presented. It found Vermont is not on track to meet its climate goals for 2030. Thermal and transportation make up 74% of Vermont's emissions (2018 data) while electricity is down to just 2% (from 10% in 2015) due in large part to the passage of Vermont's Renewable Energy Standard in 2015. BED is working to support additional legislation in the thermal and transportation sectors this coming session, which would further aid our Net Zero efforts and the state's climate efforts.

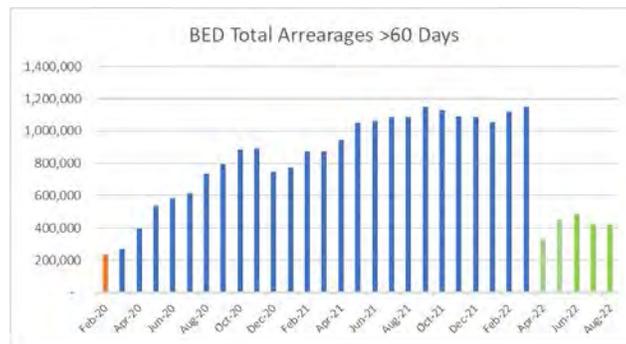
Center for Innovation - Emily Stebbins-Wheelock

- Overseeing 2022 rate case development/implementation.
- Acting supervisor of Finance & Accounting and Billing staff.
- Successfully completed recruitment of Senior Staff Accountant-Operating position in Finance. Amanda Swim Hurlbut starts on 9/19/22.

- Prepared revised Controller job description for City Council approval prior to posting.
- Continued sponsorship of IT Forward implementations.

Finance & Accounting

- Finalizing FY22 year-end and working with the external auditors on the FY2022 audit.
- Responded to Moody’s request for updated pro forma financial statements.
- Supporting energy efficiency charge calculation.
- Preparing responses to Department of Public Service (DPS) rate case discovery questions.
- Monitoring receivables in response to COVID19: as of August 31, 2022, BED’s total non-current receivables had decreased \$9,406 or 1.3% compared to the end of July 2022. Arrearages >60 days were \$419,091.



Information Services

- Continued progress on IT Forward projects.
- Successfully recruited for our new Project Manager/Business Analyst. Jessica Frank starts on 10/3/22.
- Continued support of SCADA firewall and VELCO ICCP upgrade projects.
- Finalized network design for upcoming network and wireless upgrade projects.
- Ongoing security testing and user training.
- Configured and developed documentation for new Surface Hub to support hybrid Commission and other internal meetings.

Policy & Planning

- Participated in Regional Greenhouse Gas Auction 57 for GT allowances.
- Additional Defeat the Peak Events (8/4 5-7pm and 8/8 5-7pm).
- Continued participation in Climate Council Biomass Task Force Meetings.
- Submitted response on behalf of all VT distribution utilities (DUs) on DPS RFI for changes to VT renewable policies.
- Filed draft changes to net metering tariff with PUC.
- Drafted rate case discovery responses.
- Q1 2022 REC deliveries.
- Changes to SQRP approved.
- Reviewing potential changes to centrally ducted heat pump program.
- Drafted contract for Energy Hub to take over Packetized EV Charging responsibilities.

- DES site visits on engineering and construction.
- Filed ARC pilot project request for 248 permit criteria; MOU with Airport signed.
- Testimony in Global Foundries PUC proceeding.
- Meetings on coordinating IJA funding needs across Vermont DUs.
- WRAP tariff and contract review process continuing.
- UNH Sustainability Fellow wrapped up work on rates for DC Fast Charging Service.
- Internal meetings reviewing roles and responsibilities for EV charging.
- Received revised permit for UVM Solar Test Center; deployment meetings begun.
- Submitted 2021 RES compliance filing.
- Submitted Annual Utility Resource Survey.

Sustainability & Workforce Development

- In conjunction with Adam Rabin, Communications & Technology Specialist, hosted NZE Podcast episode on Weatherization featuring VGS’s Tim Perrin. Attended launch meeting of Button Up 2022.
- Vermont Low Income Trust for Electricity (VLITE) funded project to expand EV access for low-income residents through car sharing and enhanced charging infrastructure continuing.
- Tabled at Old North End Farmers Market. Shared information on EV and e-bike rebates, heat pump technology, and various thermal policies.
- Participated in ACEEE’s building electrification working group including a presentation by Meg Howard, MassCEC, on their Decarbonization Pilot. Orchestrated September call with Meg and Energy Services to learn more about effort and lessons for BED’s NZE Home pilot.
- Organized “Coffee and Learn” session for all employees on District Energy featuring General Manager Darren Springer and James Gibbons, Director of Policy and Planning.
- Continued Energy Action Network Summit Planning for September event; continued Renewable Energy Vermont Conference planning. Coordinated call with BETA re: their participation and support.
- Attended final Burlington High School (BHS) and Burlington Technical Center Advisory meeting. Attended Burlington School District’s presentation to the Technical Review Committee along with members of BED’s Energy Services team.
- Continued planning for September 17 NZE Festival, including communication with EV Preferred Dealer Network about ride and drive portion of event, solar contractors, multi-modal transportation specialists, and others. Coordinated with Sierra Club and SunCommon on the “private EV owners” ride and drive.
- Arranged stakeholder meeting with Burlington School District on policy proposals to accelerate the decarbonization of commercial buildings; co-facilitated August 30 stakeholder meeting in conjunction with the Department of Planning and Inspections.

Center for Safety and Risk Management – Paul Alexander

Safety

- Conducted BED Safety Committee meeting.
- Conducted fire extinguisher inspections for Pine Street.
- Steel Beam Install/ Safety Retrieval Device – Contractor selected.

- Work on labeling for dual fed at McNeil is complete.
- Met with Foresters. Discussed safety items as it relates to waste wood yard and truck dumper.
- Conducted Generation Safety Committee meeting.
- Tailboard subcommittee has developed a Draft of PreJob Conference language to update that section in the BED APM.
- Completed the testing of hot sticks and personal grounds. Also conducted a sling inspection class and sling inspections.
- Issued Safety Memo in regard to seatbelts and hardhats.

Environmental.

- Completed wastewater proficiency testing.
- Complete biannual, quarterly, and monthly wastewater testing .
- Responded to two emergency spills within the city.
- Gave an emergency spill training seminar to the line crew.
- Reorganized the hazardous waste storage area at McNeil.
- Installed redundant dissolved oxygen probes in the boiler panel.
- Shipped out 13 retired Transformers for disposal.

Risk Management

- New Claims Investigations (3 total: 1 Property, 1 Liability. 1 Auto).
- Continued research and correspondence on Coronavirus (COVID -19) issues.
- Submit FY'23 NZE employee rebate.
- Meet on BED's Incident Response process for customers.
- Complete APPA RM survey.
- Attend remote State's Attorney's pole claim collection hearing.
- Complete OSHA log (15th).
- Continued Property/B&M renewal discussion with H&B.
- Create agenda for BED's Safety Committee (BSC) monthly meeting.
- Create Release for CEDO/FRAME project.
- Review questions and info for NZE Festival.
- Coordinate and submit data for Traveler's WC audit.
- Review KMPG auditor info on claim assessments.
- Attend Safety Day (slings and ladders).
- Chair LMC meeting (8/31).

Purchasing/General Services

- Worked on purchasing two Mach-e All Wheel Drive Selects that were in our budget.
- Conducted training with my staff on the proper way to ship fuel oil samples out.
- Meetings on Net Zero festival and coordination between departments
- Meet with the representatives of the city down at the Moran Station to go over a temporary fence design that would attach to our fence.
- Meeting on the re-design and implementation of the tailboard forms with the subcommittee.
- Monthly meetings with the state and Lyon on our electric bucket truck for next year.

Center for Operations & Reliability – Munir Kasti

- Completed a project at UVM’s Larner College of Medicine to pull new wire and install two new pad mounted transformers, a new 5-way automated switch, and two capacitor banks (one aerial and one pad mounted). Distribution crews, technicians, and engineering staff coordinated to troubleshoot and fix the pad mounted capacitor bank.
- Installed a second phase to balance out loading on 1L4 on Ethan Allen Parkway. An issue arose when our crew inadvertently pulled down a customer’s service while removing the old neutral. An electrician was called in to help fix the customer’s service and their power was restored. This initiated a discussion about whether BED should have an electrician or list of multiple electricians to expedite the process in this type of scenario and give our staff the ability to give a short list to customers who call and request recommendations. We are currently working on a list and talking to other divisions within BED about utilizing electricians for other purposes i.e., power misers, mellow devices, and car chargers.
- Completed relighting project on Ferguson Avenue and Richardson Street to bring streetlighting in these areas up to our new lighting standard by changing some fixture heads and removing others.
- Completed pulling new underground cable on Apple Tree Point Road and have transferred some customers over to the new underground service. They will be pulling new aerial wire and transferring existing services in the coming weeks and continuing to set new poles.
- Continuing ongoing work on the Shelburne Street roundabout project where crews have been working with the site electrician to energize new streetlighting and transfer the final overhead guy lines and services. We will be swapping phases in the coming week and completing our portion of the project.
- Due to a low inventory of plastic service cover material, we have implemented a new process for retrieving our cover for services that customers request we place for any work occurring at their residence. We are now tracking all new cover placed and communicating to customers that we will retrieve it 30 days after it is placed unless they request more time. Crews are currently checking over 100 locations and removing the old cover from locations where work has been completed.
- Resolved several outages:
 - On August 5, a squirrel made contact on the open 964S causing 3L3 and 3L5 to come together, cross phase, and go to ground taking out the MB3 breaker at Queen City Substation and opened the entire South end of Burlington. Dispatch worked to quickly restore many of our customers by back feeding 3L1, 3L2, and 3L4. We were then able to locate the issue and clear off any potential problems to restore the rest of our customers.
 - On August 19 we completed a scheduled outage to repair old, disintegrated aluminum wire feeding 35 church St.
 - On August 23 we discovered a faulted underground cable on Little Eagle Bay Road between the last transformer and Killarney Drive (the backup feed). We were able to find and repair the fault.
 - On August 30, a small storm in the new North end took out lines on Cayuga Court and several other places. Crews responded quickly to restore power.
- Removed graffiti from BED equipment at various locations throughout the city.
- Continued updating firmware on Remote Terminal Units (RTUs) at switchgear throughout the city.

- Configured and tested new pad-mounted capacitor bank and placed into service at UVM LCOM/Firestone project.
- Received new pad-mounted switch and began shop work for preparation and testing. Switch will replace existing failed switch at Main and South Prospect Streets.
- Coordinated and attended Advanced Distribution Management System (ADMS) demos with eTAP, OSI, Schneider Electric, and GE.
- Issued design and work order for the following projects:
 - Replacement of recloser 252R with automated switch 252S on the bike path
 - Upgrade service at 225 South Willard Street
 - Upgrade service at 254 South Union Street
 - Transfer to new pole P754 replaced by Consolidated Communications on Ledge Road
 - Replacement of pad-mounted transformer at 300 Pearl Street.
- A 3rd Year Apprentice position has been filled with the new member of the Distribution line crew starting on September 20.
- Distribution’s Underground Cable Locator Jeremy Parent completed his first NEPPA training in basic electrical mathematics.

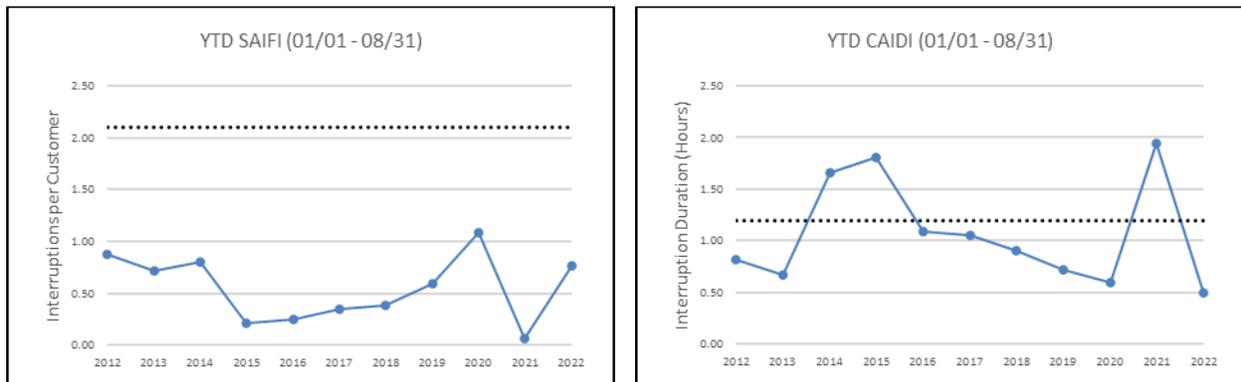
Grid Services

- Continued training at the Gas Turbine.
- Continued to work with consultant on replacement of SCADA firewalls.
- Continued troubleshooting SCADA alarms and working with SCADA vendor to address open issues.

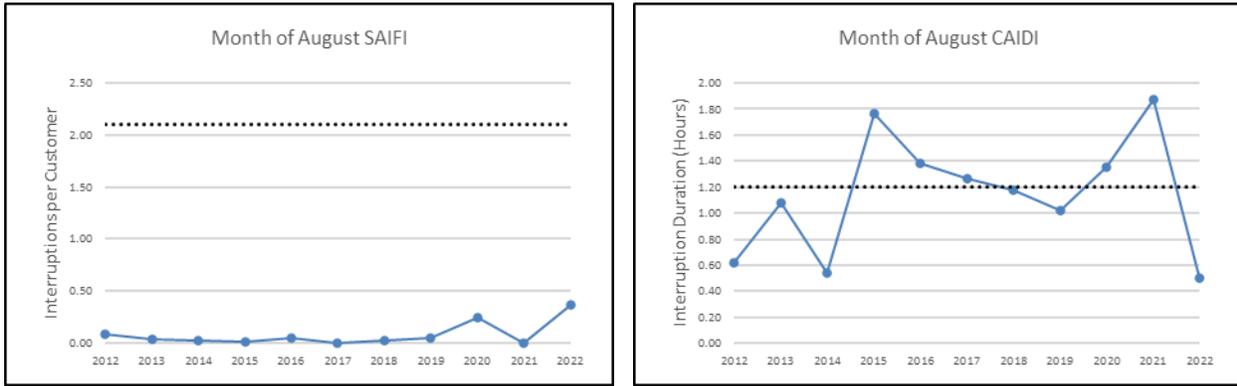
SAIFI & CAIDI Outage Metrics:

BED’s distribution system experienced 24 outages in August 2022 (8 unscheduled and 16 scheduled). BED’s SAIFI for the Month of August was 0.36 interruptions per customer and CAIDI was 0.5 hours per interruption. BED’s YTD SAIFI is 0.77 interruptions per customer and YTD CAIDI is 0.5 hours per interruption.

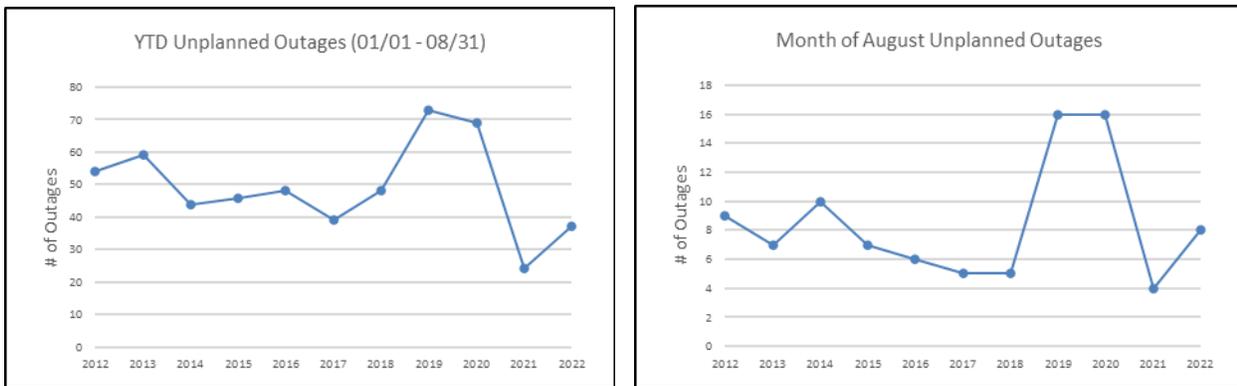
The following figure shows BED’s historical YTD SAIFI and CAIDI:



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



The following figure shows BED’s historical Unplanned Outages:



GENERATION

McNeil Generating Station

Month Generation:	25,511 MWh
YTD Generation:	171,249 MWh
Month Capacity Factor:	68.58 %
Month Availability:	73.63 %
Hours of Operation:	555.93 hrs.

There was a total of 10,201 MWH hours of reduction due to west grate issues, cooling tower fan issues, and over fire air fan issues. Projects completed at McNeil included west grate repairs, washer and dryer installation, and cooling tower fan variable frequency drive (VFD) issues resolved.

Winooski One Hydroelectric Station

Monthly Generation:	375.847 MWH (27.215% of average)
YTD Generation:	17,121.067 MWH (80.84% of average)
Month Capacity Factor:	6.826 %
Annual Capacity Factor:	39.671 %
Month Availability:	99%

Winooski One projects completed included #2 High Pressure Unit (HPU) filtering, dive inspections of racks, radio repairs, and started annual outage. Work has been completed on #3 unit and starting on #2 unit. Vibration analysis of all three units has been conducted. Completed work on #3 unit included gear inspection, new seals, fabrication work on runner and cone, changing generator oil, cleaning parts, and painting seals. Work completed to date on #2 unit includes it being dewatered, having the runner pulled, gears tested, wickets pulled, and new oil lines.

Burlington Gas Turbine

Month Generation:	00.000 MWh
YTD Generation:	355.686 MWh
Month Capacity Factor:	0.000%
Month Availability:	00.000%
Hours of Operation Unit A:	0.0
Hours of Operation Unit B:	0.0

The asset has been out of service since 7/20/22 and is undergoing troubleshooting and repairs due to the forced outage resulting from the failed PT A coupling shim pack. In total, four PT and generator bearings, associated with both PT A and PT B, along with the East and West generator bearing seals were found to be out of tolerance after the failure event and need re-machining. Initial troubleshooting is complete, and repairs are underway. Based on present known repair lead times and commissioning expectations at this time, the asset is expected to be available for operation in early October after reassembly activities occur and vibration analysis is completed upon commissioning. The asset is unavailable for operation at the end of the month.

Solar (Airport 499 kW)

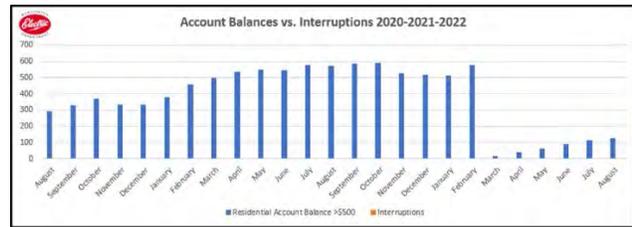
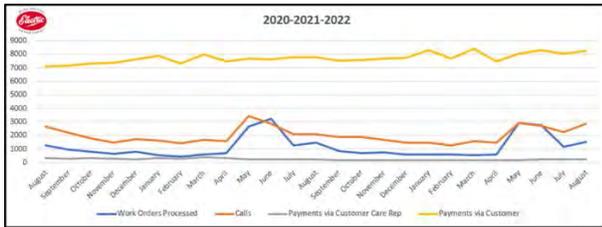
Month Generation:	76.4 MWh (+5% from previous year)
YTD Generation:	488 MWh
Month Capacity Factor:	20%
Month Availability:	100%

Solar (Pine Street 107 kW)

Month Generation:	14.5 MWh (+3% from previous year)
YTD Generation:	88 MWh
Month Capacity Factor:	18%
Month Availability:	100%

Center for Customer Care & Energy Services – Mike Kanarick

- **Call Answer Time (75% in 20 seconds):** August 2022 69.5%, July 79.5%, June 77.5%, May 71.1%, April 85.0%, March 85.8%. August 2021 81.5%, July 81.6%, June 69.3%, May 65.8%, April 91.0%, March 89.1%. Decrease of 12.0% from same time last year. Significant decline due to Customer Care lending a hand with cash receipts (taking one Rep off phones) plus increase in monthly # calls (2,882 up from 2,267 in July) due to 2nd “busy season.”
- **August 2022 Stats:** please see dashboard for additional metrics categories.



**Please note that our account balances greater than \$500 was substantially reduced with the application of more than \$1M in ARPA funds in early April.*



**Please note that our first complaint to the Consumer Affairs & Public Information (CAPI) Division of the Vermont Department of Public Service was made on August 12, 2022 by a customer upset with having received a disconnection warning notice for failure to pay her bill in a timely manner. Customer Care replied to CAPI's request for an explanation and, as of this date, has not heard anything further.*

Communications and Marketing

- **First Annual Net Zero Energy Festival – A Supercharged Day of Family Fun:** to help our community learn how to take steps to meet our Net Zero Energy city goal by 2030, Team BED is hosting our first annual NZE Festival outdoors at BED’s 585 Pine Street offices on Saturday, September 17 from 9am to 1pm (September 24 rain date). We will have activities and information for folks of all ages, including: food trucks, DJ & live music, raffles, E-Bike test rides and EV test-drives, mobile bike repair unit, bike parking, heat pump, solar, and lawn care vendor partners, walking, biking, and carsharing advocates, BED energy experts, CHAMP, the Vermont Lake Monsters' furry, friendly mascot. Please visit <https://www.burlingtonelectric.com/festival> for more information.
- **Energy Assistance Program:** new monthly bill credit program to offset by 12.5% the rate increases (3.95% proposed this year and 7.5% last year) began July 1, 2022 – boost to former Temporary Energy Assistance Program of 7.5%. Last year’s participants in Temporary Energy Assistance Program of 7.5% automatically enrolled in new program. So far, 134 (up from 120, 114, 101, 99, 90, 79, 75, 69, and 58) customers have applied with 97 approved, 33 pending verification, and 1 found ineligible. Customers can learn about eligibility requirements and apply by visiting burlingtonelectric.com/rates.
- **Vermont Emergency Rental Assistance Program (VERAP - erap.vsha.org):** launched by State in April 2021 “to help alleviate income pressure on tenants and landlords and restore stability to the rental community.” VERAP helps tenant households with paying rent, as well as paying utility and home energy costs. **Big news: the state has announced that the last day to apply will be December 31, 2022, and that any eligible amounts will be covered only for bills through the end of the year. In addition, on October 1, 2022, assistance will be reduced from 100% to**

70% for all VERAP participants, including existing renters and new applicants. BED has approved 1,052 of 1,442 (up from 962 of 1,288 July, 870 of 1,202 June, 810 of 1,099 May, 765 of 1,037 April, 709 of 972 March, 591 of 866 February, 560 of 818 January, 478 of 696 December, 411 of 639 November, 312 of 561 October, and 280 of 461 September) program applicants for a total of \$899k (up from \$796k July, \$706k June, \$660k May, \$620k April, \$568k March, \$474k February, \$434k January, \$353k December, \$323k November), of which BED has received \$852k (up from \$731k July, \$687k June, \$643k May, \$599k April, \$533k March, \$436k February, \$388k January, \$263k December, \$212k November).

- Vermont Homeowner’s Assistance Program (VHAP): launched by the State of Vermont through the Vermont Housing Finance Agency (VHFA) in January 2022 to help prevent home foreclosure and displacement with assistance for overdue mortgage payments, homeowners association fees, property taxes, and utilities. So far, BED has certified 52, (up from 46, 34, 27, 13, 12) applicants and received \$22k (up from \$10k) in payments.
- Customer Satisfaction Survey: BED’s triennial Customer Satisfaction Survey (that was postponed by one year until FY21 with PUC approval due to the pandemic) is complete and Michael Moser, Coordinator, Vermont’s Census State Data Center and Research Specialist, University of Vermont Center for Rural Studies, will make a presentation at the September 14 BEC meeting.
- ONE Farmers Market: on August 30, BED again tabled at the Old North End Farmers Market (we also tabled on July 19), engaging with a more diverse groups of our Burlington community. Conversations from our August outing have led to customers indicating that they will be joining us at our first annual Net Zero Energy Festival on September 17 to test-drive EVs and test-ride E-bikes and adding our NZE lawn signs to their lawns so they can engage with their neighbors about the steps they have taken along the path to Net Zero Energy.
- Art Hop sponsorship: BED is partnering with our friends at SEABA to sponsor Art Hop, this weekend from September 9-11. Similar to last year, BED’s 585 Pine Street building will be part of “Light Hop,” with SEABA installing LED lighting on the building at night, in addition to lighting on other Pine Street buildings. BED also will host a sculpture that spells out the word “YES” in giant letters. BED further has provided lineworker pens, activity coloring books, and grocery store bags for Kids Hop.
- North Avenue News: our September column and ad focus on promoting our Net Zero Energy Festival.
- August 2022 Website and Facebook Highlights
 - Overall site-wide pageviews for August 2022 = 27,972
 - July = 23,885
 - June = 24,859
 - May = 29,609
 - April = 28,428
 - March = 23,967
 - February = 17,126
 - January = 19,000
 - December = 18,374
 - November = 19,898
 - October = 20,598
 - September = 21,327

- August = 22,962
- July = 23,727
- June = 25,159
- May = 28,428
- April = 22,745
- March = 21,463
- February = 18,773
- Unique homepage pageviews for August 2022 = 8,895
 - July = 8,565
 - June = 7,860
 - May = 8,211
 - April = 7,499
 - March = 7,282
 - February = 5,831
 - January = 6,380
 - December = 6,346
 - November = 6,379
 - October = 6,857
 - September = 6,905
 - August = 8,464
 - July = 7,931
 - June = 7,484
 - May = 7,499
 - April = 5,404
 - March = 5,775
 - February = 5,165

- Full site traffic for August 2022



High traffic on August 2 due to an outage.

- Visitors by website page – some columns indicate n/a as the page-specific URLs changed when we launched our new website.

page title	Aug 2022	July 2022	June 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022	Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	July 2021	June 2021
Heat Pumps	579	589	490	638	512	559	331	382	264	394	477	406	496	567	369
Rebates	689	1129	754	920	696	917	488	450	377	591	537	566	571	621	795
Rebate Center	876	852	934	1026	688	732	508	549	419	499	546	339	667	679	319
Green Stimulus	32	37	29	50	53	121	49	57	27	49	91	106	113	138	233
Stop or Start Service	841	738	951	2184	164	323	202	248	279	306	298	454	867	803	1079
Leadership Team	206	159	174	185	284	269	237	265	196	222	206	243	276	228	240
Rates & Fees	228	225	208	254	220	240	180	221	203	166	214	178	132	143	247
Usage Tracker Registration	177	118	128	113	77	145	120	156	142	127	114	94	154	177	223
RFP	268	225	335	268	211	334	597	362	152	276	243	452	497	455	158
Residential Ways to Save	187	194	199	249	171	155	146	147	157	164	186	172	191	172	220
Electric Vehicles	497	483	324	273	274	356	296	222	244	296	289	272	265	245	332
E-Bikes	292	375	292	260	167	206	89	78	76	78	101	168	265	207	192
Net Zero Energy News	25	25	32	24	57	27	30	33	26	32	67	204	129	115	178
Electric Vehicles	497	483	324	273	274	356	296	222	244	296	289	272	265	245	332
COVID-19 Updates	n/a	n/a	n/a	n/a	10	11	11	17	16	22	79	153	166	397	540
Our Energy Portfolio	102	90	55	80	79	124	54	58	48	88	104	96	59	42	n/a
Lawn Care	135	249	259	472	121	149	31	n/a	n/a						
Electric Lawn Mowers & Leaf Blowers	n/a	n/a	n/a	n/a	n/a	n/a	23	49	39	94	117	150	133	184	229
RFP Detail	143	35	93	151	119	422	413	214	n/a	94	49	258	334	185	n/a
Defeat The Peak	333	242	15	25	9	16	11	8	12	12	n/a	11	137	22	155
Commercial Ways to Save	40	46	48	43	42	63	45	30	43	37	41	98	55	39	62

- Top-performing August Facebook posts

Announcement of our NZE Festival

Photo of deer in our parking lot and our successful Defeat the Peak event

Large outage on August 2

Energy Services

UVM

- UVM Stafford Greenhouse / HAF Ventilation Fan Replacement – At UVM’s request, BED is completing an analysis of the electrical energy savings to replace 14 existing HAF fans (1/3 and 1/4 HP) in the greenhouses with the same number of 1/10 HP HAF fans. Preliminary calculations show significant savings and likely a fast payback on investment.

UVMCC

- UVMCC Secondary Chilled Water Balancing – The Miller Building addition finished several years ago, created a significant new load on the central chiller plant. To optimize chiller efficiency the chiller secondary loop needed to be re-balanced so optimal differential pressures can be maintained. This project was initiated in late 2019, but the Covid lock-down created a lengthy delay in implementation. The balancing process is fully completed. Because DDC historical data trends are not available in the necessary timeframe, a plan was developed to simulate the pre-project HVAC conditions and obtain DDC trending data for comparison to the post-project energy usage. This simulation test was run earlier this month with DDC data from the event to be forthcoming and will allow an energy savings estimate to be made for the project.

Other Services

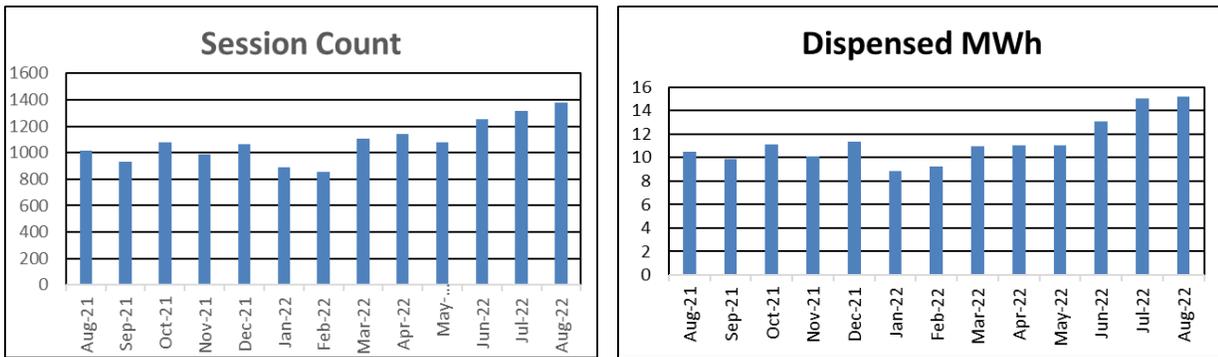
- Weatherization coordination with VGS - VGS requested electrical account usage histories this month (with customer permission) for 4 SF and 0 MF buildings (representing 4 living units) for the purpose of weatherization audit preparation and building energy use analysis. This brings the total TTD (2021-2022) requests to 138 SF and 105 MF buildings (representing 346 living units). The increase in multifamily building interest in the VGS weatherization program is being driven by the Burlington Minimum Energy Efficiency Rental Housing Ordinance.
- Collaborated with VGS staff to target Burlington multifamily buildings (owners) that have received a VGS audit, analysis, and incentive offer, but have not moved forward with their projects. These buildings will fall under the new Burlington minimum housing standard ordinance at some point in the next several years. The focus for approaching this group and encouraging them to act is to add a supplemental BED incentive where appropriate, and to notify them that the VGS incentive share will soon be reduced from 75% of project cost to 50% of project cost. Performing manual disaggregation of the electric bills for the living units in the 43 MF buildings on this list to determine what supplemental incentives BED may be able to offer.
- Eight homes are now enrolled in the BTV NZE Home Pilot Program with VGS. Each owner has received a comprehensive NZ roadmap that is customized for their home and budget.
- YMCA / HVAC Re-Commissioning – This is a new building constructed less than three years ago. It has complex HVAC systems, includes two indoor pools, and has had operational issues since it was first occupied in early 2020. It is also using significantly more energy than originally predicted by the building energy model. BED is working with the facilities director and controls contractor to help determine where energy savings opportunities may be found. A field investigation confirmed this month that the pool heat recovery system has not been operational since the building was occupied. It was also confirmed that all the correct equipment is in place, but the final control functionality was not enabled. The system is now running, and natural gas savings should quickly become evident. Final control details are still being worked out. Another issue is the condensing boilers are running at too high a temperature to ever condense and that the boilers suffer from chronic short cycling. This is in the process of being investigated.
- Green State Gardener / Indoor Cannabis Grow Facility – This company on Pine St. is in the process of fitting-up an existing portion of their building into an indoor cannabis growing facility. The area is quite small – 600 SF. BED is obtaining more details on the equipment that is being installed and the environmental settings that will be used, including lighting schedules, temperature, and RH set-points. A BED site visit was completed this month. Much of the equipment is still to be installed and information gathering is still in progress.
- North Avenue Alliance Church / HVAC Retro-fit – This church was paying excessive electrical costs due to old equipment and an over-sized chiller reaching end of life. Engineering analysis recommended the following: new modulating air-cooled chiller, variable speed drives on the main AHU, re-zoning of some the spaces to allow system optimization and replacement of the DDC system, including improved sequences of operation. The project has been in progress for some time and was completed last month. A final BED site visit with the project engineer was completed this month. Preliminary analysis of pre- and post-project AMI data show a large reduction in both KWH usage and demand. A more formal analysis will be completed when more data is available.

- Hickok & Boardman / Major HVAC Retro-fit – This seven-floor office building on Shelburne St. underwent a major HVAC upgrade, the project being completed about a year ago. The energy savings were estimated using a pre-project vs. post-project energy use analysis. There was a limited post-project usage data at the time. BED has re-done the energy savings analysis with more complete data, and a preliminary look is that the building is performing even better than originally estimated. BED completed a site visit this month to discuss specific changes in the HVAC sequence of operation that will improve occupant comfort and reduce energy use even further. It has been tentatively decided to move forward with this work which will be done in phases.
- 100 Bank St. Office Building / 6th Floor Fit-up and DDC Upgrade – This major office building in downtown Burlington has recently been undergoing a series of HVAC upgrades to improve the ventilation and cooling systems. With a new tenant moving in on the 6th floor, another opportunity has arisen to upgrade another portion of the building's DDC system. There are also several performance and comfort issues that have been identified. This month BED had a meeting with the owner to identify next steps to (1) improve boiler plant controls to prevent short cycling; (2) add a VFD to the condenser water pump; (3) air balance study to determine source of possible large supply duct air leakage; and (4) cost estimate to remove pneumatic controls from the entire building HVAC system and replace with digital control.
- Soulshine Power Yoga - 100 Church St / Ceiling Insulation Project – This Yoga Studio utilizes ceiling-mounted far-infrared electric heaters in its main yoga space for keeping the area at the required space temperature. This is typically about 90F. This has become expensive due to the loss of heat through the ceiling and into the rafters. BED committed an enhanced rebate near the end of last year for this project and the insulation work was completed in February 2022. An analysis of pre- and post-billing energy usage and AMI data was completed this month which indicated that the temperature has normalized. The savings were updated for this measure with considerably more electrical energy saved than had previously been predicted.
- Hula Office Complex / Lakeside Avenue – This two-building new construction project has been in operation for over a year. It is notable in that all heating and cooling is provided by ground-source heat pumps supplied by an open loop geothermal system. The calibration of the original energy model to the actual electrical usage of the building is now in progress. An on-site meeting was held several months ago with the facility manager, the energy modeler, and BED to review discrepancies between expected and actual energy use. BED made a complete tour of the facility to detail actual building plug loads to ensure that the energy model contains all the latest information. Covid vacancy effects have also complicated the calibration process. After much analysis and the collection of additional post-Covid consumption data, the energy model has been calibrated to an acceptable level. BED is now finalizing the project so the second rebate can be paid, and the energy savings claimed.
- 77 Pine St. Renovation / North Side Bank Offices– The north side of this renovated building is bank offices, and it has been fully occupied since April 2021. Recently completed is the renovation of the south side of the building which consists of 49 apartment units. BED has been working for several months on the calibration of the bank side energy model in comparison to the actual energy usage of that half of the building. This process is finally nearing completion, and the bank renovation project is ready to be closed out. The second and final rebate for the measure was paid this month.
- Howard Center / 300 Flynn Avenue New Construction – BED is working with the architects involved in the demolition of the existing building at 300 Flynn Avenue, and the construction of a

new Howard Center facility at the same address. It is early in the design cycle, and the focus of our initial discussion concerns BED’s requirements around our energy modeling rebate process. BED’s Energy Modeling Guidelines document has been discussed and supplied to the designers so that bids from energy modelers will contain the proper scope-of-work.

Electric Vehicles

- The EVSE dispensed a total of 15.2 MWh and supported 1,381 sessions.
- The top 3 sales were 68, 68, & 70 kWh and occurred at the Cherry St. and College St. garages.
- The top 10 sessions (0.72% of total) accounted for 4.05% (616 kWh) of the total monthly sale. The ten sessions ranged from 55 kWh-70 kWh.
- The EVSE served 724 unique drivers.
- ChargePoint requested purchase orders for the DCFC’s.
- Session Count and Dispensed Energy plots from the from the public charging network are shown below.



- Number of EV and PHEV rebates to date – 411 (of this 75 LMI rebates to date as shown below)
 - New All Electric Vehicle – 163
 - New All Electric Vehicle (LMI) – 31
 - New PHEV – 109
 - New PHEV (LMI) – 39
 - Used All Electric Vehicle – 34
 - Used All Electric Vehicle (LMI) – 4
 - Used PHEV- 16
 - Used PHEV (LMI) – 1
 - New All Electric Vehicle (\$50K plus) – 12
 - New PHEV (\$50K plus) – 1
- Number of customer loans with lending partners to date – 5
- Number of customers currently participating in the new EV Rate- 143
- Number of EV home charging stations rebates to date – 57

Electric Lawn Equipment to Date

- Number of e-mower rebates to date – 531 (11 commercial & 520 residential)
- Number of e-leaf blowers to date – 46
- Number of Residential e-Trimmers – 39

- Number of Residential e-chainsaws – 8

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

- Total Number of Heat Pump Technology rebates to date- 788 (of this 124 LMI rebates to date as shown below)
 - Number of ductless heat pumps to date – 475
 - Number of LMI eligible ductless heat pumps to date – 103
 - Number of centrally ducted heat pumps to date – 160
 - Number of LMI eligible centrally ducted heat pumps to date – 16
 - Number of air-to-water heat pumps to date – 1
 - Number of commercial VRF heat pump systems to date – 2
 - Number of geo-thermal heat pump systems to date – 1
 - Number of heat pump hot water heaters to date – 25
 - Number of LMI eligible heat pump hot water heaters participants to date – 5

Electric E-Bikes to Date

- Number of e-bike rebates to date – 351

Electric Induction Stovetops to Date (new offering in Jan 2021)

- Number of induction Stovetops rebates to date – 25

Electric Snow Blowers to Date (new offering in Jan 2022)

- Number of snow blower rebates to date – 2

BED 2022-2023 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	Aug 2022 Actuals	July 2022 Actuals	June 2022 Actuals	May 2022 Actuals	Apr 2022 Actuals	Mar 2022 Actuals	Feb 2022 Actuals	Jan 2022 Actuals	2021 Yearly Actual	2020 Yearly Actual	2019 Yearly Actual
Engage Customers and Community												
Call answer time 75% within 20 seconds	75%	70%	79%	75%	71%	85%	86%	85%	90%	avg 82%	avg 81%	
Delinquent accounts >\$500	0	127	111	89	63	40	16	571	513	avg 529	avg 201	
Disconnects for non-payment	0	0	0	0	0	0	0	0	0	0	45	
# of residential weatherization completions	10	1	1			0	0	0	0	5	3	11
Weatherization completions in rental properties		1	0		0	-	0	0	0	0	0	TBD
# or % of homes or SF weatherized		TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	0
Champ Challenge weatherization participants		0	0	0	0	2	2	3	3	0	1	TBD
# of commercial building with improved thermal envelopes		0	0	1	0	0	0	1	0	5	5	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	738	729	693								523
# of large customers participating in DtP		11	11	NA								
Strengthen Reliability												
SAIFI (AVG interruptions/customer) (annual target)	< 2.1	0.36	0.02	0.04	0.06	0.002	0.23	0.01	0.06	0.22	1.50	1.03
CAIDI (AVG time in hrs to restore service) (annual target)	< 1.2	0.50	0.89	1.23	0.31	12.05	0.38	1.4	0.12		0.55	0.75
Distribution System Unplanned Outages (annual target)	82	8	5	5	2	3	3	7	4	44	90	98
McNeil Forced Outages	0	2	1	0	3	0	1	0	2	5	21	TBD
W1H Forced Outages	0	0	0	0	2	2	0	0	0	9	2	TBD
GT Forced Outages	0	1	1	0	0	0	0	0	0	2	3	TBD
Invest in Our People, Processes, and Technology												
Avg. # of days to fill positions under recruitment	120	90	80	87	99	96	76	102	115	68	179	
# of budgeted positions vacant	0	13	10	7	7	9	9	9	10	avg 9	6	NA

BED 2022-2023 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	Aug 2022 Actuals	July 2022 Actuals	June 2022 Actuals	May 2022 Actuals	Apr 2022 Actuals	Mar 2022 Actuals	Feb 2022 Actuals	Jan 2022 Actuals	2021 Yearly Actual	2020 Yearly Actual	2019 Yearly Actual	
Innovate to Reach Net Zero Energy													
<i>Tier 3 Program</i>													
# of residential heat pump installs		20	41	22	12	9	26	13	20	315	203	10	
# of commercial heat pump installs		1	0	0	0	0	0	1	1	4	13	0	
# of residential hot water heat pump installs		1	2	1	1	1	0	1	0	14	6	4	
# of commercial hot water heat pump installs		0	0	0	0	0	0	0	0	0	0	0	
Heat pump rebates		30	41	22	12	9	26	14	21	328	212	0	
Heat pump hot water heater rebates		1	2	1	1	1	1	1	0	15	3	0	
LMI heat pump rebates		8	6	6	2	4	4	6	0	28	6	4	
Heat pump technology installs in rental properties		1	0	2	0	0	1	1	1	14	9	TBD	
LMI heat pump hot water heater rebates		0	0	0	0	0	1	0	0	2	0	1	
EV rebates - new		4	3	3	2	3	5	2	6	67	14	36	
EV rebates - pre-owned	See NZE Roadmap Goals below	2	1	2	3	3	3	0	1	7	8	2	
LMI EV rebates		0	1	3	0	1	0	0	0	11	7	7	
PHEV rebates - new		1	2	6	1	1	6	0	0	41	10	17	
PHEV rebates - preowned		2	2	1	1	0	1	0	1	6	5	3	
LMI PHEV rebates		1	0	2	2	1	5	1	1	13	6	2	
Public EV chargers in BTV (total)		27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	27 ports	14
Public EV charger energy dispensed (kWh)		15,200	15,000	13,100	11,000	11,000	11,000	9,200	8,860	86,570	35,690	78,000	
Home EV charging station rebates		0	0	0	0	0	0	0	0	1	32	20	12
EV rate charging customers (total)		143	135	129	123	116	109	106	102	40	40	40	28
Level 2 charger rebates		0	0	0	0	0	0	0	0	0	10	0	1
Level 1 charger rebates	0	0	0	0	0	0	0	0	0	0	1	0	
E-bike rebates	21	31	4	12	8	0	3	4	88	36	65		
E-mower rebates	20	31	56	23	4	1	1	2	154	95	142		
E-forklift rebates	1	0	0	0	0	0	0	0	0	0	0	0	
MWE of Tier 3 measures installed		2,572	2,967	1,883	1,890	957	2,013	829	1,730	23,763	35,112	3,342	
% Tier 3 obligation met with program measures	100%	87%	72%	55%	43%	32%	27%	15%	10%	159%	283%	31%	
<i>Net Zero Energy Roadmap Goals</i>													
# of solar net metering projects installed			2	2	7	2	3	1	4	29	24	33	
No. of homes receiving NZE Home Roadmaps			0	1	1	0	2	1	2	10	7		
Residential heat pumps for space heating (no. of homes)	2022: 8615	NA	NA	NA	NA	NA	NA	NA	NA	1235, 20% of	891	572	
Commercial heat pumps for space heating (1000 SF floor space served)	2022: 5397	NA	NA	NA	NA	NA	NA	NA	NA	405, 11% of	374	374	
Residential heat pumps for water heating (no. of homes)	2022: 4365	NA	NA	NA	NA	NA	NA	NA	NA	108, 4% of	108	87	
Commercial heat pumps for water heating (1000 SF floor space served)	2022: 1019	NA	NA	NA	NA	NA	NA	NA	NA	0	0	-	
EV registrations in BTV (light-duty)	2022: 2294	NA	NA	NA	NA	NA	NA	NA	NA	549, 45% of	361	296	
Greenhouse gas emissions (1000 metric tons CO2)	2022: 150	NA	NA	NA	NA	NA	NA	NA	NA	188, 114% of	185	214	
Fossil fuel consumption (billion BTU)	2022: 2418	NA	NA	NA	NA	NA	NA	NA	NA	3220, 120% of	3,182	3,660	

BED 2022-2023 Strategic Direction Dashboard

Metrics by Strategic Initiative	Target	Aug 2022 Actuals	July 2022 Actuals	June 2022 Actuals	May 2022 Actuals	Apr 2022 Actuals	Mar 2022 Actuals	Feb 2022 Actuals	Jan 2022 Actuals	2021 Yearly Actual	2020 Yearly Actual	2019 Yearly Actual
<i>Demand Response</i>												
# of Defeat the Peak events called		2	1	0	NA	NA	NA	NA	NA	5	3	4
Average kW savings per DtP event		472	445	0	NA	NA	NA	NA	NA	419.5	261	242
Manage Budget and Risks Responsibly												
<i>Safety & Environmental</i>												
No. of workers' compensation/accidents per month	0	1	1	2	3	3	0	1	0	4	8	
Total Paid losses for workers' compensation accidents (for the month)	annual	\$12,122	\$8,264	\$79,665	\$5,153	\$3,573	\$382	\$396	\$757	\$ 93,612	\$ 165,402	\$38,288
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	N/A	0.0	0.93	0.89
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	N/A	0.0	41.71	78.2
Lost work days per month	0	0	17	8	0	0	0	0	0	0.0	45	
NOx reporting levels to EPA (Quarterly) (lbs/mmbtu)	<0.075	0.068	0.1	0.065	0.062	0.0	0.07	0.07	0.071	0.07	0.07	
# of reported spills, waste water incidents (monthly)	0	2	1	2	0	0	0	0	0	4	4	
Phosphorus levels to DEC in lbs (monthly/yearly total)	<0.8/37	0.006/0.786	0.007/0.897	0.109/0.923	0.024/0.862	0.119/1.008	0.104/1.52	0.067/1.714	0.145/1.839	2.028		1.169
# of new power outage claims reported (monthly)	1	0	0	2	0	0	0	0	0	7	4	
# of new auto/property/other liability claims reported (monthly)	2	3	5	3	0	4	2	0	0	18	27	
<i>Purchasing & Facilities</i>												
# of Purchase Orders for Inventory (Target: avg for winter months)	42	30	57	27	50	59	56	39	70	644	593	
\$ value of Purchase Orders for Inv. (Target: avg dollars spent during winter)	\$78,000	\$146,006	\$129,412	\$179,709	\$394,020	\$753,161	\$626,698	\$231,292	\$566,870	\$ 3,278,620	975,531	
# of stock issued for Inventory (Target: avg during winter months)	320	503	477	562	526	446	531	556	387	4,402	4,545	
\$ value of stock issued for Inventory (Target: avg. during winter)	\$ 65,000	\$ 115,040	\$ 92,581	\$ 333,014	\$ 114,763	\$ 231,454	\$ 141,090	\$ 71,107	\$ 39,432	855,456	1,086,478	
# of posters pulled from poles monthly (Target: goal to remove each month)	58	171	48	36	117	42	164	76	96	2,728	627	
# of Spark Space and Auditorium setup/breakdowns monthly (Target: Covid impact)	3	11	8	13	11	12	7	3	2	88	87	
<i>Finance</i>												
Debt service coverage ratio	1.25		Not avail	Not avail	4.93	4.59	5.47	5.26	5.15	NA-FY basis	NA-FY basis	NA-FY basis
Adjusted debt service coverage ratio	1.5		Not avail	Not avail	1.33	1.2	1.5	1.43	1.39	NA-FY basis	NA-FY basis	NA-FY basis
Days unrestricted cash on hand	>90		Not avail	Not avail	140	139	138	145	142	NA-FY basis	NA-FY basis	NA-FY basis
<i>Power Supply</i>												
McNeil generation (MWH) (100%)	per budget	25,511	33,526	13,093	3,787	0	25,342	33,825	36,165	273,355	192,696	
McNeil availability factor	100%	74%	91%	39%	11%	60%	87%	100%	96%	80%		
McNeil capacity factor	per budget	68.6	90.1	36%	10.2%	0%	68%	100.7%	97.2%	62.4%		
Winooski One generation (MWH)	per budget	376	649	1,309	3,046	4,495	3,850	1,751	1,635	24,752	21,194	
Winooski One availability factor	100%	99%	99%	98%	97%	97%	99%	98%	98%	97%		
Winooski One capacity factor	per budget	7%	12%	55%	55%	84%	69%	35%	30%	37%		
Gas Turbine generation (MWH)	NA	0	55.2	77.3	40	16	137.4	13.7	16.1	373	441	
Gas Turbine availability factor	100%	0%	64%	100%	100%	100%	97%	100%	93%	96%		
Gas Turbine capacity factor	NA	0%	0.39%	0.56%	0.23%	0.1%	0.8%	0.09%	0.09%	0.21%		
BTV solar PV production (mWh)		620	706	637	687	488	396	235	156	5,015	5,182	
Cost of power supply - gross (\$000)			Not avail	Not avail	\$3,649	\$2,565	\$2,718	\$2,409	\$2,116	\$30,285	\$31,081	
Cost of power supply - net (\$000)			Not avail	Not avail	\$1,331	\$2,565	\$2,718	\$746	\$2,116	\$22,134	\$23,388	
Average cost of power supply - gross \$/KWH			Not avail	Not avail	\$0.14	\$0.11	\$0.10	\$0.09	\$0.07	\$0.09	\$0.10	
Average cost of power supply - net \$/KWH			Not avail	Not avail	\$0.05	\$0.11	\$0.10	\$0.03	\$0.07	\$0.07	\$0.08	

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

Wednesday, July 13, 2022, 5:30 pm

The regular meeting of the Burlington Electric Commission was convened at 5:32 pm on Wednesday, July 13, 2022 at the Burlington Electric Department at 585 Pine Street, Burlington, Vermont and virtually through Microsoft Teams.

Channel 17 was present to record this meeting.

Commissioners Chagnon, Stebbins, and Whitaker were present. Commissioner Herendeen participated via Microsoft Teams. Commissioner Moody was absent.

Staff members present at 585 Pine Street included Paul Alexander, Emily Byrne, Erica Ferland, James Gibbons, Laurie Lemieux (Board Clerk), Paul Pikna, Darren Springer, and Emily Stebbins-Wheelock.

Staff members present via Microsoft Teams included Rodney Dollar.

1. Election of Officers

Board Clerk Laurie Lemieux called the meeting to order at 5:32 p.m. The first meeting of the new fiscal year is the Burlington Electric Commission's organizational meeting. 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 as Chair of the Burlington Electric Commission; the nomination was seconded by Commissioner Whitaker. 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 a show of hands. Of the 4 members present, 3 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 the Chair.

Commissioner Stebbins opened the floor for nominations for Vice Chair of the Burlington Electric Commission. Commissioner Chagnon made a motion to nominate Commissioner Moody; the nomination was seconded by Commissioner Whitaker. Commissioner Stebbins asked if there were any other nominations. Hearing none, Commissioner Stebbins asked the Commission to indicate support for Scott Moody by a show of hands. Of the 4 members present, 4 votes were cast in support of Commissioner Moody. Commissioner Moody was elected Vice Chair of the Commission.

Commissioner Whitaker nominated Laurie Lemieux as Board Clerk for the Burlington Electric Commission; the nomination was seconded by Commissioner Chagnon and approved by all Commissioners present

2. Agenda

There were no changes to the Agenda.

3. June 9, 2022 Meeting Minutes

Commissioner Herendeen made a motion to approve the minutes of the June 9, 2022 Commission Meeting; the motion was seconded by Commissioner Whitaker and approved by 3 of the 4 Commissioners present. Commissioner Chagnon abstained as he was not present for the June 9, 2022 meeting.

4. Public Forum

No one from the public was present for the meeting.

5. Commissioners' Corner

Commissioner Stebbins stated that in years past the Commission did not meet for an August meeting and asked if the staff were aware of any pressing matters, such as the budget or any critical votes that would be required.

Mr. Springer stated that the staff have planned their work around not having an August meeting and, therefore, have added any important issues to the July agenda and do not have any planned items or votes for August.

Commissioner Stebbins has some thoughts regarding street lighting and stated that the Commission has heard from some Burlington residents about the amount of new street lighting being installed. Commissioner Stebbins stated that back in January/February, the Commission asked the BED team to reach out to the Illuminating Engineering Society (IES) to inquire if the lighting standards had been updated or when they anticipated they would be updated but did not receive much information back. At the last meeting, Mr. Andy Elliston stated that a new set of sidewalk standards had been published and that the BED team would review the updates and report back to the Commission at the September meeting. In the meantime, a couple City Councilors contacted Mr. Springer due to some lighting complaints and concerns from residents. At this time, Commissioners Stebbins and Herendeen, along with Mr. Springer, Mr. Elliston, and Mr. Alexander met with City Councilors Shannon and Traverse to discuss what jurisdiction the Burlington Electric Commission has concerning our Street Lighting Policy. Currently, our Street Lighting Policy follows the IES Standards, and during the meeting with the City Councilors, they indicated that we, as a Commission, have the authority to modify the policy. As an example, if a residential street that has had the same lighting for many years with no lighting complaints, the Commission has the authority

to change the policy to indicate that this residential street does not have to be updated to IES Standards. At this meeting Commissioner Stebbins understood that we would have our BED attorney, Mr. Bill Ellis look at the language. Commissioner Herendeen stated that this was also his understanding and volunteered at that time to do some research on other communities that have backed away from the IES recommendations.

Mr. Springer stated that he recalls the suggestion during the meeting with the Councilors to be that the Commission has the authority to look at changing the Street Lighting Standard. Subsequent to that meeting, Mr. Elliston and his team finished reviewing the updated IES Standards and found that the sidewalk standards are lesser now than the past standards. In one of the communities where we had concerns, Scarff Avenue, we were able to reduce the number of fixtures from 23 fixtures to 14 fixtures as a result of the standard changes. Mr. Springer is not 100 percent certain that a policy change is necessary to accomplish the goal of reducing the lighting that was affecting some of the residents. Mr. Springer believes the advice from Mr. Ellis would continue to be that, if the Department is tasked with doing street lighting, then we need to follow a standard and have a process for implementing it, which we currently do. Mr. Springer stated that he is reluctant to move ahead with a policy change, at least prior to implementing the new IES Standards at places like Scarff Avenue to see if it addresses the concerns. Mr. Springer recommended that, if the Commission is considering any kind of policy change at the September meeting or any subsequent meeting, we invite Mr. Ellis for this discussion. Commissioner Stebbins concurred that this would be sensible.

Commissioner Stebbins stated that, although the residents of Scarff Avenue would feel better about 14 fixtures versus 23, it's still many more than the original 2 fixtures that had been there for many years. At the meeting with the City Councilors, the idea of grandfathering a residential street that had no lighting complaints was discussed. Commissioner Stebbins asked if there were any other streets currently being reviewed for lighting and, if so, whether these streets would be evaluated with the new lighting standards.

Mr. Elliston stated that the next lighting project in the queue is Lyman Avenue. Construction is starting on this street, with lighting to be installed in the or winter at the earliest.

Commissioner Stebbins stated that the Commission received concerns last year in the areas of Home Avenue and Richardson Street and asked if these streets would be evaluated with the new standards. Mr. Elliston stated that the department is in the process of reevaluating Home Avenue and Richardson Street with the new standards to see if we can reduce the output of the fixtures and, in some cases, even remove fixtures.

Mr. Elliston stated that going forward the new standards will be used to evaluate lighting in residential areas.

Commissioner Herendeen asked Mr. Elliston that since the lights on Lyman Avenue would not be installed until spring would the department install poles before that?

Mr. Elliston stated that the department would only be installing underground conduit, and the lights would be installed at a later date. This conduit needs to be installed regardless of how many lights will be installed.

Commissioner Stebbins asked that the Street Lighting Policy be forwarded to the Commission and asked Mr. Elliston to highlight the section in the policy that says the City will be following the IES Standards. Also, Commissioner Stebbins requested that the department ask Mr. Ellis to draft an opinion indicating what it would be like to grandfather existing streets regarding street lighting.

Mr. Springer stated that the Board Clerk will forward to the Commission the requested IES Standard but felt Mr. Ellis probably would not be in favor of drafting something that would not uphold the department's Street Lighting Policy, at least without having a conversation with the Commission first. Mr. Springer will tentatively put the September Commission meeting on Mr. Ellis' calendar just in case street lighting is on the agenda.

Commissioner Whitaker asked if there is any required public engagement when installing fixtures, poles, etc. Mr. Elliston stated that the department sends letters to the residents before the project begins, providing BED contact information for residents who have questions, concerns, or feedback.

Commissioner Whitaker stated that giving residents a timeframe for input, and not receiving many comments until after the fixtures are installed can be frustrating. This puts the department in a very precarious situation. Commissioner Whitaker acknowledges that it's probably extremely dramatic if there were 2 poles and now there are 23 poles.

Mr. Elliston stated that not all feedback has been negative, adding that we did receive positive feedback.

Mr. Springer stated that, if the department was unable under the new IES Standards to do something to address the challenge, then we likely would be forced to look at a policy change if we wanted to do something. It's fortunate that we now have flexibility so we can at least demonstrate to residents that we have heard them and that we can make changes in the infrastructure in an effort to address the concerns.

Commissioner Whitaker stated that, if it is possible to grandfather in old streets, then we might want to get the entire street to weigh in. These are questions we need to address.

Commissioner Stebbins requested that Commissioner Herendeen share any information pertaining to public outreach support it would be helpful.

Commissioner Stebbins asked the Board Clerk to forward this portion of the meeting minutes to City Councilors Shannon and Traverse.

5. GM Update

Mr. Springer stated that we are working on creating a report for the City Council for its July 18 meeting, which will outline initial recommendations and thoughts regarding the Charter Change authority, with a focus on new construction, major renovations, City buildings, and large existing commercial buildings, per the Council's Resolution. BED has worked with Building Electrification Institute to study examples of policy in other cities, Boston, New York, and Denver and has also begun initial stakeholder outreach with UVM and UVMMC, with more to follow. Mr. Springer stated that we are conscious that it's only been a couple of months since the Charter Change passed and that there will be significant additional public process and policy research prior to making any final recommendations to the City Council.

BED has been engaging in a number of upcoming community events, including two customer nights at the ballpark with the Lake Monsters and VGS, a Summervale sponsorship on July 14, a table at the ONE Farmer's Market, and planning for our September NZE Festival from 9:00 am-1:00 pm on September 17. At this event we will have eBike and EV test rides, conversations with vendors from our heat pump partners, and an appearance by Lake Monsters mascot CHAMP. We also will have live music, a DJ, fossil free food and drink trucks, and a variety of kids activities.

The City Council has approved the City's FY23 budget, including BED's budget, and we have continued work to prepare our FY23 rate case and engage with the PUC on our updated energy assistance program. In addition, BED and the City have reached agreement with IBEW on a new four-year contract, which was ratified by IBEW members and by the City Council in June. A signing event with the Mayor and Jeffrey Wimette, IBEW Business Manager, will take place at BED on July 27 at 10:30am.

Mr. Springer stated that all partners have signed a letter agreement guiding the development work of the district energy system for the remainder of 2022, including UVM, UVMMC, The Intervale Center, the City, BED, VGS, and Ever-Green. We are working as well on the preparation of files necessary to receive the funding from the Department of Energy that Senator Leahy secured and engaging on the additional engineering/design work needed to get updated construction pricing later this year. Mr. Gibbons also will be working on updated fuel related pricing as well. We are hoping that by the end of the year some of the impacts of rising rates and inflation on construction are able to be addressed in a favorable way.

Commissioner Stebbins asked about the multifamily EV Charger project, including the results of the soft launch.

Mr. Springer stated that we have approval from the PUC for the 50-60 additional through the EV match program. We are using this soft launch to reach out to customers. We presently have 14 installed already, and the software is great because it allows you to set it for certain times a day for residents, certain times for the public, and set the charge. The chargers show up on the plug share website, so that when people are searching for an EV Charger, they know when it's available.

Mr. Springer stated that we just signed the grant agreement for the State of Vermont, and we now can install five (5) Level 2 street light EV chargers. These will be installed in areas that we have identified as having higher percentages of low-income and renter customers.

Mr. Gibbons will forward the results of the soft launch along with a map of where these chargers will be installed.

Commissioner Stebbins asked if BED is involved in working with the new Burlington High School to make this new project as Net Zero Energy as possible. Chris Burns and his team are working on this and are looking at geothermal. Commission Whitaker stated that transportation is also important for the new high school. When looking at the last plans, it appears very suburban style and assume that preference is given to cars over busses. Mr. Springer stated that Jen Green has offered feedback on transportation. BED has less to do from an incentive standpoint unless they are looking at EV Chargers.

6. FY22 May Financials

Ms. Byrne presented the budget-vs-actual results for the month of May, FY22. Ms. Byrne noted that there is a change in the accounting treatment of Renewable Energy Credits (RECs) that was not implemented in the May financial statements but will be accounted for in the June/Final FY 2022 statements. Historically, the department has expensed the purchase of RECs at the time of purchase. The new accounting treatment will treat the RECs as inventory upon purchase, as they retain value for more than one year. Annually, the department will only expense the number of RECs needed for compliance in each fiscal year. In May, the department purchased additional RECs, and the cost was expensed. In June, there will be an accounting adjustment to move approximately \$500,000 to inventory and expenses will be reduced accordingly.

In May, the department had a net income of \$274K compared to a budgeted net income of \$1.345M. On the revenue side, actual sales to customers were favorable compared to budget by \$123K. Residential sales were up \$103K, and commercial sales were up \$19K. Other revenues were down \$91K, primarily due to lower than budgeted EEU receipts. REC revenue was under budget by \$28K.

Power supply expenses were \$983K less than budget. The primary driver was due to the purchase of RECs that were fully expensed but will be adjusted in the year end financials. The ISO exchange expense was \$581K over budget due to under production at McNeil, Winooski One, and in wind contracts. Fuel was under budget by \$365K due to underproduction at McNeil. Operating expenses were \$58K over budget. Other income was under budget due to lower than anticipated customer contributions to date.

For FY22 year-to-date, actual net income is (\$173K) as compared to budget (not adjusting for the REC accounting change). Sales to Customers is \$65K over budget. Other revenues are down due to lower than anticipated EEU receipts and customer billings. Power supply revenues are down by

\$77K or less 1% for the year. On the expense side, power supply is under budget by \$706K, driven by purchase power, transmission, and fuel costs all coming in under budget. Operating expenses are running below budget by \$1.110M.

As of May, the department has spent 55% of the FY22 capital budget. Capital spending continues to be impacted by the timing of McNeil overhaul invoices (they continued to be paid in June). At the end of May, the department had an operating cash balance of \$11.066M with 140 days cash on hand. The debt service coverage ratio is 4.93 and the adjusted debt service coverage ratio is 1.33.

7. 2022-23 Draft Strategic Direction

The Commission reviewed the updated draft Strategic Direction, asking questions regarding adding other technologies other than heat pump. Mr. Burns explained that building electrification is tricky with heat pumps. In this climate, going against natural gas, we felt a dedicated tool just to deal with the heat pump issue would be more helpful to customers and, for that reason, we stay with that technology. The Commission was comfortable at this time to vote to adopt the 2022-23 Strategic Direction.

Commissioner Whitaker made a motion to adopt the 2022-23 Strategic Direction as presented; the motion was seconded by Commissioner Chagnon and approved by all Commissioners present.

8. Weatherization Repayment Assistance Program (WRAP)

Ms. Stebbins-Wheelock stated that this program is being presented to the Commission because it may end up taking the form of a tariff filed with the PUC. If that becomes the case, the Department will need Commission approval along with City Council approval. Mr. Burns has been the person primarily engaged with VHFA in developing this program and can answer any programmatic questions. Mr. Gibbons is here because it may become a PUC filing.

Ms. Stebbins-Wheelock stated that WRAP is an on-bill financing pilot program that will help low- and moderate-income customers pay for weatherization improvements. The financing could also cover heat pump or electrification improvements if bundled with weatherization. Financing will be provided by the Vermont Housing Finance Agency (VHFA) using \$9M in State appropriations. VHFA is hoping to make this a statewide program and to have several utilities file to offer the program before the end of the calendar year, BED among them.

Ms. Stebbins-Wheelock stated that the loan would follow the meter, so that a subsequent homeowner or tenant would pick up the loan obligation, and there would be no disconnection for non-payment of the loan component of the bill.

BED's EEU would vet the project from an energy savings perspective, and VHFA would set the loan terms. VHFA has indicated that the financing rate should be no more than 2%. VHFA would provide BED's billing and finance department with information including customer name, loan amount,

payment amount, and length of the loan so that BED can put the on-bill financing charge on the bill. After the customer pays their bill, BED will set aside the loan payment portion and send it to VHFA, acting as their payment collector and processor. BED would be compensated for this service by VHFA with a one-time setup fee, as well as by the customer through a monthly fee as part of the loan payment to cover BED's expenses for payment collections and processing. The program will be filed for PUC approval as a two-year pilot, but the loans made during the pilot period could last up to 15 years, so the Department could be servicing these loans for some time, even if the pilot program is not extended or made permanent.

The Commission asked questions and felt comfortable at this time making a motion to recommend this program.

Commissioner Whitaker made a motion to recommend to the Board of Finance and City Council to approve the Weatherization Repayment Assistance Program (WRAP) Public Utility Commission filing and the Distribution Utility Services Agreement between BED and VHFA, subject to legal review; the motion was seconded by Commissioner Chagnon and approved by all Commissioners present.

9. Airport ARC Wind Turbine Contract

Mr. Gibbons stated that the Department has spoken to the Commission in the past regarding the ARC Wind Turbine project and at that time the Commission approved advancing this project. We are back before the Commission because there have been some minor changes since then and thought it prudent to bring this back to make sure that the Commission didn't have any issues with the revised proposal.

As a reminder, the ARC Industries were a company out of the 2021 Delta Climb Mentoring Cohort. It was one of the pilots selected by BED for a pilot project to install a roof-mounted wind turbine. This turbine is approximately 8 feet tall, and we liked it because it was a chance to deploy something else alongside solar panels and potentially could share inverters if the two items were not producing at the same time.

We now are looking at locating this turbine at the airport, and the airport has been extremely helpful and very engaged. We currently are authorized to enter a contract to deploy the ARC wind turbine but to locate it at the airport requires us to amend the MOU that we have with the airport that allows us to use the garage roof. The reason we need to amend the MOU is due to coming outside the airport solar array footprint, and the original MOU is extremely specific to solar equipment. The airport is willing to consider an amendment.

Since we originally received approval from the Commission, we have determined that a power supply contract would be better for the actual second phase ARC agreement itself because what we get out of this is the energy, RECS, and related products from the plant while it's in operation as well as information on small scale rooftop wind production. Also, BED will have the right to buy the

plant/unit out at the end of the contract.

What we did was split the original approved contract into two agreements. We have a preparation agreement with a one year or less term that has been executed and will not exceed \$4,000. We are proposing a second operation and installation agreement that would take over from when we are ready to install the unit, with BED responsible for obtaining the Certificate of Public Good for the array. At that point, we would be moving into the operation/installation contract.

The project options are still what was approved the first time. It would either be decommissioned or could be extended, or it could be bought out. The way we have drafted the contract also allows an extension of up to five years which matches the Commission's ability to approve power contracts.

What we are asking of the Commission is for a motion to authorize the General Manager to enter into a contract with the commercial terms described at this meeting and to seek modification of the MOU with the airport.

The Commission asked several questions. Commissioner Herendeen questioned the location at the airport and stated that it seems to be a little chancy to assume that 3 kW will translate into 1 kWh of energy production. Commissioner Herendeen stated that he would be voting no, stating that they are not talking about scaling this up to size and cannot imagine a lot of these around in a congested area such as Burlington.

Commissioner Whitaker made a motion to authorize the General Manager to enter into a contract with ARC, containing the commercial terms described at this meeting, to install and receive power from one ARC wind turbine at the airport, and to seek supporting modifications of the MOU with the airport as needed; this motion was seconded by Commissioner Chagnon. Commissioner Herendeen did not feel comfortable voting in favor of this contract, at this time the Board Clerk, Laurie Lemieux, conducted a roll call vote by calling on the following Commissioners:

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

Results: 3 Ayes with 1 Nay, the motion carries.

10. IT Forward Project Update

Ms. Stebbins-Wheelock stated that it has been some time since the Commission has been given a detailed update on the IT Forward Project. Erica Ferland has been with BED for six months as IT Director, and together we felt it was a good time to let the Commission know how these projects are going.

As a reminder about what IT Forward means, it's an internal label that BED has used for what is a collection of projects to replace the Department's core business systems.

Ms. Stebbins-Wheelock reviewed the four (4) systems being replaced along with the vendors associated with each system and stated that all the vendors listed are part of Harris Utilities.

The four systems include:

Meter Data Management System (MDMS)

Customer Web Portal

Customer Information System (CIS)

Financial Information System (FIS), including Payroll and Work and Asset Management (WMS)

Ms. Stebbins-Wheelock stated that since the Commission recommended in December 2020 to execute the contract with Harris Utilities, the overall timeline for the sequencing of these implementations has changed by mutual agreement between BED and Harris. Unchanged is that the MDMS and the Portal are first as they remain the highest priority. After talking with Harris, however, we have changed the plan to implement the CIS next after the MDMS and Portal, instead of the FIS. This sequencing allows us to complete the final stages of the MDMS and Portal, which involve integration with the new CIS, and meet the Department's need for a more sophisticated billing system in a shorter period of time.

Ms. Stebbins-Wheelock then reviewed in more detail the status of the MDMS, Customer Portal, and CIS projects. The MDMS implementation is in progress; it kicked off in March 2021 and has a go-live target of October 2022. The project is approximately one year behind schedule for a few reasons, primarily substantial BED IT staff turnover last fall, third-party vendor integrations, and internal staff resource constraints as we have not backfilled any positions to support the project. Everyone involved is supporting the project in addition to their regular job duties. Ms. Stebbins-Wheelock stated that SmartWorks has been a good partner in managing the project flexibly to maintain forward progress and adapt as challenges have arisen.

The SilverBlaze Customer Portal project kicked off in April 2021 and has a go-live target of October 2022. Ms. Stebbins-Wheelock stated that the Department has had concerns related to product capabilities and vendor engagement that we believe now have been addressed.

The CIS Infinity Project is still in the scoping and planning stage, and we have not executed a notice to proceed or committed to a kick-off date. We have recently begun conversations with Harris to finalize the statement of work. We have engaged our project management consultants to map all the business processes that relate to the CIS. It is hoped that a clear understanding of what we need the system to do will translate into clear requirements for the statement of work and provide Harris with a clear understanding about what they need to deliver to meet our expectations.

Commissioner Stebbins stated that Item #10 is an update on contractual items and vendor negotiations related to BED's IT Forward Project and will be held in Executive Session. Also, Item #11 regarding BED's Cybersecurity Update is also to be held in Executive Session due to proprietary information. Commissioner Stebbins suggested that the Commission make a motion to enter Executive Session for both items at this time instead of separately.

Commissioner Chagnon made a motion that premature general public knowledge regarding the contractual items and vendor negotiations related to BED's IT Forward Project would clearly place the Burlington Electric Department at a substantial disadvantage per Title 1, Section 313 (a)(1) of the Vermont Statutes; this motion was seconded by Commissioner Herendeen and approved by all Commissioners present.

11. Cybersecurity Update

Commissioner Chagnon made a motion that disclosure of proprietary information related to BED's Cybersecurity plan could jeopardize public safety per Title 1, Section 313 (a)(10) of the Vermont Statutes; this motion was seconded by Commissioner Herendeen and approved by all Commissioners present.

Commissioner Chagnon made a motion to enter into Executive Session with Burlington Electric Department Staff at 7:24 pm to discuss contractual items and vendor negotiations related to BED's IT Forward Project and to discuss BED's proprietary Cybersecurity Plan; the motion was seconded by Commissioner Herendeen and approved by all Commissioners present.

Commissioner Chagnon made a motion to exit Executive Session at 8:02 pm; the motion was seconded by Commissioner Whitaker and approved by all Commissioners present.

12. Commissioners' Check-In

There were no Commissioner check-ins.

Commissioner Chagnon made a motion to adjourn; the motion was seconded by Commissioner Whitaker and approved by all Commissioners present.

The meeting of the Burlington Electric Commission adjourned at 8:02 p.m.

Attest:



Laurie Lemieux, Board Clerk