



LEBANON ENERGY ADVISORY COMMITTEE (LEAC)
OCTOBER 19, 2023 - 4:00 PM
COUNCIL CHAMBERS, CITY HALL OR
REMOTE VIA VIRTUAL PLATFORM
LEBANONNH.GOV/LIVE

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- 1. Call to Order**
 - 2. Approval of Minutes**
 - A. September 21, 2023
 - 3. Old Business**
 - A. Legislation/PUC Regulations/CPCNH/LCP updates
 - B. Landfill Gas to Energy Updates
 - C. Municipal Solar Updates
 - D. Charging and Fueling Infrastructure (CFI) Grant application
 - E. SHARC Energy Wastewater Heat Recovery
 - 4. New Business**
 - A. EV Subcommittee Report
 - B. EV Expo Review
 - C. Draft letter to the Zoning Board of Adjustments, Re: The request for a variance at the Element Hotel
 - D. Proposed Parkhurst EV charging station
 - E. Review Fleet Electrification Plan and EV Subcommittee comments
 - F. EV Charger Reliability & Accessibility Accelerator -APD
 - G. Clean Energy NH Local Energy Solutions Conference
 - H. Recent & Upcoming Conferences or Webinars of Note
 - I. EFM Report
 - 5. Open to the Public**
 - 6. Future Agenda Items**
 - 7. Adjournment**

Meetings are open for in-person and remote attendance. Members of the public that wish to attend remotely may do so by going to LebanonNH.gov/Live where you will find instructions on how to enter the meeting. Members of the public will be able to participate and ask questions through the City's virtual platform or by phone. Please note: Should technical difficulties occur during the meeting that disrupts virtual or phone connection(s), the meeting will continue without remote access capabilities.

AGENDA
LEBANON ENERGY ADVISORY COMMITTEE(LEAC)
October 19, 2023

AGENDA ITEM 2
APPROVAL OF MINUTES:

September 21, 2023

DRAFT

**LEBANON ENERGY ADVISORY COMMITTEE
CITY HALL MEETING ROOM OR
REMOTE VIA VIRTUAL PLATFORM
4:00PM, THURSDAY SEPTEMBER 21, 2023**

MEMBERS PRESENT: Greg Ames (Chair) (REMOTE), Jon Chaffee (Vice Chair), Woody Rothe, Clifton Below (City Council Rep.), Sherry Boschert (REMOTE), Henry Bromberg

MEMBERS ABSENT: James Mashal, Devin Wilkie (Alt. Council Rep), Meghan Butts (alt)

STAFF PRESENT: Tad Montgomery (Energy & Facilities Manager)

1. CALL TO ORDER

Chair Ames called the meeting to order at 4:04pm.

At 4:05pm, Chair Ames approved the appointment of Mr. Bromberg to sit in for Mr. Mashal.

Chair Ames said he was remote because he is currently on the Dartmouth College campus, and he has another meeting at 5:00pm. Ms. Boschert said she was remote due to health issues in the family.

2. APPROVAL OF MINUTES – August 17, 2023

A MOTION was made by Jon Chaffee to approve the August 17, 2023 Meeting Minutes. The Motion was seconded by Sherry Boschert.

Amendments: Page 1 Line 5: change “remote because he cannot work and logistics prevent him from attending in person” to “remote because work logistics prevent him from attending in person”
Page 2 Line 16: Change “Callahan” to “Calnan”

** The Vote on the Motion was approved by roll call vote: Boschert: aye; Rothe: aye; Chaffee: aye; Bromberg: aye; Below: aye; Ames: aye (6-0)*

Chair Ames said, because he may have to leave the meeting early, he’d like to change the order of the agenda and start with New Business items first.

4. NEW BUSINESS

A. EV Subcommittee Report

Ms. Boschert said the City Council approved the resolution thanking EV-friendly employers. She said the City Manager has a version of the resolution that could be sent

1 to all the employers involved. She said maybe the resolutions could be sent with a flyer
2 about the 2023 Upper Valley EV Expo.

3
4 Ms. Boschert reminded the group that she has an appointment in October with the new
5 Lebanon School Superintendent to discuss electric buses.

6
7 She said plans for the 2023 Upper Valley EV Expo on September 30,
8 10am-3pm are progressing. She said more than 150 attendees are registered to attend.
9 Chair Ames said he had flyers about the event and asked committee members to take
10 some and put them up around the City. He also said that they should contact Councilor
11 Sykes and invite him to be part of the state policy panel. He said he believed Councilor
12 Sykes is the ranking Democrat on the House Transportation Committee, which deals
13 with a lot of legislation that pertains to EVs.

14
15 Ms. Boschert said she would contact Councilor Sykes. She said she is also trying to get
16 someone from the Drive Electric NH group. She said VT State Senator Rebecca White
17 is going to attend the event and participate on the Policy panel. She said Tom Korman
18 of the NH Legislature is participating in the event because he's showing off his electric
19 lawn tools and power tools.

20
21 Ms. Boschert said she needs to be in touch with City Managers Shaun Mulholland or
22 Nick Coates to request Mr. Montgomery's help with opening City Hall and other
23 details.

24
25 **B. EV Motion: LEAC support letter for EV Street Sweepers**

26 Ms. Boschert said a draft letter was included in the agenda packet that supports the
27 purchase of EV Street Sweepers by the City. Mr. Ames suggested that parts of the letter
28 that were in passive voice be changed to active voice.

29
30 *A MOTION was made by Sherry Boschert that the Lebanon Energy Advisory*
31 *Committee accept the letter supporting the purchase of EV Street Sweepers by the*
32 *City of Lebanon as amended. The Motion was seconded by Clifton Below.*

33
34 ** The Vote on the Motion was approved by roll call vote: Boschert: aye; Rothe: aye;*
35 *Chaffee: aye; Bromberg: aye; Below: aye; Ames: aye (6-0).*

36
37 **C. Recent and Upcoming Conferences or Webinars of Note**

- 38
- 39 • Window Dressers Builds planned for October 13-18 at the Hartland Town Hall. Mr.
40 Montgomery said volunteers should visit [windowdressers.org/vermont-community-](http://windowdressers.org/vermont-community-builds)
41 [builds](http://windowdressers.org/vermont-community-builds) to register for a shift.
 - 42 • Mr. Montgomery said that the NH DES is seeking input on a community EV
43 charging grant program. Ms. Boschert said she believes the state is seeking input to
44 add to its application for a similar CFI grant that Lebanon applied for this summer.
45 She said she hopes she can provide data from the EV Expo for the DES application.

- Local Energy Solutions Conference on November 2 from 8:00am-4:30pm at the Double Tree Conference Center in Manchester, NH
- Forward Fest on October 13 at 5:30 at the Courier Museum in Manchester, NH
- World Resources Institute webinars on funding for municipalities to do decarbonization energy transition projects on September 25 at 1:00pm.

D. EFM Report

Mr. Montgomery said he's been working on the Granite State Clean Fleet grant application. He said he's had meetings with Waldron, ChargePoint, and other EV installers, along with the City's fleet superintendent Jesse Dumayne to discuss the budget for EV charging station and the DC fast charger at the Lebanon Landfill.

Mr. Montgomery said he has also been working on the streetlight project. He said the project involves the conversion of 15 floodlights and seven roadway luminaries. He said they may be installing new streetlights and relocating streetlights to different utility poles. He talked about streetlights around the City that are operating with voltage issues.

3. OLD BUSINESS

A. Legislation/PUC Regulations/CPCNH Updates

Mr. Below gave an update from the latest Legislative session. He said the jurisdictional issue for enabling pilot projects for limited producers (generators under 5 megawatts) has been delayed until December because the CPCNH's attorneys filed a letter that supports the position that the Coalition can purchase directly from limited producers and the values back. He said the Commission accepted the additional case law that supports the argument into the record and has given the utilities until December to respond.

He said that he expects there to be testimony on new net metering rates or tariffs in early December.

Chair Ames left the meeting at 4:52pm.

Mr. Below said Coalition CEO, Brian Calnan, is hiring three more employees to make a staff of five.

B. Landfill Gas to Energy Updates

Mr. Below said Mr. Montgomery is working with the engineers on the plans for the direct charge EV building and islanding. He said he thought construction may be

1 delayed until spring, but the equipment is on site now. Mr. Below explained that
2 islanding means that the building can operate when the power distribution grid is down
3 or not running.
4

5 **C. Municipal Solar Updates**

6 Mr. Montgomery said he has been updating the revenue spreadsheet.
7

8 **D. Charging and Fueling Infrastructure (CFI) Grant Application**

9 No update
10

11 **E. SHARC Energy Wastewater Heat Recovery**

12 Mr. Bromberg said he attended a Zoom meeting on September 5. He said SHARC
13 shared a preliminary analysis of the proposed Lebanon wastewater treatment plant
14 project. He said the SHARC representatives requested more detailed information.
15

16 He said they also discussed the other possible project sites that are potentially in
17 consideration for the SHARC technology, such as the new fire station, the DPW garage,
18 and the Tailor Street projects.
19

20 **5. OPEN TO THE PUBLIC**

21 None
22

23 **6. FUTURE AGENDA ITEMS**

- 24 • **Multifamily Thermal Energy Retrofit**
25

26 **7. ADJOURNMENT**
27

28 *A MOTION was made by Woody Rothe to adjourn the meeting at 5:22pm. The Motion was*
29 *seconded by Sherry Boschert.*
30

31 ** The Vote on the Motion was approved by roll call vote: Boschert: aye; Rothe: aye; Chaffee:*
32 *aye; Bromberg: aye; Below: aye; (5-0).*
33

34 **The meeting was adjourned at 5:23pm.**
35

36 Respectfully Submitted,
37 Paula Roux
38 Recording Secretary
39
40

AGENDA ITEM 4
NEW BUSINESS:

**C. DRAFT LETTER TO THE
ZONING BOARD OF
ADJUSTMENT; RE: THE
REQUEST FOR A
VARIANCE AT THE
ELEMENT HOTEL**

DRAFT – PROPOSED LETTER REGARDING THE FORMER ELEMENT HOTEL -- DRAFT
[DATE]

To the Zoning Board of Adjustment:

We, the members of the Lebanon Energy Advisory Committee (LEAC) are writing to comment on a request by AAM Lebanon Residences for a zoning variance to allow Hanover Place Apartments to offer leases longer than 184 days in what used to be the Element Hotel on Route 120. The zoning variance would change the building's classification from a hotel to a residential dwelling, according to reporting in *The Valley News*.

To the extent that the Zoning Board of Adjustment may grant a variance for this, it should condition its approval on compliance with Lebanon's Zoning Ordinance #2, adopted January 16, 2023, which requires installation of specified amounts of electric vehicle (EV) charging in new multi-unit housing developments. See pages 131-2 and 183-4 in the ordinance at <https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF>. It is worth noting that in Section 103 of that document (see the bottom of page 6) it says that "No land in the City of Lebanon shall hereafter be used for building, development or otherwise and no structure shall be erected, enlarged, materially altered, moved or used, except in conformance with this Ordinance." In other words, the Ordinance applies to the hotel in question if it is to be granted a variance to become residential dwellings.

In Section 607.8 C.2, off-street parking in new multi-unit family dwellings must include, at minimum, 5% of parking spaces with EV chargers installed, 20% of spaces being EV-ready, and 65% of spaces being EV-capable. We don't know how many spaces are in the building's lot, but if there is at least 1 for each of the 120 units, that would mean installation of at least six EV chargers, the infrastructure for 24 EV-ready spaces, and 78 EV-capable spaces.

To our knowledge, AAM Lebanon Residences has shown little interest in meeting the burgeoning demand for EV charging by drivers. None of the firm's other buildings at Alteria Business Park, including other residential buildings, offer EV charging, as far as we know. The Element Hotel had two EV chargers in its lot at one time that became dysfunctional because of a building fire. Those two charge ports appear to be inoperable. Meanwhile, the number of registered plug-in vehicles in Lebanon grew 127% between 2020 and 2022, according to data from the New Hampshire Department of Motor Vehicles. The number of EVs statewide grew 203% in that time period.

We urge the Zoning Board of Adjustment to follow Lebanon's Zoning Ordinance #2 and apply the EV charging requirements when considering the request for a zoning variance from AAM Lebanon Residents or any other developers.

Sincerely,

Greg Ames, LEAC Chair

AGENDA
LEBANON ENERGY ADVISORY COMMITTEE(LEAC)
October 19, 2023

AGENDA ITEM 4
NEW BUSINESS:

E. REVIEW FLEET ELECTRIFICATION PLAN AND EV SUBCOMMITTEE COMMENTS

Feedback sent in Summer 2023 from EV Subcommittee to Nik Coates regarding the Draft Fleet Electrification Plan

From Sherry Boschert, following the EV Subcommittee meeting:
Tad asked the EV Subcommittee for feedback on the draft CoL Fleet Electrification Plan. Here are some of the comments that came up.

- The draft plan raises a lot of good questions. It could benefit from being more directive by proposing answers to some of those questions and recommending specific steps, goals, and timelines.
- So, for example, the draft plan lists vehicles in the CoL fleet without suggesting which ones to target first for electrification, and under what time frame. A proposal for a course of action would be helpful.
- Under "Vehicles for Conversion / Vehicle Identification Process," the draft notes that a spreadsheet tool called DRVE can produce a detailed, tailored assessment of our fleet electrification opportunities. Later, under "Financing," it says that Lebanon should follow the State's collective vehicle procurement offers and those of the Climate Mayors' Purchasing Collaborative. It is unclear if these tools have been used to inform the draft plan. It may be helpful to go ahead and use these tools and then propose a plan of action incorporating the information gained from them.
- Under "City Policy / Note Regarding Stakeholder Engagement," it may be helpful to recommend specific steps that the City could take for community engagement, and propose who should pursue them.
- DPW and the EFM may want to consult two resources for examples of fleet electrification plan contents: a) [Philadelphia's Municipal Clean Fleet Plan](#), and b) The US Energy Department's [Blueprint 4A: Electric Vehicles and Fleet Electrification](#) -- in particular slide 4 gets pretty detailed, but other slides have some good stuff too.



CoL Fleet Electrification Plan

6/20/2023 draft

The most updated version of this Plan can be found at the link above

Sections/Topics:

- City Policy – Goals & Objectives
- City Vehicles Appropriate for Conversion
- Technical Considerations
- Charging Infrastructure
- Financing EV's and EVSE
- Resources

Introduction

The future of the automobile is looking increasingly electric, and automakers are acting accordingly: General Motors, Stellantis, and Ford have announced a shared goal of achieving “sales of 40–50% of annual U.S. volumes of electric vehicles (battery electric, fuel cell and plug-in hybrid vehicles) by 2030.” In addition to corporate commitments, other factors are accelerating electrification, including a [recent report](#) which found that, since 2014, investment in the electrified transport sector has risen by a compound annual growth rate of around 48%ⁱ. The City of Lebanon has made a commitment to electrify its fleet in order to meet its environmental and other goals. This should also reduce operating costs in the long-run.

City Policy

Elements needed:

- Overall policy on conversion of City fleet to electric
- When EV's should be purchased by departments/divisions
- How departments will cover the additional cost of EV's
- EV vs. hybrid
- Integration with CoL Procurement Policy

Goals & Objectives: To be developed/decided by Management

Stakeholder Engagement: Successful rollout of an Electrification Plan will require getting all of the right people in the room and building solid relationships with them. This includes the following individuals and groups: CoL Management, City Council, Fleet Manager, **Department Heads**, Maintenance Manager, EFM, Drivers, Grant Writer, Planning Office, LEAC – esp. the EV Subcommittee, Finance, EVSE installers & service providers, funders (NH-DES, national agencies, CoL), Liberty Utilities, Granite State Clean Cities Coalition, dealerships, DPW Road Crew, UVLSRPC, Sustainable Lebanon. Determine the goals, concerns, and needs of each stakeholder with regard to EV's.

Note Regarding Stakeholder Engagement: Grant funding usually requires the demonstration of substantial community engagement, especially as it relates to low-income groups and social equity. Waiting to undertake community engagement until a grant is being applied for could lead to failure. Community engagement should be seen as critical not only to obtaining funding, but also to the overall success of the

City's conversion to electric transportation because it will incorporate important perspectives that might otherwise be overlooked.

Futureproofing: Facility renovations should include infrastructure for future EVSE wherever possible, such as was done with the PD parking lot renovation. This will substantially reduce future costs and work. EVSE installed by the City should meet not only current needs but anticipate future needs as well.

Policy Questions:

- To what extent does the City want to further other environmental goals through EVSE deployment? Options include solar or Landfill Gas power supplied to EVSE; incorporate energy storage into EVSE to reduce electric demand; Time-Of-Use rates for EV charging; vehicle-to-grid energy flow during system peaks; etc.
- When are outside consultants and experts needed to assist the City in implementing this plan to avoid costly mistakes?
- How are utility demand charges managed? Does the City want to control charging rates of EVSE to limit demand charges?
- May CoL Staff use City EV charges, for a fee or not, as a means of promoting EV adoption, pollution reduction, and helping the City to meet its climate and other environmental goals?
- How can EV procurement policy employ life-cycle costs for EV's instead of basing decisions primarily on capital costs?

Vehicles for Conversion

The current spreadsheet that lists City vehicles can be found at this link:

<C:\Users\montgomery\OneDrive - City of Lebanon\DPW Shared\FLEET\2023 VEHICLE-EQUIPMENT LIST For EV Conversion.xlsx> (please don't edit this spreadsheet – download a copy to work on if needed)

The 6th tab identifies vehicles that have been flagged for replacement with EV's. The table below shows the list as of 6/20/2023 sorted by dept./division and year of replacement:

DEPT	YEAR	MAKE/MODEL	REPLACE WITH	YEAR TO BE REPLACED	FUEL USED PER YEAR - GAL.	GHG REDUCED MTCO2
AIR	2012	CHEVY SILVERADO 2500	SIMILAR MAKE/MODEL	2026	270	2.4
AIR	2001	CASE 821 FRONT END LOADER - diesel	SIMILAR MAKE/MODEL	2027	1,143	11.7
AIR	2009	CHEVY SILVERADO 3500	SIMILAR MAKE/MODEL	2029	270	2.4
AIR	2009	NEW HOLLAND TRACTOR - TV6070 - diesel	SIMILAR MAKE/MODEL	2030	1,182	12.1
AIR	2011	FORD F350	SIMILAR MAKE/MODEL	2032	270	2.4
DPW	2013	FORD F250 PICKUP TRUCK	3/4 TON PICKUP W/PLOW	2023	716	6.4
DPW	2009	FORD TAURUS	PASSENGER	2024	129	1.1
DPW	2014	FORD FUSION	PASSENGER	2024	93	0.8
DPW	2014	FORD F-250	QUAD CAB F250 3/4 TON PICKUP W/PLOW	2025	572	5.1
DPW	2017	FORD F-150 CREW CAB	F250 4WD CREW CAB PICKUP W/ PLOW	2027	606	5.4
DPW	2019	SKID STEER/LOADER - Diesel	SKID STEER W/ATTACHMENTS	2028	3,380	34.5
DPW	2018	FORD F-150 EXTENDED CAB	F250 QUAD CAB WITH PLOW	2029	251	2.2
DPW	2019	TOYOTA HIGHLANDER	FULL SIZE CAR	2029	1,000	8.9
FIRE	2015	FORD EXPLORER: FD CAR 2	EQUIVALENT EV	2025	561	5.0
FIRE	2016	FORD EXPLORER: FD CAR 3	EQUIVALENT EV	2026	219	1.9
FIRE	2017	FORD EXPLORER: FD MIH	EQUIVALENT EV	2027	317	2.8
PD	2016	RAM 1500: PD -21	EQUIVALENT EV		183	1.6
PD	2017	FORD EXPLORER POLICE INTERCEPTOR: PD-25	EQUIVALENT EV		897	8.0
PD	2014	FORD TAURUS POLICE INTERCEPTOR: PD-26	EQUIVALENT EV		254	2.3
PD	2016	FORD EXPLORER: PD-27	EQUIVALENT EV		415	3.7
REC	2011	FORD F250	1 TON DUMP WITH PLOW	2025	200	1.8
REC	2011	FORD RANGER	F150 LIGHTNING OR EQUIVALENT	2026	600	5.3

Vehicle Identification Process: DPW Fleet and Maintenance Staff identified vehicles for possible conversion by evaluating what we currently have for vehicles, what is available to convert to electric dependent on the vehicle's task and distance of travel, hours of use, **availability of equivalent electric vehicle**, and availability of current charging capabilities. Staff will work with Dept./Div. heads and the EFM to continue the process of vetting possible EV conversions to meet the City's needs.

DRVE is a spreadsheet tool that provides a user-friendly platform to analyze fleet electrification by evaluating a variety of vehicle types, procurement ownership structures, and EV charging configurations. City Staff can get a customized, detailed assessment of fleet electrification opportunities by simply uploading basic fleet information collected through the fleet inventory and customizing several key inputs. Pacific Gas & Electric has developed a similar tool, but it uses PG&E's electricity rates. See the Resources section for more info.

Technical Considerations

There is a need for ongoing education and research because of the rapidly changing nature of EV and EVSE development. Below is a list of specific areas needing technical assessment.

Issue – Increased Complexity of Maintenance: The City Fleet Manager prefers to limit new vehicles to a small number of manufacturers in order to simplify maintenance training and equipment. Concern has been expressed about the increased complexity of having to maintain EV's of different makes because it increases the number of tools that DPW must purchase and the additional training that each vehicle make requires. This is an issue because different manufacturers are rolling out specialized EV equipment at different times and with different characteristics.

Issue – EV Maintenance: There is additional training that is required to maintain EV's in general. City Management should understand these additional needs and help staff to minimize them and/or allocate more staff time to meeting them.

Issue – EVSE Installation: When EV's are planned, EVSE needs to be planned as well. Because this is a rapidly evolving technology, there should be continuous review of developments and lessons learned. See the Charging Infrastructure section for more info on this.

Issue – Networked EVSE: To what degree does the City wish to monitor EV charging, control charging rates to limit costs, allow for remote maintenance of EVSE, and/or be able to charge a fee for non-City use of EVSE? Networked EVSE could also allow for charging in off-peak times of the day to reduce costs.

Issue – EV Charging Demand Costs: Liberty's G-1 and G-2 electricity tariffs for large users have a 'demand charge' in addition to a charge for each kWh that is used. This charge is based on the peak electricity use in any given month and could be as much as \$5,000 for a single use of electricity at an EVSE in any given month. Level 3 EVSE should be planned with this cost in mind, as well as ways to diminish this cost. Relevant Liberty tariffs, pending legislation, and NH PUC rules should be constantly monitored and the City should join with other municipalities and stakeholders to affect policy and rules.

Issue – Adequate EV Features: Does the vehicle being considered have all the required features that the Dept./Div. needs? For example - the first line of EV pickup trucks does not have the ability to attach a plow, and its towing range under load is very short.

Charging Infrastructure (aka electric vehicle service equipment or EVSE)

Regular Charging: When a vehicle is identified by a Dept./Div. for EV conversion, plans should be made to install EVSE adequate to meet the daily/weekly charging needs of that equipment in coordination with the purchase of that vehicle.

Emergency Backup: The City needs to develop a plan for emergency charging of EV's in the case of power outages. This is especially important for emergency vehicles and vehicles that supply time-sensitive services that are replaced with EV's: police, fire, snow plowing, etc. Options include back-up generators dedicated to supplying EVSE, EVSE at the landfill that can run off of the landfill gas electricity, and a micro-grid powered by the landfill gas generator with EVSE in different locations.

EVSE Planning: When EV's are planned, EVSE needs to be planned as well. When developing a cost estimate and plan for EVSE installation, Staff should consult with the City Electrician, EFM, DPW Fleet and Road Crew, and Liberty Utilities, especially if a DC Fast Charger (Level 3) is being installed. Ongoing review of developments in the field of EVSE should be undertaken continuously. If the City has already chosen to work with one or more designated EVSE installers, they should be consulted regularly. EVSE should be sited to avoid accidents and hazards, maximize convenience, and minimize the cost of installation. Is electrical capacity at the site an issue? Will the EVSE negatively affect traffic patterns? What major site constraints need to be overcome?

Note: Liberty should be consulted early in the development of Level 3 chargers because procurement and installation of electrical infrastructure for DC fast chargers can require a long lead time. Staff should assume a two to three year planning timeline for DCFC installation.

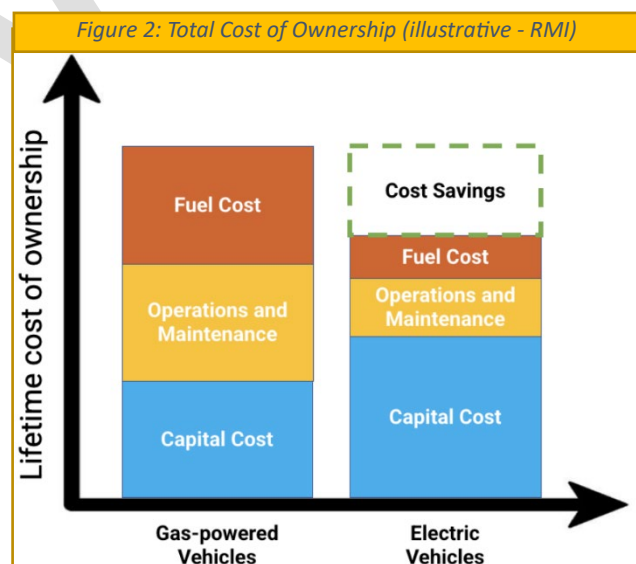
Financing

EV's cost more to purchase than gas or diesel (ICE) vehicles, but a 2020 [Consumer Reports](#) estimated that most EVs cost up to 50% less to fuel and maintain over their lifetime than their gas/diesel counterparts. Even greater savings will be possible in Lebanon if the Landfill Gas and/or solar projects are used to supply cheaper power to City EVSE. Total Cost of Ownership (TCO) should weigh more heavily than capital costs in the decision to purchase an EV. The DRVE tool can be used for calculating TCO.

Financing needs include not only EV's, but also charging infrastructure. CIP budgets should include EVSE installation in coordination with the purchase of EV's at each Dept./Div. when EV purchases are planned.

Departments are encouraged to track O&M costs for EV's once purchased, compare those to comparable ICE vehicles, and publicize the savings.

Options to cover the additional cost of EV's: CIP, grant writing, and the operating budget. For grants, consult the FFOLD tool to identify the most appropriate grant sources for a particular vehicle (see the Resources section). Below are several best practices for both internal and external coordination on funding applicationsⁱⁱ:



- Understand the funding agency’s process and solicitation; create an application checklist.
- Continue to secure buy-in from key decision makers and regularly inform them of fleet electrification progress and opportunities.
- Use fleet assessments and TCO analyses to prioritize electrification opportunities and identify potential EVSE deployment locations to inform development of a phased EV procurement plan.
- Build relationships with utility representatives, peer local governments, regional associations, state-level agencies, elected state and federal officials, and other stakeholders to partner on grant applications, receive funding, and identify policy changes to facilitate the accelerated transition to EVs.

City Staff should be aware of two specific fleet electrification incentives:

Qualified Commercial Clean Vehicles Tax Credit (Section 45W): This new tax credit provides up to \$7,500 for vehicles with a gross weight up to 14,000 pounds, and up to \$40,000 for heavier vehicles. Although final assembly of eligible vehicles must take place in North America, unlike the modified personal vehicle tax credit (Section 30D), the commercial version does not impose battery and critical mineral manufacturing and sourcing requirements, which will make it considerably easier for automakers to accommodate. The 45W tax credit value is calculated as the lesser of (a) 30% of the vehicle’s cost basis (for battery electric vehicles) or (b) the incremental cost of the EV compared with a conventional alternative.

Alternative Fuel Vehicle Refueling Property Tax Credit (Section 30C): This tax credit provides an incentive for developing EV chargers, modifying and extending a previous tax credit that had expired at the end of 2021. Specifically, for EV chargers deployed in either low-income communities or outside of urban areas, a credit of 6% of project costs is available, with the potential to increase this credit to 30% for projects using prevailing wages and meeting certain apprenticeship requirements. The maximum credit value is \$100,000 per charger.

In addition to grants, Lebanon should follow the State’s collective vehicle procurement offers as well as those of the [Climate Mayors’ Purchasing Collaborative](#).

One possible revenue stream to offset the additional cost of EV’s is known as ‘vehicle-to-grid,’ where an EV’s battery is used to discharge energy to the grid during periods of annual or monthly system peak. This should be explored and incorporated into the TCO calculations where possible.

Resources

- National Electric Vehicle Infrastructure (NEVI) Program - [NEVI \(ct.gov\)](#)
- Local Government Playbook: <https://electrificationcoalition.org/resource/local-government-playbook/>
- Dashboard for Rapid Vehicle Electrification: DRVE Tool <https://electrificationcoalition.org/resource/drve/>
- Climate mayors EV purchasing collaborative <https://electrificationcoalition.org/work/climate-mayors-ev-procurement-collaborative/>
- Transportation Electrification roadmaps <https://electrificationcoalition.org/roadmaps/>
- Charging and Fueling Infrastructure grant program <https://www.transportation.gov/rural/grant-toolkit/charging-and-fueling-infrastructure-grant-program>

- U.S. Department of Transportation Federal funding programs
<https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-funding-and-financing/federal-funding-programs>
- Joint office of Energy and Transportation <https://driveelectric.gov/>
- [FACT SHEET: Biden-Harris Administration Announces New Standards and Major Progress for a Made-in-America National Network of Electric Vehicle Chargers | The White House](#)
- Connecticut Department of Transportation EV Plan: [CTDOT-Approved-NEVI-Plan-2022-2023.pdf](#)
- Net Zero Montpelier, VT:
<https://civicclerk.blob.core.windows.net/stream/MONTPELIERVT/701d6129-5fb5-47eb-8edf-2cd89993b5a6.pdf?sv=2021-10-04&st=2023-05-25T12%3A35%3A30Z&se=2024-05-25T12%3A40%3A30Z&sr=b&sp=r&sig=SAgM9zUD76f33xATwFfULFCh7b22NfI glo5BpZm0Om4%3D>
- Electrification Coalition: State Plug-In Adoption Resource Kit (SPARK):
<https://electrificationcoalition.org/spark/>
- RMI's [Federal Funding Opportunities for Local Decarbonization](#) (FFOLD) tool helps local governments identify the most relevant funding sources for their fleet electrification process (and other decarbonization efforts) and provides key guidance on eligibility and effective grant application components.

ENDNOTES:

ⁱ *How Cities and Counties can Electrify Their Fleets*, Rocky Mountain Institute, January 2023.

ⁱⁱ Ibid.

AGENDA
LEBANON ENERGY ADVISORY COMMITTEE(LEAC)
October 19, 2023

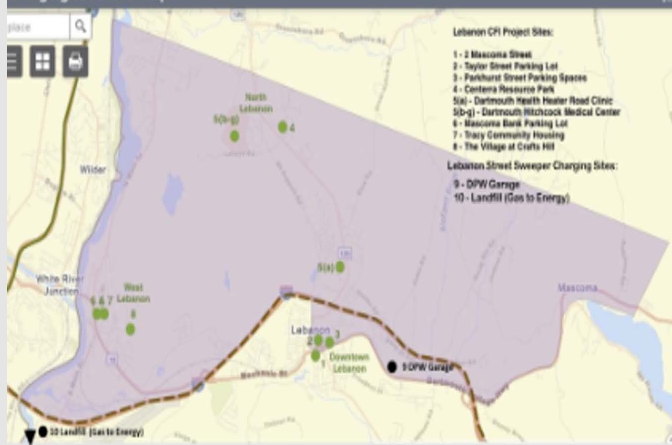
AGENDA ITEM 4
NEW BUSINESS:

I. EFM REPORT- ENERGEY BUDGET & CIP CHARGE STATION

Public Electric Vehicle Charging Stations

Potential EV Charging Sites

Charging Justice40 Map



- Based on the Federal Charging and Fueling Infrastructure grant (DOT), 91 public charging stations including three fast charging stations at: 2 Mascoma St., Centerra Plaza, and Main St. West Lebanon.

- Total Project Cost: \$5,228,912, City match: \$50,203.

- Grant Award Announcement: expected in October.

- Construction: 2024.

- Potential Granite State Clean Fleet grant for Municipal EV Chargers too - black dots (not in this CIP).

Citywide EFM Cost Reduction & Environmental Measures



Streetlights



Solar



Conservation



Fuel Pre-Purchase



Wholesale
Power + Peak
Curtailment

Streetlight Conversion Savings 2023: \$80,200

Solar:

- **Estimated 2023 Production: 795,660 kWh**
- **Estimated 2023 Savings: \$67,328**

City Hall Renovations Est. 2023 Savings: \$78,200

Fuel Pre-Purchase Estimate 2023 Savings: \$58,200

Wholesale Electricity 2023 Savings: \$75,321

Peak Electricity Curtailment 2023 Savings: \$

**Green Electricity Consumed Through CPCNH in
2023: kWh**

Total Est. Annual Savings: \$359,049