



Central Vermont Regional Planning Commission

TRANSPORTATION ADVISORY COMMITTEE

Tuesday May 28, 2024, 6:30 p.m.

Join Zoom Meeting via Computer, Tablet or Smartphone:

<https://us02web.zoom.us/j/86220375669?pwd=aXFEYkNa0VYeTBORmlhd2tZV3VKdz09>

Meeting ID: 862 2037 5669- **Passcode:** 692202

Dial in via Phone: +1 929 436 2866

Find your local number: <https://us02web.zoom.us/u/kbEE5qK91g>

Download Zoom here: <https://zoom.us/download>

Agenda

- 6:30 1) Meeting Commencement
 - a) Roll Call
 - b) Adjustments to the Agenda
 - c) Public Comment
 - d) Staff Announcement
- 6:40 2) Approval of April 2024 TAC Meeting Minutes (*Enclosed; Action*)
- 6:45 3) Alternative Fuels Programs and Funding
- 7:15 4) TAC Member Round Table
 - a) Local concerns including project updates and other issues
- 7:30 5) Adjourn

Next Meeting May 28, 2024

Persons with disabilities who require assistance or alternate arrangements to participate in programs or activities are encouraged to contact Nancy Chartrand at 802-229-0389 or chartrand@cvregion.com at least 3 business days prior to the meeting for which services are requested.



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Transportation Advisory Committee (TAC)
Minutes
Tuesday, April 23, 2024

Attendees:					
	Barre City		x	Moretown	Joyce Manchester
x	Barre Town	Stephanie Magnan (Chair)	x	Northfield	Thomas Davis
	Berlin	Robert Wernecke			Jeff Schulz, Alt
	Cabot	John Cookson		Orange	Lee Cattaneo
x	Calais	David Ellenbogen	x	Plainfield	Bob Atchinson (Vice Chair)
		Karin McNeill, Alt	x	Roxbury	Gerry D'Amico
x	Duxbury	Alan Quackenbush	x	Waitsfield	Don LaHaye
		Bill Whitehair, Alt.	x		Alice Peal, Alt
x	E. Montpelier	Adam Stanforth		Warren	Michael Bridgewater, Alt
	Fayston	Donald Simonini	x	Washington	Peter Carbee
	Marshfield	Todd Eaton		Waterbury	Mike Hedges
x	Middlesex	Ronald Krauth		Williamstown	Richard Turner
x	Montpelier	Dona Bate		Woodbury	Chris Koteas
			x	Worcester	Bill Arrand
<p>Staff: Keith Cubbon, Reuben MacMartin Guests: Monica White, GMT</p>					

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Stephanie brought the meeting to order at 6:32pm.

Roll Call

- Roll was called and a quorum was present

Adjustments to the Agenda

- None

Public Comments

- None

1 **Staff Announcements**

- 2 • Keith notified TAC that CVRPC has extended an offer to a summer planning tech and
- 3 that a second candidate was scheduled to interview.
- 4 • Keith notified TAC of upcoming voting for officers would occur at May TAC meeting.

5 **Approval of February 2024 TAC Meeting Minutes**

- 6 • Alan Q. made a motion to accept the January meeting minutes with Don L. as 2nd.
- 7 Group voted and motion passed

8 **Explanation of Upcoming Road Supervisor Meeting**

- 9 • Reuben walked the TAC through the purpose of and agenda for the upcoming CVRPC
- 10 Road Supervisor meeting.
- 11 • Gerry D. confirmed date and time of upcoming meeting.
- 12 ○ Reuben confirmed date and location
- 13 ○ Stephanie M. confirmed timing of invite
- 14 • Tom D. offered that he has been researching soil stabilizer treatments for gravel/dirt
- 15 roads. Was curious if any other members were familiar with them.
- 16 ○ Keith was familiar with technology
- 17 ○ Tom D. offered “Perma-zyme” as an example provider. Hoping that this
- 18 technology could reduce maintenance cost. Considering piloting Lovers Lane in
- 19 South Northfield
- 20 ○ Reuben confirmed that this is a chemical treatment
- 21 ○ Tom D. confirmed that these are injectable concrete-like
- 22 ○ Bob A. referred TAC to a study “Muddy Roads” that involved testing raking of
- 23 sprinkled concrete
- 24 • Alice P. asked if we had heard from road supervisor’s that they need more admin help?
- 25 ○ Keith had gotten feedback on need for grant management support
- 26 ○ Alice P. reported that there had been some contention in Waitsfield
- 27 ○ Keith mentioned Cabot as an example of good coordination
- 28 • Alice P. asked if culvert survey tracks undersized culverts
- 29 ○ Keith replied that previously we have not, but that starting this year we would be
- 30 identifying such locations

31 **Discussion of Mutual Aid Agreement**

- 32 • Keith presented purpose and draft/template text: equipment and effort sharing for
- 33 disasters, collective purchasing potential
- 34 • Stephanie M. asked if we intend to present text to VT Emergency Management for
- 35 review

- 1 ○ Keith explained that text was borrowed from Rutland which has already been
2 approved. Document will have regional coordinator review before taking to
3 board
- 4 • Joyce M. wondered if collective hiring via this agreement was possible
 - 5 ○ Keith was unsure, would need to review or get a decision
 - 6 ○ Stephanie M. understand “aid effort” to be fixed duration
 - 7 ○ Reuben asked if collective purchase of professional services for limited duration
 - 8 contract was a viable use
 - 9 ○ Keith would need to look into collective services purchasing
 - 10 ○ Stephanie M. thought town employees could be “sub-contracted” to other
 - 11 towns
 - 12 ○ Keith and Reuben agreed that this sounded like a potentially viable model worth
 - 13 investigating
 - 14 ○ Joyce M. thought this sounded like a good way to make full time hires to share
 - 15 between town that only need part-time effort
 - 16 ○ Alice P. offered example of Waitsfield/Fayston Fire Dept and plowing
 - 17 • Peter C. looking at agreement as more in line with emergency aid, unsure if this
 - 18 agreement right venue for shared services procurement, but would like to investigate it.
 - 19 • Gerry D. was curious as to history of the underlying legislation
 - 20 ○ Keith reported that it was enacted 2022 and Rutland and Addison RPCs have
 - 21 both set them up
 - 22 ○ Gerry D. wanted to know how agreement worked in event of activation
 - 23 ○ Keith clarified intertown request process including need, location, and timeline.
 - 24 Provider town invoices equipment and labor at standard FEMA rates.
 - 25 ○ No knowledge of prior experience in other regions
 - 26 • Dona B. asked if this would preempt existing bilateral town mutual aid agreements
 - 27 ○ Keith explained that this would not preempt. Would create framework for
 - 28 mutual aid between all towns, bilateral agreements would govern in relevant
 - 29 situations
 - 30 ○ Stephanie expressed that this looked like a template for towns
 - 31 • David E. wanted to know how mutual aid for Calais worked during 2023 floods given
 - 32 that substantial aid came from surrounding area
 - 33 ○ Keith explained that this agreement wasn’t in place, 2023 aid most likely
 - 34 spontaneous
 - 35 • Joyce M. VLCT has sample Mutual Aid Agreement: must be signed by each town and
 - 36 notarized. How does statute change this?
 - 37 ○ Keith: CVRPC Board acceptance would lead to dissemination to town select
 - 38 boards for ratification

- 1 ○ Stephanie M clarified concern regarding duplication of effort. Asked about state
- 2 level agreements
- 3 ○ Keith explained that VEM has agreements with other stats but does not host or
- 4 administer agreements between sub-state units
- 5 • Stephanie M. responsibility for equipment on respective ends of lender-borrower
- 6 arrangement and importance of documenting location.
- 7 ○ 3c4a “transportation” vs “mobilization” in text
- 8 ○ Define ICS structure

9 **TAC Member Round Table**

- 10 • Bob A mentioned Plainfield had completed MERP audit of town buildings and are
- 11 reviewing audit reports and looking to add a vehicle charging location.
- 12 ○ Looking to restore hydro damn
- 13 • Tom D construction has started on VT-12 paving between Northfield and Montpelier
- 14 • Joyce M hearing concerns about GMT schedule changes and fares being reinstated
- 15 ○ Monica W happy to present at future TAC. Fare reinstatement only happening
- 16 on urban routes so only affect LINK to Burlington from CV region
- 17 ○ Tom D requested that GMT coordinate with Northfield around future service
- 18 planning in light of RAISE TOD planning efforts and expect new housing starts in
- 19 Northfield village
- 20 ○ Alice P at last GMT Board meeting VTrans presented on diminished funding with
- 21 several sources reaching end of life and need for GMT to belt-tighten in the post-
- 22 ARPA world
- 23 ○ Monica W urban funding loss due to ARPA ending. Part of Monica’s work is
- 24 funding stabilization for CV Region services
- 25 • Ron K. provision of charging infrastructure in parking lots?
- 26 ○ Keith asked if the question was all lots or just park and rides (PnR)?
- 27 ○ Ron K said PnR would be a good start
- 28 ○ Keith said he wasn’t aware of any such mandate
- 29 ○ Vermont welcome center in Berlin at Maplefields
- 30 ○ Peter C: every 50 miles on interstate is federal standard
- 31 ○ Bob A: there is spacing for grants for chargers on other federal aid roads, exact
- 32 standard unknown. Senate Energy committee: require new parking of 80+
- 33 stances PV on carport or equivalent adjacent to lot
- 34 ○ JoyceM: drive electric map online

35 **Adjourn**

- 36 • At 7:45 PM Bob L made a motion to adjourn Bill A 2nd the motion.
- 37 Motion passed.



**Clean Cities and
Communities**

Vermont Clean Cities and Communities Alternative Fuels Overview

May 2024

Central Vermont Regional Planning Commission – TAC

Peggy O'Neill-Vivanco, Coalition Director





**Clean Cities and
Communities**

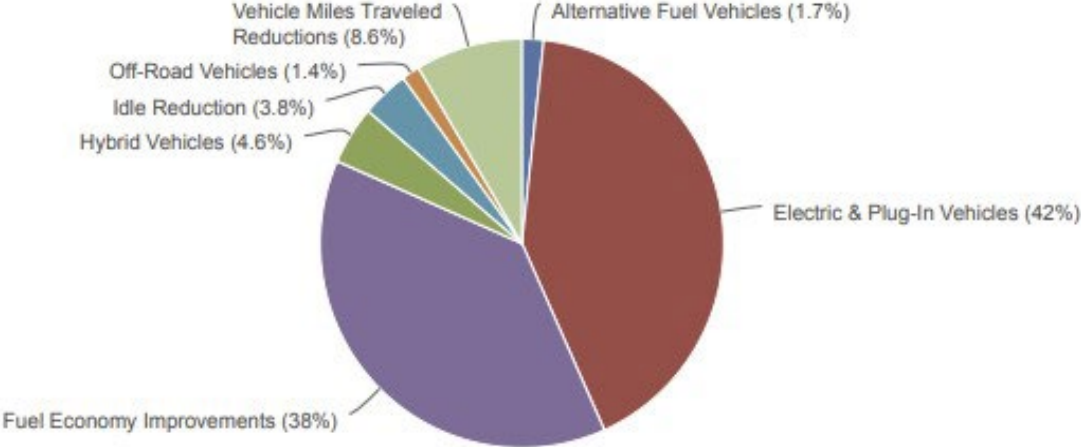
Agenda

- Vermont Data
- Let's talk EVs and Charging
- Alternative and Renewable Fuels
- Other Ways to Conserve Fuel
- Additional Resources

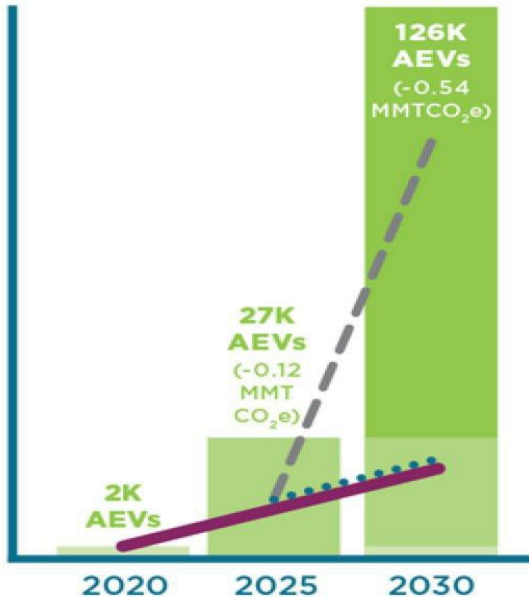


Vermont: GHG Reductions 2023

2023 Greenhouse Gas Emissions Reduced
24,514 tons



Vermont's Climate Goals



**ALL-ELECTRIC
VEHICLES**



ENERGY ACTION NETWORK

VERMONT
CLIMATE
COUNCIL

**GLOBAL WARMING
SOLUTIONS ACT**

1. Replace carbon intensive fuels (gas and diesel) with zero emission or low carbon fuels such as electricity
2. Develop and expand the charging infrastructure to support an integrated EV network.
3. Currently 12,754 EVs in Vermont - Vermont needs 170,000 by 2030 to achieve required emissions reductions.
4. Climate Council has identified expansion of workforce and programs in trades and skills to implement Climate Action Plan

Basics: Electric-Drive Vehicles

Electric Vehicles (EVs):

- All-Electric Vehicles
 - Powered by an electric motor
 - Uses charging infrastructure to charge the battery
- Plug-In Hybrid Electric Vehicle (PHEV)
 - Powered by an electric motor and engine
 - Uses charging infrastructure to charge the battery

Hybrid Electric Vehicle (HEV):

- Powered by an engine and electric motor
- Does not use charging infrastructure to charge the battery



Charging EVs and PHEVs

Type of Charger	Type of Current	Input Voltage (V)	Typical Charging Time	Primary Use
Level 1	Alternating Current (AC)	120 V	Approximately 5 miles of range per hour of charging	Residential
Level 2	AC	208 V or 240 V	Approximately 25 miles of range per hour of charging	Residential Commercial
DC Fast	Direct Current (DC)	208 V or 480 V	100-200+ miles of range per 30 minutes of charging	Commercial
Wireless	AC	Varies	10-20 miles of range per hour of charging	Commercial



Charging Considerations

- Talk to your utility!
- Where do you park your vehicles currently?
- Where do you plan to charge your vehicles?
 - AFDC: <https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC>
 - Plugshare: <https://www.plugshare.com/map/free-ev-stations>
- Do you have a vehicle checklist for different users?
- Would you consider workplace charging?
- Electric vehicle technician training?
 - Advanced Vehicle Technician Group (AVTG): <https://www.avtg.org/>

Funding for EVs

State of Vermont Electrify Your Fleet

- Rebate up to \$2,500
- Rebate is for *new* electric vehicles with a starting MSRP under \$60,000.
- Stackable rebate with state and utility
- Visit [Drive Electric Vermont's website](#) for additional rebate information.

Green Mountain Power

All electric vehicle rebates

- New \$2,200
- Used \$1,500

Plug in Hybrid rebates

- New \$1,000
- Used \$750

This rebate is in addition to any manufacturer rebates.

- **Federal Tax Credit (Up to \$7500)**



Funding for EV Chargers

Green Mountain Power (workplace and public locations):

- **Level 2** - \$750 installation per port
- **DC Fast Charger** - \$1,500 per port
- **Energy Innovations Team** – Incentives based on amount of carbon offsetting
- **Flexible Load Management** – Helps optimize energy use

- **Vermont Community EV Chargers Incentive Program**
- Workplace, Multi-Unit and Public Attraction Charging Grants

- **EMPOWER Workplace Charging**
- Clean Cities & DOE Resources, Assistance and Pledge

Electric Equipment Incentives

Green Mountain Power

Electric Forklift Rebate: \$3,000 or \$1,500 for used

Electric Mower

\$2,500 all commercial e-mowers

Must have 6-8 hour run time; minimum 36v, minimum 48" deck

Federal Tax Credits (*pending clarification)

Commercial Clean Vehicle Credit – Mobile machinery

Plug-in electric vehicle that draws significant propulsion from an electric motor with a battery capacity of at least:

- 7 kilowatt hours if the gross vehicle weight rating (GVWR) is under 14,000 pounds
- 15 kilowatt hours if the GVWR is 14,000 pounds or more



EV Workforce Training

Budget for ongoing electric vehicle safety and technician training.

- EV Training 101 for staff who work on or near high-voltage electric vehicles and equipment – ASE High-Voltage Safety Certification
- First-responder EV training
- Low-voltage Electrical Training
- Electronics
- High Voltage AC/DC Training



Biodiesel Vehicles

Renewable Diesel

- Trucks and passenger cars in private and government fleets
- Personal vehicles



Light-Duty

- Trucks and passenger cars in private and government fleets
- Personal vehicles

Medium-Duty

- Vans and shuttles
- Airports and taxi fleets

Heavy-Duty

- School and transit buses
- Emergency vehicles
- Delivery and bucket trucks
- Street sweepers

Renewable Diesel

- Advanced biofuel can be used in normal diesel engines
- Meets the [ASTM D975](#) specification for petroleum in the United States and EN 590 in Europe.
- Can be used as a replacement fuel or blended with petroleum diesel.
- Nearly all domestically produced and imported renewable diesel is used in California due to economic benefits under the Low Carbon Fuel Standard.
- NYC first East Coast City to expand use of RD in city fleet.
- NYC has retail RD fueling station
- VTCCC will host RD webinar later this fall



Renewable Diesel	Biodiesel
No changes to vehicle fuel system or fuel station equipment	Requires modifications to vehicle fuel systems and fuel station equipment if blended above 5%
Diesel substitute (100%) or blended in any amount	Highest recommended blending level is 5%
Stable in long-term storage	Less stable in long-term storage
Won't absorb significant amounts of water	Retains more water than traditional or renewable diesel
No fuel filter blocking	Increased potential for fuel filter blocking

Strategies to Conserve Fuel

- Idle Reduction
- Fleet Rightsizing
- Fleet Procurement Policies
- Vehicle Maintenance



Source: DOE, AFDC, Idling Reduction Technology Saves Police Department Money, Reduces Emissions (2019).
<https://afdc.energy.gov/case/3076>

Idle Reduction



Wasted Fuel

- Wasted fuel from idling costs more than \$11 billion annually.

Increased Emissions

- Emissions, including greenhouse gasses and those that cause smog, can be harmful.

Engine Wear

- Idling the engine can increase maintenance costs

IdleBox Tool Kit

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<https://cleancities.energy.gov/technical-assistance/idlebox/>.



Source:

https://afdc.energy.gov/conserve/idle_reduction_benefits.html and

https://afdc.energy.gov/conserve/idle_reduction_basics.html

Fleet Rightsizing

- Evaluate vehicle needs and use to make smart purchases
 - Determine whether you can reassign, replace, or eliminate vehicles
 - Define evaluation criteria and rank vehicles
 - Create a fleet procurement policy to evaluate alt fuel vehicles or efficiency in class
 - Transition to smaller, more efficient engines
 - Choose lighter vehicles
- Use alternative fuels and vehicles
 - Optimize vehicle use
 - Find creative, strategic ways to reduce vehicle use



Fleet Procurement Policy Examples

The City of Burlington has a Fleet Advisory Committee (FAC) and a policy manual. Process outlines how the Fleet Manager will choose the new vehicles based on the department's needs, maintenance requirements, fuel costs, funding, and the city's sustainability goals. Info presented to the committee for approval.¹

UVM's Vehicle Request Form requires consideration of alternative fuel vehicles for the replacement. If there is no viable alternative fuel vehicle, the requestor must determine the vehicle's fuel economy. This ensures the vehicle procurement is purposeful, is financially responsible, and reduces emissions.²

1. The City of Burlington: [Determining Annual Need for and Procuring General Fund Vehicles](#)
2. [UVM's Vehicle Request Form](#)

Support for your fleet transition

- Fleet Analysis – VTCCC can help with high-level look at your fleet
- [Vehicle tools and calculators](#)

- National Renewable Energy Lab (NREL): [Clean Energy to Communities Program \(C2C\)](#) Municipal Fleet Electrification
 - Support municipal fleets in transition to zero-emissions light- and medium-duty vehicles.
 - Next round opens in fall 2024



Alternative Fuels and Advanced Vehicle Technologies References and Resources

- AFDC
 - Station Locator
 - Laws and Incentives
 - Maps and Data
 - Case Studies
 - Publications
 - Tools
- TRS



The screenshot shows the homepage of the Alternative Fuels Data Center (AFDC) website. At the top, it features the U.S. Department of Energy logo and navigation links for "Energy Efficiency & Renewable Energy", "EERE Home | Programs & Offices | Consumer Information", and a search bar labeled "Search the AFDC". Below the header, there are navigation tabs for "FUELS & VEHICLES", "CONSERVE FUEL", "LOCATE STATIONS", "LAWS & INCENTIVES", "Maps & Data", "Case Studies", "Publications", "Tools", "About", and "Home".

The main content area is divided into several sections:

- Fuels & Vehicles**: A row of six fuel types with corresponding icons: Biodiesel, Electricity, Ethanol, Hydrogen, Natural Gas, and Propane.
- Information by State**: A map of the United States with a dropdown menu to "select a state".
- Information by Fleet Application**: Four categories with icons: Delivery Services, Refuse Collection, Public Transit, and School Transportation.
- Maps & Data**: A list of links: "U.S. Alternative Fueling Stations by Fuel Type", "U.S. Hybrid Electric Vehicle Sales by Model", and "Light-Duty Alternative Fuel Vehicle Registrations".
- Fuel Prices**: A line graph showing price trends for different fuels.
- Tools**: A list of links: "Laws & Incentives", "Electricity Sources & Emissions", "Vehicle Cost Calculator", and "Vehicle Search".
- Station Locator**: A map of the United States showing fueling station locations.

At the bottom right, there are links to "Download iPhone app" and "or Android app".

Flipping the Switch on Electric School Buses

The Information Source for Alternative Fuels and Advanced Vehicles

The Alternative Fuels Data Center (AFDC) provides information, data, and tools to help fleets and other transportation decision makers find ways to reach their energy and economic goals through the use of alternative and renewable fuels, advanced vehicles, and other fuel-saving measures.



**Clean Cities and
Communities**

Q&A and Thank You

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cleancities.energy.gov

