

Town of Needham Select Board

Policy Number:	SB-ADMIN-007
Policy:	Zero-Emission First Vehicle Policy
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Policy:

The Zero-Emission First Vehicle Policy governs the replacement of all non-exempt municipal vehicles with the most sustainable vehicle option, as defined below.

This policy replaces SB-ADMIN-006, “Fuel Efficient Vehicle Policy” adopted in November 2019. (Note due to an administrative error, there are two policies numbered SB-ADMIN-006. The other is relative to public participation in meetings and will remain in place.)

The purpose of the Zero-Emission First Vehicle Policy is to set standards and guidelines for the purchase, operation, and maintenance of the Town of Needham’s fleet vehicles that will advance the economic, energy, and climate sustainability of municipal operations by achieving long-term reductions in energy costs, energy consumption, and greenhouse gas (GHG) emissions. The primary objectives of this policy are to:

- Accelerate the adoption of emissions-reduction technologies and the transition of the fleet to all electric or other environmentally advantageous vehicles;
- Minimize the long-term environmental and financial impacts of fleet vehicles;
- Optimize the composition of the fleet to achieve maximum fuel efficiency;
- Advance the installation of electric charging infrastructure across municipal facilities; and
- Prioritize the utilization of grants, rebates, and incentives to support the acquisition of vehicles and technologies that will improve efficiency and reduce GHG emissions.

This policy shall not require a department to take any action which conflicts with local, state, or federal requirements nor mandate the procurement of products that do not perform adequately for their intended use, exclude adequate purchasing competition, require the purchase of vehicles that are not commercially available or practicable, or for which charging infrastructure is not currently available.

1. APPLICABILITY

This policy applies to all divisions and departments of the Town of Needham.

2. DEFINITIONS

Alternative fuel vehicles (AFVs) - Dedicated, flexible fuel, or dual-fuel vehicles designed to operate on at least one alternative fuel (such as electricity, biodiesel, propane, or natural gas) to reduce carbon emissions.

Battery electric vehicle (BEV) - An electric vehicle that draws propulsion energy solely from an on-board electrical energy storage device during operation that is charged from an external source of electricity.

Combined City and Highway MPG (EPA Combined fuel economy) - A weighted average of a vehicle's city and highway miles per gallon (MPG) values updated regularly throughout the year as new models are released and included in [Green Communities Criterion 4 Guidance](#).

Drive System - The manner in which mechanical power is directly transmitted from the drive shaft to the wheels. The following codes are used in the vehicle inventory drive field:

- a. All Wheel Drive (AWD) - Four-wheel drive automatically controlled by the vehicle powertrain systems.
- b. 4-Wheel Drive (4WD) - Driver selectable four-wheel drive with 2-wheel drive option.
- c. 2-Wheel Drive (2WD) - Powertrain conveys the power generated to two of the car's four wheels.

Electric Vehicle - A vehicle that gets all or part of its energy from electricity instead of gasoline.

Electric vehicle supply equipment (EVSE) or electric vehicle charging station - An electric component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles by permitting the transfer of electric energy to a battery or other storage device in an electric vehicle.

Fuel-cell electric vehicle (FCEV or FCV) - An electric vehicle that draws propulsion energy solely from an on-board energy storage device during operation, where energy stored as hydrogen is converted to electricity by a fuel cell, that is recharged from an external source of hydrogen.

Gross vehicle weight rating (GVWR) - The maximum safe operating weight of a vehicle, as specified by the manufacturer, including passenger and cargo loads.

Heavy-duty vehicle - A vehicle with a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds.

Hybrid electric vehicle (HEV) - Powered by an internal combustion engine and a small electric motor that uses energy stored in a battery. Under light load, for instance during initial acceleration, only electricity is consumed. The vehicle is typically fueled with gasoline to operate the internal combustion engine, and the battery is charged through the engine and regenerative braking, not by plugging in.

Light-duty vehicle - A vehicle with a GVWR of less than 8,500 pounds.

Plug-in hybrid electric vehicle (PHEV) - An electric vehicle with an on-board electrical energy storage device that can be recharged from an external source of electricity and that also has the capability to run on another fuel.

Telematics - A system that is installed in a vehicle that records and transmits information about the vehicle such as the current odometer, maintenance needs, and fuel/electricity consumption.

Zero emission vehicle (ZEV) - Zero emission vehicles include battery electric vehicles, plug-in hybrid electric vehicles, and fuel-cell electric vehicles; if the most recent definition of ZEVs per the Massachusetts Zero Emission Vehicle Commission diverges from this scope, the Commission definition shall take precedence.

3. GUIDELINES FOR VEHICLE PROCUREMENT

3.1 – Zero-Emission First Procurement

Vehicle procurement should be prioritized as follows:

1. Battery-electric vehicle (BEV) or Fuel Cell Electric Vehicles (FCEVs)
2. Plug-in hybrid vehicle (PHEV)
3. Hybrid electric vehicle (HEV) or other alternative fuel vehicle (AFV)
4. Most fuel-efficient internal combustion or vehicles that run on alternative fuels in accordance with requirements of [Green Communities Criterion 4 Guidance](#)

The fleet policy is zero-emission first, meaning that battery-electric vehicles and fuel cell electric vehicles shall be prioritized first when the Town purchases or leases light-duty vehicles for its operations.

3.2 – Fuel-Efficient Requirements for Standard Vehicles

If it is determined that a BEV, FCEV, PHEV, HEV, or AFV does not meet the Town's needs, the purchased or leased vehicles must be the most fuel-efficient class, drive train, and model available that will fulfill the intended municipal function. When determining the most fuel-efficient vehicle for a given class, the Town will utilize the fuel efficiency limits contained in the most recent guidance for Criterion 4 published by the Green Communities Division.

3.3 – Transfers Between Departments

Vehicles will be recycled when they are no longer operable and/or scheduled for replacement and will not be recycled from one municipal department to another as a replacement vehicle unless the repurposed vehicle is more efficient than the vehicle it is replacing. In addition, when considering vehicle replacement, the function of the vehicle will be reviewed for potential replacement with a more fuel-efficient vehicle, including a zero-emission vehicle.

3.4 – Exempt Vehicles

Vehicles exempt from the fuel efficiency requirements above include:

- Any vehicle with emergency response capabilities (vehicles with radios, computers, emergency lights, and sirens)

Note: Police cruisers are exempt, only if fuel efficient cruisers are not commercially available

- Any vehicle required for use in the Town snow and ice program
- Heavy-duty trucks, such as fire trucks, ambulances, and public works trucks
- Off-road or specialty vehicles

All other vehicles, including pickup trucks, vans, and police/fire administrative vehicles are not exempt and therefore must comply with the requirements of this policy.

Exempt vehicles should prioritize vehicle procurement as outlined in this policy. If purchasing a standard vehicle, exempt vehicle purchases should still prioritize the most fuel-efficient model available and consider fuel-reduction and emissions-reduction technology, such as diesel particle filters, selective catalytic reduction systems, exhaust gas recirculation, NOx adsorbers, oxidation catalysts, or anti-idling devices.

Where opportunities exist, particularly if grants and new technologies are or become available, the Town shall pilot electric options for heavy-duty and exempt vehicles.

Where the Town contracts vehicle services, the Town will allow for consideration of contracts and seek out companies that offer the use of electric and/or fuel-efficient vehicles.

3.5 – Evaluation of Fleet and Vehicle Size

The Town will procure vehicles and equipment of minimum size according to assessed needs. The Town will ensure that purchase plans require vehicle class and model of the smallest size and weight appropriate for each vehicle's tasks. All positions requiring vehicle use shall be evaluated as to the required vehicle class size necessary to conduct the job. The Town will evaluate ways to reduce its fleet size. Departments should consider whether vehicles can be shared between departments. When retiring a vehicle from the fleet, the Town will evaluate whether replacement is necessary.

4. **ZERO-EMISSION FIRST VEHICLE REPLACEMENT PLANNING**

4.1 – Inventory

As required by the Green Communities Program, the Town will maintain an inventory of all Town- and School-owned vehicles. This inventory will include the following information: model, make, model year, month and year purchased, VIN, drive system, weight class, miles per gallon, annual miles driven, total fuel consumption, department, and vehicle function.

4.2 – Electric Vehicle Charging

Where possible, efforts will be made to install charging equipment, including fleet-only charging equipment, at locations convenient and accessible for vehicle users to minimize operational inefficiencies. However, flexibility may be required of vehicle operators and town staff to adjust procedures to accommodate charging locations.

4.3 – Funding

The purchase of policy-compliant vehicles and equipment may be more expensive in the initial years. Departments should estimate upfront investment required for vehicle purchases and budget accordingly in capital budget requests. Departments should also consider the lifecycle costs of any acquisition when preparing capital budget requests.

The Town shall evaluate existing capital requests for vehicles and evaluate opportunities to fund additional upfront costs.

The Town shall take advantage of grant funding to offset the upfront costs of electric vehicles and charging apparatus.

5. VEHICLE OPERATION AND MAINTENANCE

5.1 – Anti-Idling

Vehicle idling produces both excessive waste of fuel and air pollution. As a part of this policy the Town hereby recognizes the importance of enforcing the existing Anti-Idling Law, as allowed by M.G.L. Chapter 90 Section 16A. Additionally, Town staff will reduce idling as much as possible in vehicle operations.

5.2 – Reinforce Operator Awareness

The Town and its employees will encourage energy-saving driving habits and pay attention to the need for regular preventative maintenance of vehicles.

5.3 – Reduce Vehicle Miles Travelled (VMTs)

The Town will reinforce employee awareness of vehicle miles travelled during work hours and will encourage alternate travel practices such as carpools, vanpools, bicycling, and walking.

5.4 – Vehicle Maintenance

A well-maintained vehicle will optimize fuel use and reduce air pollution. Preventative maintenance that ensures optimal vehicle operation shall be performed regularly for each vehicle. Vehicles will be inspected regularly and prior to extended use to ensure correct tire pressure, oil and coolant levels, and to identify possible signs of other fluid leaks.

6. QUESTIONS AND ENFORCEMENT

All inquiries should be directed to the department/division responsible for fleet management and/or fleet procurement. This Zero-Emission First Vehicle Policy will be enforced by the Town Manager/designee.