

# Action Implementation Blueprints



## ACTION NAME

**Implement a long-term plan to electrify school and municipal vehicle fleets.**

### DESCRIPTION OF ACTION

The town can lead by example in reducing emissions from the transportation sector by electrifying its municipal and school fleets. Electric vehicles reduce GHG emissions at least 50%, with a greater impact as our electricity supply becomes cleaner.

### CHAMPION

Sustainability Division, Department Heads, Concord-Carlisle Regional School District Transportation Office

### IMPLEMENTATION STEPS

### PLANNING CONSIDERATIONS

#### TIME FRAME

#### KEY PARTNERS

1. Conduct a fleet baseline by reviewing the existing vehicles, identifying mileage, fuel use, duty cycle and age. Review any past projects involving vehicle electrification for any best practices, such as the 2016 electric school bus pilot program with Concord Public Schools and funding from MassCEC.

**2020-2021**

- Sustainability Division
- Town Departments
- School District

2. Update Town Vehicle Policy to be an electric-first policy.

**2020-2021**

- Select Board & Town Manager
- Planning Board
- Public Works
- Fire-Rescue
- Police
- Schools
- Finance

3. Use fleet analysis to develop a vehicle transition plan.

- Develop a prioritized list of vehicles for replacement.
- Identify electric vehicle options that meet needs of current fleet vehicles.
- Identify other opportunities for efficiencies by adjusting routes or operational practices.
- Identify procurement implications, including vehicle costs, procurement method, and infrastructure requirement.

**2021-2022**

- Sustainability Division
- Town Departments
- School District

4. Identify priority locations (e.g. Schools, Municipal Buildings, Community Centers) for charging infrastructure.

- Conduct an electrical assessment of the sites to see if any infrastructure upgrades will be required to meet current and future charging demands, considering the addition of new fleet EVs.
- Determine the type of charging station that will be required to meet charging demand (Level 1, Level 2, or DCFC). Special consideration should be given to the fact that school buses have larger batteries than a typical EV and therefore will require higher charging capacities.

**2021-2025**

- Town Departments
- School District
- CMLP Engineering
- Concord Public Works
- Town Facilities Division
- School Facilities Team
- Information Technology

5. Conduct a Vehicle-to-Grid (V2G) pilot with the school bus fleet and/or the town Nissan LEAFs.

**2021-2023**

- CMLP Engineering
- Information Technology

## Implement a long-term plan to electrify school and municipal vehicle fleets.



IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	TIME FRAME	KEY PARTNERS
6. Track annual mileage and electricity consumption. <ul style="list-style-type: none"> <li>a. Ensure vehicles are being used in the most efficient way possible.</li> <li>b. Facilitate staff training on electric vehicle best practices.</li> <li>c. Schools operating electric buses should optimize their routes to maximize the number of students while minimizing miles driven to most efficiently optimize their bus fleet.</li> </ul>	2022+	<ul style="list-style-type: none"> <li>• Town Departments</li> <li>• School District</li> </ul>

FINANCING RESOURCES AND MECHANISMS
<ul style="list-style-type: none"> <li>• VW Settlement Funds</li> <li>• DOER Green Communities</li> <li>• MA Clean Cities</li> <li>• <a href="#">MassEVIP Fleet Incentives</a></li> <li>• Public-Private Partnerships</li> <li>• Public Access and Workplace Charging Incentives</li> </ul>

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
<ul style="list-style-type: none"> <li>• Vehicles with low annual mileage may have limited opportunity for operating cost savings.</li> <li>• Medium/Heavy duty electric vehicles options are limited and have high incremental costs.</li> <li>• Site upgrades may be required for charging infrastructure to be installed.</li> </ul>	<ul style="list-style-type: none"> <li>• School buses give all students the chance to experience riding in an electric vehicle.</li> <li>• Work with a phased approach and maximize grant funding to make best use of taxpayer funds.</li> <li>• EVs provide public health benefits through improved air quality and improved resiliency.</li> </ul>

TRACKING SUCCESS	ENGAGING THE COMMUNITY
Outputs: <ul style="list-style-type: none"> <li>• Increased % of EVs in town fleet</li> <li>• Increased # of e-miles driven</li> </ul>	<ul style="list-style-type: none"> <li>• Town and School District leading by example will complement town goal to accelerate adoption of EVs among residents and businesses.</li> <li>• Vehicles can be put on display at community events, parades, farmers markets, etc. to educate members of the community.</li> </ul>
Outcomes: <ul style="list-style-type: none"> <li>• Reduced GHG emissions from transportation sector</li> <li>• Reduced maintenance costs</li> <li>• Savings in Total Cost of Ownership</li> <li>• Improved air quality</li> </ul>	