

2019 Transportation Technology Deployment Report:

Massachusetts Clean Cities
Expanded Edition

March 2020



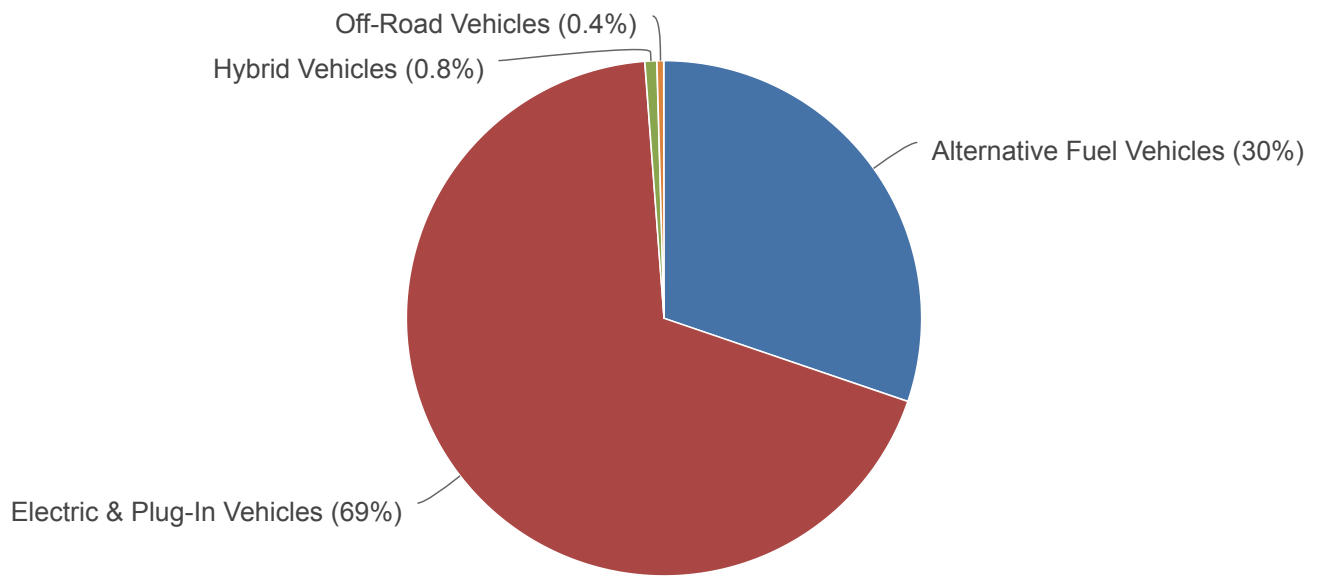
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and new transportation technologies, as they emerge.

Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition coordinators, 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 coordinators also submit data on the sales of alternative fuels, deployment of alternative fuel vehicles and hybrid electric vehicles, idle-reduction initiatives, fuel economy activities, and programs to reduce vehicle miles traveled. NREL and DOE analyze the data and translate them into petroleum-use and greenhouse gas reduction impacts for individual coalitions and the program as a whole. This report summarizes those impacts for .

To view aggregated data for all local coalitions that participate in the Clean Cities program, visit cleancities.energy.gov/accomplishments.

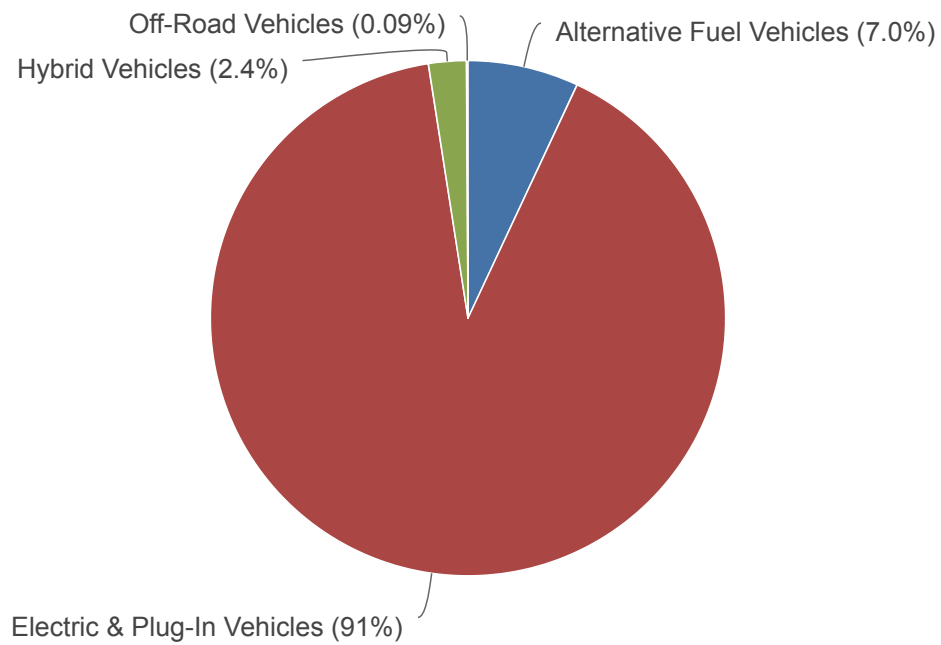
2019 Gallons of Gasoline Equivalent Reduced

6,975,049 gallons

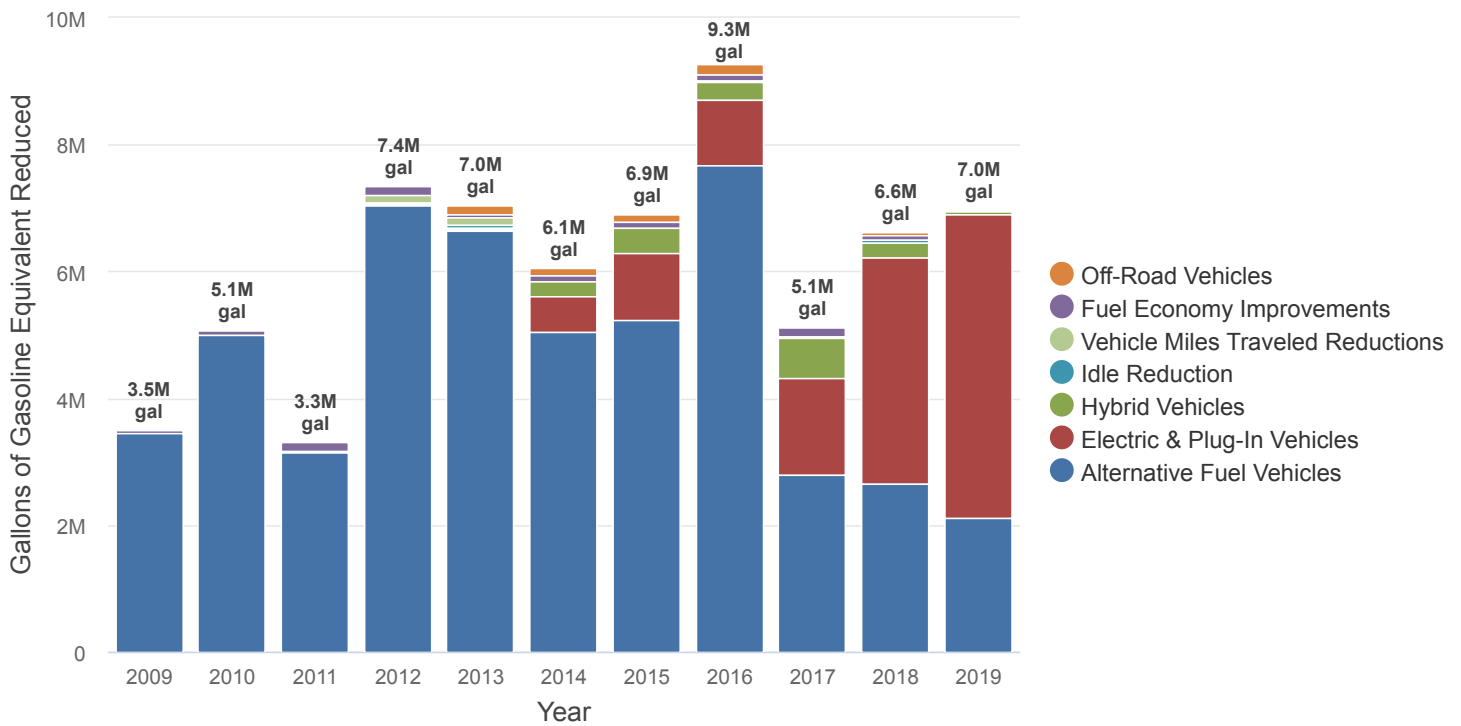


2019 Greenhouse Gas Emissions Reduced

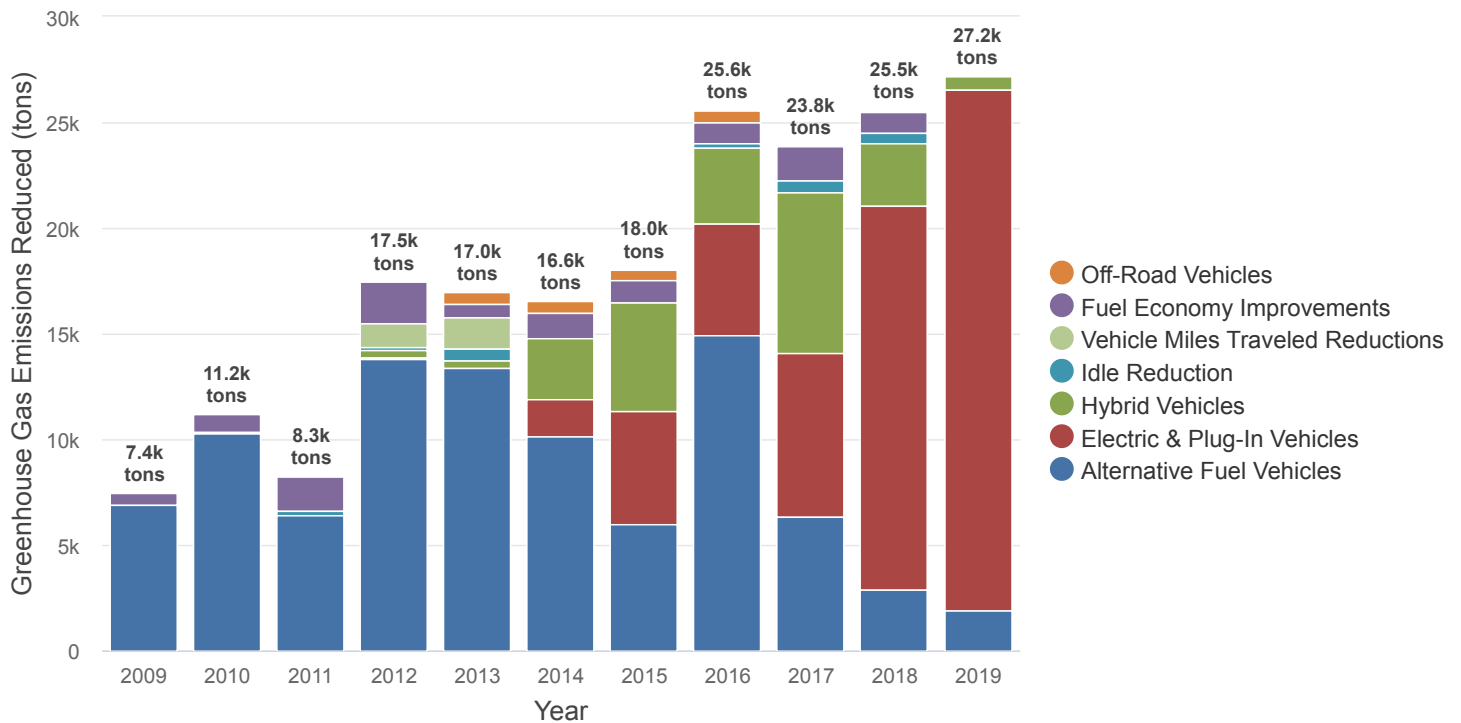
27,216 tons



Historical Gallons of Gasoline Equivalent Reduced

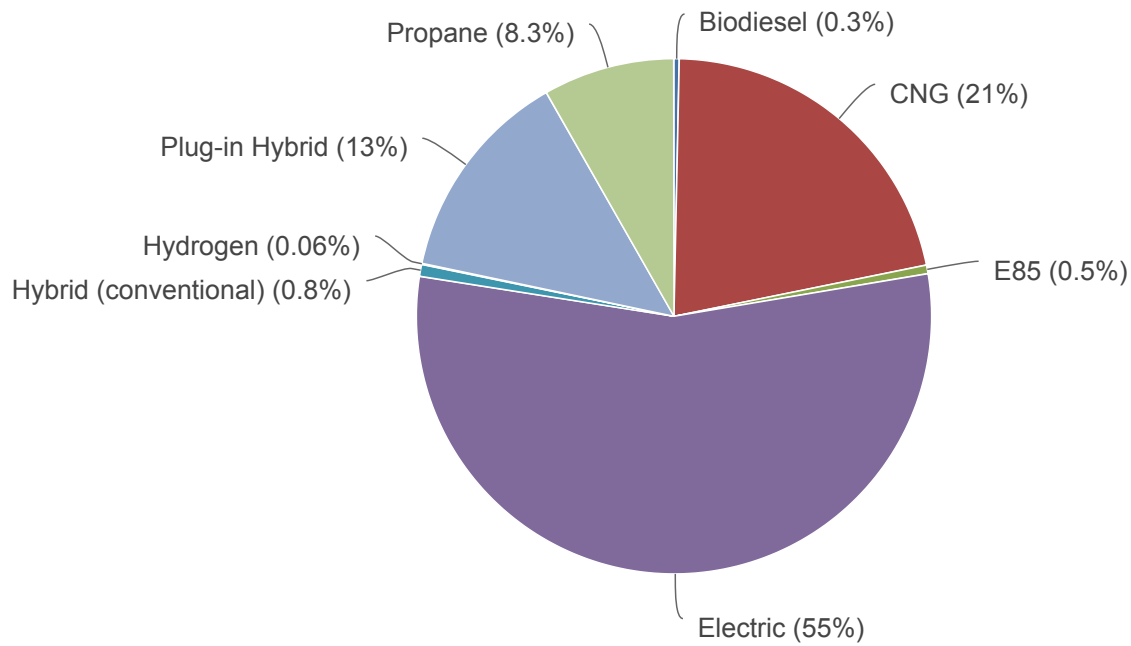


Historical Greenhouse Gas Emissions Reduced



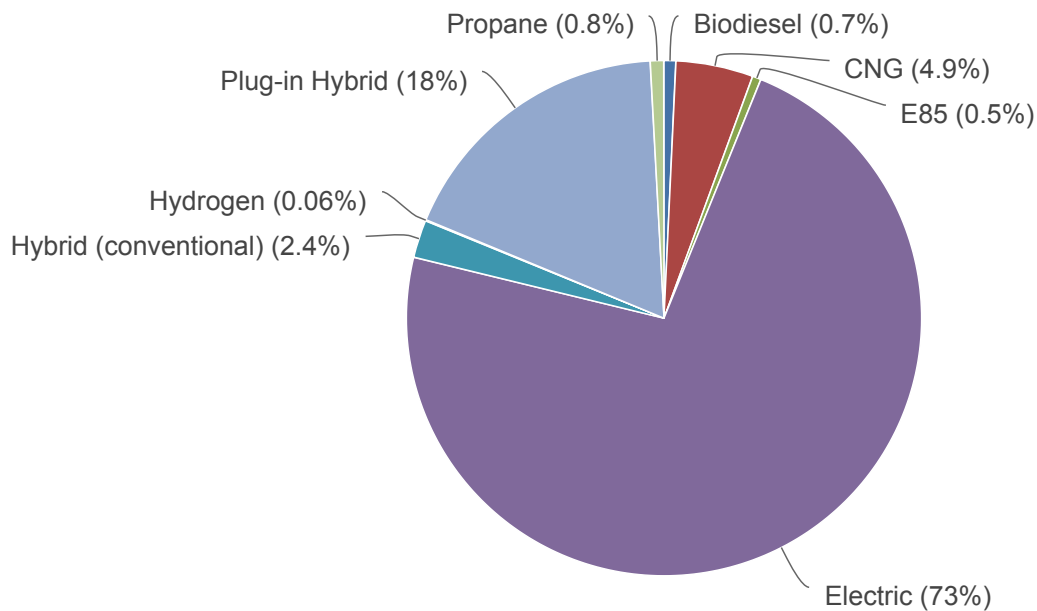
2019 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

6,974,872 gallons



2019 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

27,213 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. Carbon Monoxide benefits are not included since no Clean Cities coalitions are in nonattainment areas for CO. To learn more about what your emissions numbers mean, please take the Understanding Emissions or Emissions Compliance courses at [Clean Cities University](http://CleanCitiesUniversity.org).

Reductions by Technology*	NOx	VOC**	PM10	PM2.5
CNG - Compressed Natural Gas	64,590 lb	137 lb	3 lb	2 lb
E85 - 85% Ethanol	0 lb	11 lb	0 lb	0 lb
Electric (all-electric)	29,203 lb	25,035 lb	774 lb	716 lb
Hybrid (conventional)	5,194 lb	127 lb	10 lb	7 lb
Hydrogen	42 lb	1 lb	0 lb	0 lb
Plug-in Hybrid	9,889 lb	15,234 lb	437 lb	404 lb
Propane	29,340 lb	-4,833 lb	13 lb	16 lb
Total:	138,258 lb	35,711 lb	1,236 lb	1,146 lb

* This table accounts for criteria pollutants from alternative fuel vehicle, hybrid vehicle, and VMT reduction projects only. It does not include fuel economy, idle reduction, or off-road projects. Negative values indicate an increase in emissions.

** 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

COORDINATORS

	Address	Telephone	Fax
John Liriano	Massachusetts Department of Energy Resources 100 Cambridge Street, Suite 1020 Boston, MA 02114	617-851-1457	
Mike Manning	C-6 Shipway Pl Boston, MA 02129	617-242-8755 x14	617-242-0814

Number of coordinators	2
Coordinator(s) hours per week on Clean Cities	45 hours
Other staff hours per week on Clean Cities	20 hours
How long have you been the coordinator?	10 years

OPERATING INFORMATION

Coalition organizational structure	Hosted in a state government agency
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Stakeholders

Number of stakeholders	385
Number of private stakeholders	275
Does the State Energy Office provide any financial support to the coalition or stakeholders?	Yes
Explain State Energy Office's support	
Salary, office space, and admin support	
How would you rate the quality of the data on your survey?	Fair
How do you obtain most of your data for the survey?	Coalition records, Estimates, Paper, e-mail, or spreadsheet questionnaire to stakeholders
Has your coalition registered with www.grants.gov ?	Yes

2019 Outside Funding

Stakeholder dues collected	\$0
How much funding is obtained from other sources to cover coalition operating expenses?	-
Non-DOE or ARRA grant and matching funds spent in 2019	\$31,215,700
Total non-DOE or ARRA funding in 2019	\$31,215,700

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