

Climate Advisory Committee
Special Meeting
Tuesday, July 21, 2020 - 5:00pm

Electronic Participation Link and Teleconference Number:

[Join Microsoft Teams Meeting](#) or contact Geoff Martin at gmartin@hartford-vt.org for instructions on electronic participation.

[+1 802-377-3677](tel:+18023773677) United States, Middlebury (Toll)

Conference ID: 401 138 257#

AGENDA

Item	Minutes Planned
Call to Order and Statement of Act 92 compliance	3
Additions/changes to the agenda	2
Review CAP RFP bidder questions and formulate responses	25
Adjournment	

Next Regular Meeting: August 12, 2020 at 5PM

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DRAFT TALKING POINTS FOR CAC:

General

1. Build the case for why we need to act to limit global warming – use SR15 Summary for Policymakers (<https://www.ipcc.ch/sr15/chapter/spm/>) and the Joint Resolution

A 2018 report from the United Nations Intergovernmental Panel on Climate Change (IPCC) states that in 2017 the planet had warmed by 1°C above pre-industrial levels and is accelerating to reach 1.5°C in 20 to 30 years (and most IPCC models on climate change have proven to be conservative)

Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C; and (IPCC SPECIAL REPORT: GLOBAL WARMING OF 1.5 °C, B.5)

2. The crisis is happening, it is affecting Vermonters, and is/will affect vulnerable populations disproportionately

Vermont is currently experiencing rising temperatures and more intense storms with measurable negative impacts on health, water quality, farms and forests

Hartford has three rivers flowing through it, and therefore, is disproportionately affected by extreme rain and snow thaw events

“Populations at disproportionately higher risk of adverse consequences with global warming of 1.5°C and beyond include disadvantaged and vulnerable populations...” (high confidence, IPCC SR15 B5.1.)

***** We don't need to get into the distinction between the goals unless questions arise. Voters already approved the Town government carbon neutrality requirement. Stick to just the town-wide goal of NZ GHG by 2030.**

Boundary: Town gov versus town-wide Scope: direct emissions plus those caused by Town gov action vs direct emissions. Reason for two goals: Town to lead by example, voters are holding the muni to a higher standard

3. Build the case for involvement- every household, every business
[something about the need for a community-wide coalition of voices to ensure action] **of ACTION, not voices**

Draw the parallel with current situation: COVID-19 has shown us, amongst other things, that individual action and local action can have a global impact.

Hartford alone cannot solve CC, but we can and must serve as a model for others to emulate.

Additionally, we must be working with other towns and cooperating regionally

Average annual emissions for a Vermonter: 15.6 tons CO₂e (<https://www.eanvt.org/wp-content/uploads/2020/02/pg6-annualemissions.png>) - need all hands on deck!!

Just Transition

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We seek a jobs and justice-centered plan that will **decarbonize lead Hartford to Net zero GHG emissions** in 10 years.

We affirm that climate change does not affect everyone equally and believe in the importance of a plan that will help the economically disadvantaged and BIPOC [is this acronym widely accepted? marginalized communities?] who are disproportionately affected by climate change's harmful effects

We affirm the importance of a just transition for those who work in fossil fuel industries and other industries that will change as a part of **decarbonizing** the Hartford community.

Hartford's response to the climate emergency be just and equitable, especially with respect to the most vulnerable and impacted members of society [or of our community]

Carbon Facts => Climate change facts?

On: fossil fuel spending, energy burden, public health, ecosystems diversity

Fossil fuel spending: <https://www.eanvt.org/featured-news/data-download/data-download-fossil-fuel-spending/>

2 billion annually, prorate by population $(10,200/620,000) * 2,000,000,000 = 1.65\% * 2B = 32.9\text{Million}$

It is our responsibility as human beings to be stewards of mother earth, to preserve our fellow human beings and other species. But if you need more specifics...

Value Proposition (redefined)

1. Reduced spending on imported fossil fuels
2. Demonstrate leadership and innovation and, by doing so, making our community more attractive to others
3. Improve air quality, reduce noise pollution
4. By planning for a transition it can be less costly, more equitable, and less disruptive than if we are in reactive mode (like the nation currently is with the pandemic)

Town of Hartford – Green Fleets Policy - DRAFT

Green Fleets Policy Overview

The Selectboard and School Board unanimously passed A Joint Resolution Declaring a Climate Emergency (henceforth “Joint Resolution”) in December of 2019, which commits the town to achieving net zero greenhouse gas (GHG) emissions by 2030. Subsequently, Hartford residents passed Article 25, which requires the municipality to lead by example by achieving carbon neutrality in the “operation, development, and maintenance of the Town of Hartford’s municipal infrastructure and equipment” by 2027. Meeting this requirement will mean significant reductions across the full spectrum of the Town’s emissions – Scope 1 (direct emissions), Scope 2 (purchased electricity), and Scope 3 (indirect emissions).

The emissions from the combustion of fossil fuel like fuel oil, propane, gasoline, and diesel, to heat Town buildings and facilities and power Town vehicles and equipment all fall within Scope 1 emissions and are the emissions over which the Town has the most direct control. Within Scope 1 emissions, the Town’s vehicle fleet accounts for 53% of all emissions – more than the emissions from all Town buildings and

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facilities. Reigning in emissions from Town vehicles will be critical to the success of meeting the carbon neutrality requirement and means adapting the Town's purchasing policy and operational practices to meet the its climate objectives.

Reducing emissions from the vehicle fleet can be realized with five broad strategies:

1. Optimizing the fleet size
2. Reducing vehicle miles traveled (VMT)
3. Reducing idle time
4. Transitioning to all-electric vehicles (or hybrid-electric where an all-electric model does not exist)
5. Increasing fuel economy

All five of these strategies are reflected in this Green Fleet Policy.

In addition to lowering emissions and energy use, this Green Fleet Policy will ultimately result in cost savings for the Town. Strategies 1 and 2 above require no capital investment and result in immediate savings for the Town. They are also likely to result in the greatest reduction in emissions and energy use and should be prioritized. Strategies 3 and 5 do require an upfront investment. Investments in these strategies are often, but not always, greater than the cost of a less efficient (strategy 3) or internal combustion engine (strategy 5) alternatives. Nonetheless, there are substantial operational savings associated with these strategies, meaning they are often cheaper when looking at life-cycle costs. Strategy 4 can be achieved in part through behavioral change, and in part through minor capital investments and can result in substantial savings.

This Green Fleets Policy, beginning in FY 21, will enable the Town to purchase the most cost-effective, least polluting, and fuel-efficient vehicles and equipment possible that still meet the operational requirements of the intended use. It will be important to continue to benchmark against best practices and lessons from peer communities and institutions as the policy evolves and is updated in the future.

Definitions

- “All-electric Vehicle” or BEV (Battery-only Electric Vehicle), is a vehicle operating exclusively on a battery charge and does not possess or require an internal combustion engine.
- “Alternative Fuel Vehicle” means any vehicle powered by a fuel other than fossil fuel.
- “Hybrid Vehicle” or “Hybrid-electric Vehicle” means a vehicle that draws propulsion energy from onboard sources of stored energy that are both an internal combustion/heat engine that runs on combustible fuel, and a rechargeable energy storage system.
- “Internal Combustion Engine vehicle” or “ICE vehicle” means a vehicle that draws propulsion energy from an internal combustion engine that runs on combustible fuel.

Page Break

1. Goals

This Green Fleets policy directs all Town of Hartford Departments that own/operate vehicles and equipment to

- Decrease greenhouse gas (GHG) emissions in accordance with Article 25,
- Reduce vehicle miles traveled (VMT) in accordance with Chapter 10 of the 2019 Hartford Town Plan, and

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- Increase the Town’s use of electric vehicles (EVs) in accordance with Chapter 10 of the 2019 Hartford Town Plan.

2. Targets

The ultimate objective of achieving carbon neutrality as required by Article 25 is to eliminate the Town’s GHG emissions. This may be impossible by 2027, and carbon offsets may be used to cover emissions that cannot be eliminated due to technological limits or exceedingly high cost. Recognizing that the Town could purchase carbon offsets to cover unavoidable GHG emissions if necessary, the Town should strive to meet the following goals:

- Reduce vehicle GHG emissions by 20% by 2023; 50% by 2025; and 100% by 2027,
- Reduce VMT by 5% by 2023, 10% by 2025, and 20% by 2027, and
- Replace vehicles as they are scheduled to be replaced with all-electric alternatives, hybrid electric if all-electric options are not available, or the most fuel-efficient option available if hybrid-electric options do not exist.

By 2023 the policy targets will be revisited and updated.

3. Green Fleets Team

1. The function of this Team shall be to develop and monitor policies, procedures and practices related to the purchase and use of Town vehicles and Equipment to achieve the goals and objectives of the Policy. The Team will report progress and findings to the Town Manager and the Selectboard at least annually and as appropriate, including any proposed alterations to the policy.

2. This Team shall include the Town Energy Coordinator and one representative from each of the following Town Departments:

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- Public Works
- Finance
- Fire
- Police
- Parks and Recreation

2. The Team shall include a member of the Climate Advisory Committee appointed by the Chair of the Climate Advisory Committee.

4. Strategies

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 1. Each Department is instructed to examine their fleet to determine if there are any unnecessary vehicles or equipment. Any vehicle using 200 gallons of fuel per year or less shall automatically be considered for removal from the fleet. Other vehicles and equipment may be examined at the discretion of the Town Manager, in consultation with the respective Department Head and the Green Fleet Team (Energy Coordinator). The Town Manager shall make recommendations to the Selectboard for elimination of vehicles and equipment, and the Selectboard shall make the final determination.
 2. No vehicle or equipment will be purchased to replace the removed vehicle. It shall be removed from the fleet database, and the miles normally traveled by the removed vehicle will be distributed to other transportation modes if necessary.
 3. Encourage the selection of vehicles of a smaller class size whenever possible to achieve increased miles per gallon. Requests for new vehicle purchases must be supplemented with written justification addressing the need for a specific model and type. The Green Fleets Team [Energy Coordinator] shall work with the Department and vehicle operators to determine whether a proposed vehicle could be downsized and still complete its required function. For example, whenever possible, full-size trucks and vans should be downsized to light duty vehicles, and large gasoline/diesel engines replaced with smaller electric engines.

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2. Reducing vehicle miles traveled (VMT)

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1. For vehicles that operate on fixed routes, such as snow plows, route optimization should be employed by the Department. In general, all routes should be planned to optimize the route and trips chained together to reduce required travel time and distance. VMT optimization shall also be managed by each Department.

2. Vehicle use should be avoided whenever possible. Meetings should be held through tele/videoconferencing whenever possible. If tele/videoconferencing is not an option, staff should:

- Hold meetings in a centralized location
- Use alternative transportation modes (walk, bike, Advance Transit) when possible
- Ride-share with other staff
- Conduct all necessary business at time of meeting to minimize return trips

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3. The deployment of telematic vehicle devices, which were employed briefly in FY19, or similar technology that monitors and optimizes routes and analyzes patterns and potential adjustments to best meet this policy's aims should be reconsidered.

5. Reducing idle time

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1. During the five-month pilot of telematics in FY 19, average idle time across the Town fleet was 50%. Some vehicles idled over 80% of the time they were operating. Reducing idle time alone will have a significant impact on vehicle emissions and cost savings.

2. It is the policy of the Town to eliminate idling. Vehicles shall not be left idling for more than 5 minutes in a 60-minute period unless a running engine is necessary to protect public safety, to prevent harm to contents of the vehicle, run auxiliary equipment in performance of a job, or to maintain health of occupants while performing duties, or is exempt per V.S.A. Title 23 Chapter 013 Section 01110. Vehicles are not to be left idling to warm up a vehicle.

3. Signs shall be posted stating the Town's idling policy in all locations where Town vehicles are parked.

4. Departments shall invest in idle-reduction technology to reduce or eliminate engine operation when vehicles are not moving. Departments should meet the following targets for installing idle-reduction technology in all vehicles that need to idle to perform work duties:

- 25% of all applicable vehicles have idle-reduction technology installed by 2023
- 50% of all applicable vehicles have idle-reduction technology installed by 2025
- 100% of all applicable vehicles have idle-reduction technology installed by 2027

Note that the number of vehicles for which this technology is necessary should decline over this time period, as more ICE vehicles are replaced by hybrid or all-electric vehicles.

6. Transitioning to all-electric vehicles (or hybrid-electric where an all-electric model does not exist)

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1. The Town shall purchase all-electric vehicles where options exist that meet the operational requirements of the vehicle and are not exceedingly expensive (life-cycle costs greater than 10% of ICE alternative).

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2. The Town shall purchase hybrid-electric vehicles when an all-electric option is not available, subject to the same conditions above.

3. Both internal budgets and external grants would be eligible to cover the anticipated premiums for an all-electric or hybrid-electric version of a fleet vehicle or piece Equipment.

4. Alternative Fuels shall be considered when feasible if an electric option is not available and any negative environmental impacts from such fuels do not negate benefits. The latest scientific consensus on the environmental advantages or disadvantages of such fuels should be the determinate of whether or not the alternative fuel should be given preference. If the scientific consensus indicates the alternative fuel has a greater environmental impact than gasoline/diesel, or if no scientific consensus exists, the alternative fuel should not be considered.

7. **Increasing fuel economy**

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1. When a vehicle replacement is needed for which there is no all-electric or hybrid-electric options available or for which the incremental cost is exceedingly high (life-cycle costs are greater than 10% above ICE option), the Town shall purchase the most fuel-efficient model available that meets operational requirements.

2. Request for exemptions to the fuel economy targets in vehicle procurements shall be submitted in writing to the Green Fleets Team [Energy Coordinator], which will evaluate the request. The Team [Energy Coordinator] will provide the request and evaluation to the Town Manager for a final decision on whether to grant the exemption.

8. **Equipment**

1. The Town shall purchase or lease electric portable or stationary equipment if available and costs are not exceedingly high (life-cycle costs greater than 10% of ICE alternative). If an electric option is not available, the Town shall purchase the most fuel efficient, cleanest, fuel-combusting equipment available.

9. **Baseline Fleet Inventory**

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1. To enable a baseline for Measures of Success, the Town shall create and maintain a complete fleet inventory of the vehicles and equipment that existed in each Department as of the end of FY 2020. Each Department shall be responsible for providing this baseline data in a reliable and verifiable manner to the Town Energy Coordinator.

This inventory should include:

- a. Vehicle number, year, make, model, drive train (2- or 4-wheel drive), transmission type, and primary use
- b. Miles per gallon per vehicle -- actual if possible, published EPA rating if actual not available;
- c. Type(s) of fuel used;
- d. Average cost per gallon (or gallon equivalent) of fuel(s);
- e. Annual miles driven per vehicle per fuel type, if available;
- f. Total fuel(s) consumption per vehicle per year;
- g. Vehicle function and utilization (e.g., hours of use divided by total hours) with commentary on continued need or alternatives.

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1. The Green Fleets Team [Energy Coordinator] may grant an exemption from the requirements of this Policy to a Department requesting an exemption under the following circumstances:

- a. Where the requesting Department demonstrates that no model of vehicle or Equipment is available which will comply with the requirements of this Policy and still meet the specifications of the Department for its intended purpose.
- b. Where the requesting Department demonstrates to the satisfaction of the Green Fleets Team [Energy Coordinator] each of the following:
 - c. That the life-cycle cost of the vehicle or Equipment that complies with the requirements of this Policy is more than 10 percent higher than the life-cycle cost of an equivalent vehicle or Equipment powered by gasoline or diesel fuel; and
 - d. That the Department (with assistance from the Energy Coordinator) has attempted to apply for, but failed to receive, grant funding for the purchase or lease of the vehicle or Equipment that complies with the requirements of this Policy from sources other than the Town's General Fund; and

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e. Where the requesting Department demonstrates to the satisfaction of the Team [Energy Coordinator] that the use of a vehicle or Equipment that complies with the requirements of this Policy would significantly disrupt Department operations due to the lack of reliability, adequate fueling, and/or maintenance facilities for that vehicle or Equipment.

11. Annual Reporting

1. The Energy Coordinator shall provide an annual report by July 1st to the Green Fleets Team and Town Manager for the prior fiscal year providing information to demonstrate how well each Department's fleet is in compliance with the Green Fleets Policy as well as any recommended updates to the Policy.

2. This report shall include an updated inventory of all vehicles and equipment as well as a list of vehicles/equipment purchased and vehicles/equipment removed from the Town fleet in the prior fiscal year.

3. In addition, the report shall contain or summarize the following:

- a. A list of vehicles by classes and by year; a similar list for all equipment
- b. Make and model
- c. Drive train (2-wheel drive or 4-wheel drive)
- d. Town vehicle number and VIN number
- e. Type of fuel used
- f. Annual miles driven per vehicle
- g. Annual fuel consumption and cost per vehicle/equipment
- h. Annual maintenance costs
- i. Vehicle/Equipment function and utilization (hours)
- 1. Total CO₂ emissions for each vehicle/equipment.

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- 4. The Energy Coordinator shall be responsible for providing these data in a reliable and verifiable manner. These data will be submitted to the Team and Town Manager in conjunction with an annual Green Fleets plan for evaluating approaching replacement opportunities.

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5. The annual Green Fleets plan shall be developed using any/all of the options listed above plus any other alternatives deemed appropriate to achieve the goals of the Plan. These strategies allow considerable margin for the creative development of a plan that will have greatest potential to green each Department's (and Town's) fleet.