

2021 Transportation Technology Deployment Report:

Massachusetts Clean Cities
Expanded Edition

March 2022



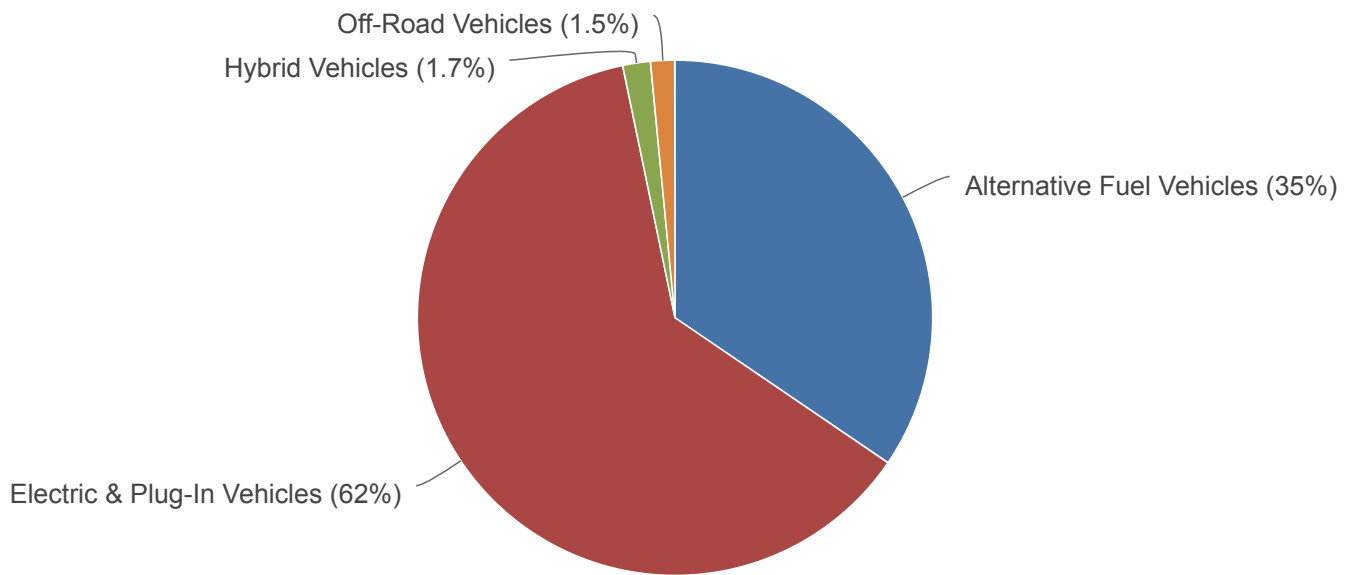
The U.S. Department of Energy's (DOE) Clean Cities Coalition Network fosters the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices. A national network of more than 75 active coalitions serve as the foundation of Clean Cities by working in communities across the country to implement alternative fuels, fuel-saving technologies and practices, and new mobility choices.

Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition directors, who lead the local coalitions, provide information and data via an online database managed by the National Renewable Energy Laboratory (NREL). The data characterize membership, funding, projects, and activities of the coalitions. The coalition directors also submit data on the sales of alternative fuels, deployment of alternative fuel vehicles, idle-reduction initiatives, fuel economy activities, and efforts to reduce vehicle miles traveled. NREL and DOE analyze the data and translate them into energy use impact, greenhouse gas reduction, and other metrics to show progress supporting the Clean Cities mission for individual coalitions and the network as a whole. This report summarizes those impacts for Massachusetts Clean Cities.

To view aggregated data for all local coalitions in the network, visit cleancities.energy.gov/accomplishments.

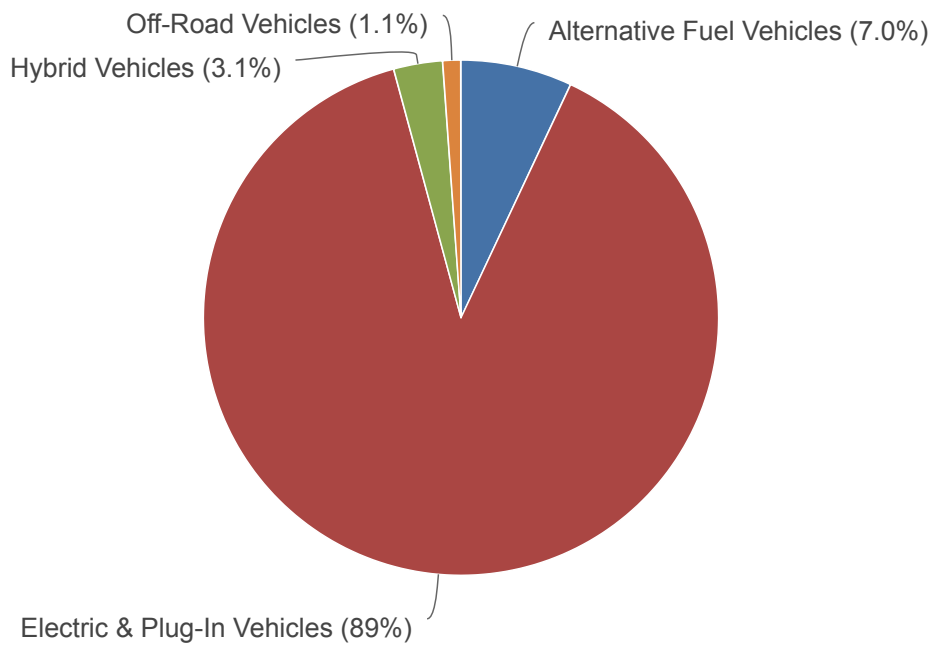
2021 Gallons of Gasoline Equivalent Reduced

1,903,311 gallons

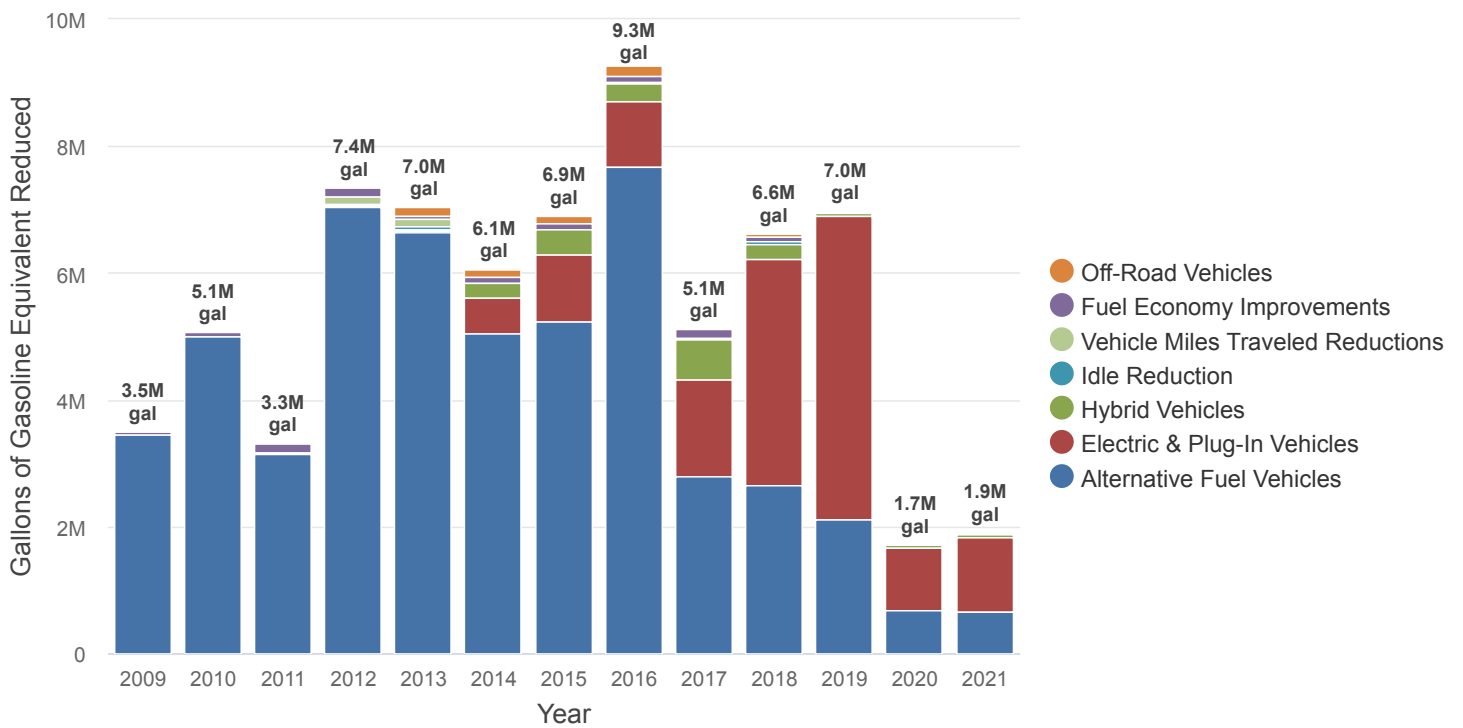


2021 Greenhouse Gas Emissions Reduced

12,781 tons



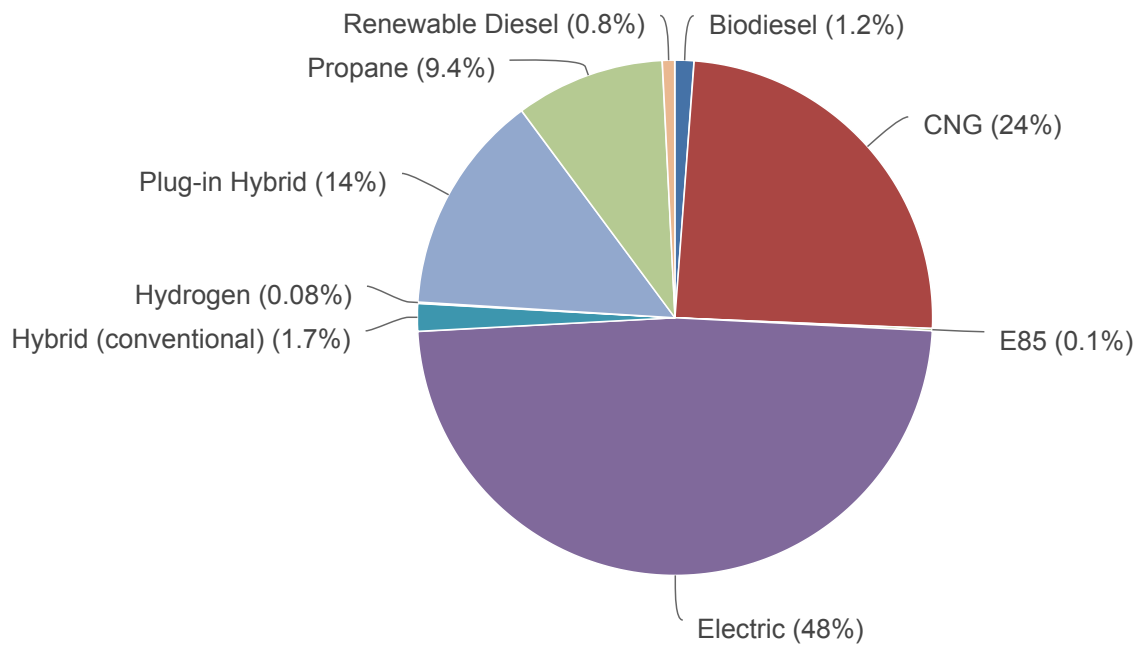
Historical Gallons of Gasoline Equivalent Reduced



Historical Greenhouse Gas Emissions Reduced

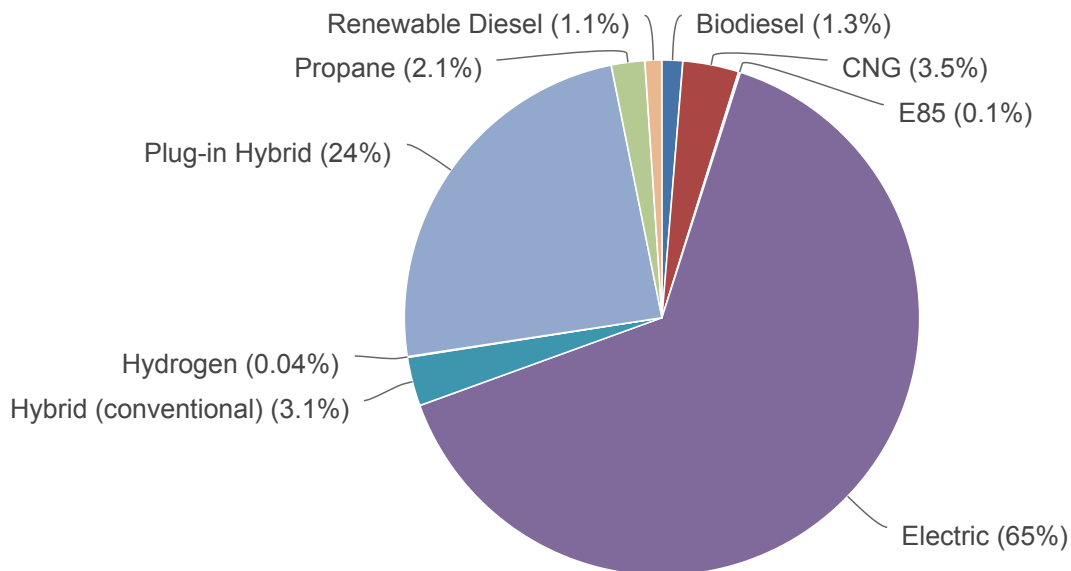
2021 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

1,903,127 gallons



2021 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

12,779 tons



Criteria Pollutant Emissions Reduced

Criteria pollutants are chemicals that have been linked to human health effects and therefore regulated in the Clean Air Act of 1970. Criteria pollutants include nitrogen oxides (NOx) and volatile organic compounds (VOC), both precursors to ozone pollution or smog. They also include particulate matter (PM) grouped into 10 and 2.5 micron sizes. The Clean Cities annual report calculates them using the same assumptions and default values as AFLEET 2016, with some adjustments to fit specific data inputs. They are quantified at vehicle tailpipes, as those are the emissions contributing to the regulated "ambient" air quality of a given city. Upstream emissions from electric power plants, refineries, and biofuel feedstock farms are not included in this summary since those operations typically do not take place in or near population centers where the vehicles are operated and health effects can be documented. When a specific pollutant surpasses a given threshold for a given area, the area is considered to be in "nonattainment" for that pollutant. Nonattainment areas for given pollutants can be viewed at www.epa.gov/green-book. To learn more about what your emissions numbers mean, please take the Understanding Emissions or Emissions Compliance courses at [Clean Cities University](http://CleanCitiesUniversity.com).

Reductions by Technology	CO	NOx	VOC*	PM10	PM2.5
Alternative Fuel Vehicles - Biodiesel	0 lb	0 lb	11 lb	0 lb	0 lb
Alternative Fuel Vehicles - CNG	8,433 lb	573 lb	553 lb	51 lb	28 lb
Alternative Fuel Vehicles - E85	0 lb	0 lb	2 lb	0 lb	0 lb
Alternative Fuel Vehicles - Hydrogen	61 lb	3 lb	3 lb	0 lb	0 lb
Alternative Fuel Vehicles - Propane	0 lb	0 lb	1,163 lb	0 lb	0 lb
Electric, Hybrid & Plug-in Vehicles - Electric	153,501 lb	6,945 lb	11,193 lb	715 lb	379 lb
Electric, Hybrid & Plug-in Vehicles - HEV	5,799 lb	265 lb	371 lb	49 lb	20 lb
Electric, Hybrid & Plug-in Vehicles - PHEV	41,056 lb	1,823 lb	3,628 lb	354 lb	142 lb
Off-Road Vehicles	441 lb	26 lb	24 lb	1 lb	1 lb
Total:	209,290 lb	9,635 lb	16,948 lb	1,171 lb	570 lb

* VOC is interchangeable with NMOG (non-methane organic gases) and NMHC (non-methane hydrocarbons) for all purposes relevant to the Clean Cities suite of technologies.

COALITION

Massachusetts Clean Cities - MA

<http://www.mass.gov/energy/cleancities>

Designated: 03/18/1994

Boundaries: Entire state of Massachusetts

DIRECTORS

Number of coalition directors	1
Coalition director(s) hours per week on Clean Cities	40 hours
Other staff hours per week on Clean Cities	0 hours
How long have you been the coalition director?	1 year

OPERATING INFORMATION

Coalition organizational structure	Hosted in a state government agency
Does the coalition have a non-profit governing board?	-
Does the coalition have a non-governing advisory committee?	-

Stakeholders

Number of stakeholders	1,918
Number of private stakeholders	0
Stakeholder counting notes	
Does the State Energy Office provide any financial support to the coalition or stakeholders?	No
How do you obtain most of your data for the survey?	Coalition records, Online questionnaire to stakeholders (SurveyMonkey, Google Forms, etc), Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders
Has your coalition registered with www.grants.gov ?	Yes

2021 Outside Funding

Stakeholder dues collected	\$0
How much funding is obtained from other sources to cover coalition operating expenses?	\$0
Non-DOE or ARRA grant and matching funds spent in 2021	\$0
Total non-DOE or ARRA funding in 2021	\$0

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles