

Electric Vehicles and the Town of Dalton



BACKGROUND

Dalton is the western-most Massachusetts town with a 2015 population of 6,572, and an area of 22 square miles. The Town's Green Dalton Committee focuses on improving Dalton's natural environment and promoting sustainability and Dalton was designated as a 2014 Massachusetts Green Community. The Town obtained its Electric Vehicles (EVs) from the Massachusetts Department of Environmental Protection's (MassDEP) Electric Vehicle Incentive Program (MassEVIP) with leadership from their Green Dalton Committee in 2015.

Town officials decided to work simultaneously with MassEVIP and Dalton's designation as a Green Community, which included funding for EVs, to replace two aging cars; an unmarked police car and a general-purpose car. Convincing town officials to acquire energy efficient EVs was a simple process due to the overwhelming cost benefits. The Town's municipal fleet of passenger vehicles, besides the police and fire vehicles, is now electrified, making Dalton a leader in fleet conversion by percentage.

EQUIPMENT AND SITE SELECTION

The Town received a MassEVIP incentive of \$23,500 for the EVs and a charging station, which they supplemented with Green Community funds making the two vehicles very affordable.

Dalton chose a Ford Fusion Plug-In Hybrid Electric Vehicle (PHEV) as its unmarked police car and a Ford Focus Battery Electric Vehicle (BEV) as its general purpose car. The Town chose a dealer on statewide contract VEH98 for the EV purchases to make procurement easier. The dealership received high praise for the transaction even though the dealership's distance from Dalton exceeded the range of the BEV, forcing the dealership to truck the car to Dalton. Vehicle servicing must be done an hour away in Northampton because the local Ford dealership does not yet have EV trained mechanics.

The largest debate centered on the location of the charging station. Town officials wanted to place the charger in a publically located municipal facility where users would be likely to park for long periods. However, the facility needed to be able to set aside parking spots for EVs only. Dalton's Senior Center was chosen over Town Hall because of a simpler installation process and it had more public parking spaces available for extended periods.

The Town valued choosing a local company, American made products, functionality, and affordability when selecting its charging station vendor. To install the charger, Dalton relied on local electricians, the highway department, and a local IT vendor. An unforeseen benefit to installing the charging station at the Senior Center, was that the charger installation necessitated the upgrade of the Senior Center's internet service.

RESULTS AND EXPERIENCES

Town personnel have had very positive reactions to the EVs and drivers report the BEV is fun to drive. Some challenges experienced by drivers have been related to winter driving, where the heating system depletes the battery faster; long excursions where planning for charging is required; and Dalton's location in the Berkshire Mountains which makes driving the BEV challenging because of steep inclines. The PHEV gets 40 miles to the gallon, making its fuel costs very low, on average \$32 of gasoline per month. Drivers have noted that the unmarked police PHEV's pickup is not as fast as a regular combustion engine car, a challenge for its role in policing.

Charging station usage has increased in both municipal and privately owned EVs, with nearly equal use by personal EVs and town EVs. The Town charges users \$1.50 per hour for charging at its station.

Over the two years since acquiring its EVs they have travelled a total of 2,694 miles on electricity alone. The cost to charge over the two years was \$88 total with an additional cost of \$182 for maintenance. 113 gallons of gasoline were saved over twenty-seven months, which translates to about \$260 saved at the pump and 2,213 pounds of greenhouse gas emissions avoided. In the future, Dalton would like to add more EVs to its fleet, perhaps in the form of maintenance vehicles, with the help of MassEVIP.

Dalton Fast Facts

- Population: 6,572
- Median Household Income: \$62,263
- EVs: 2
- Charging Stations: 1
- Estimated Gas Savings: \$260 over 27 months
- Estimated GHG Emissions Avoided: 2,213 pounds over 27 months

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