

2020 Transportation Technology Deployment Report:

Vermont Clean Cities
Expanded Edition

March 2021



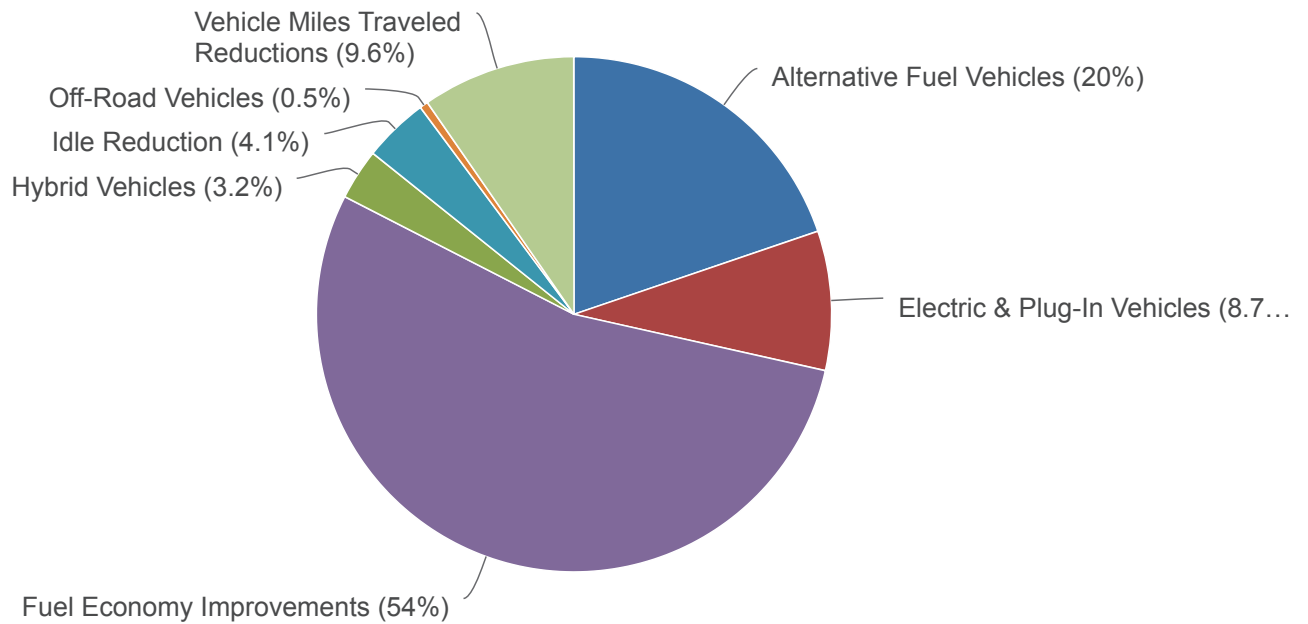
The U.S. Department of Energy's (DOE) Clean Cities Coalition Network fosters the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices. A national network of more than 75 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 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, 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 .

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

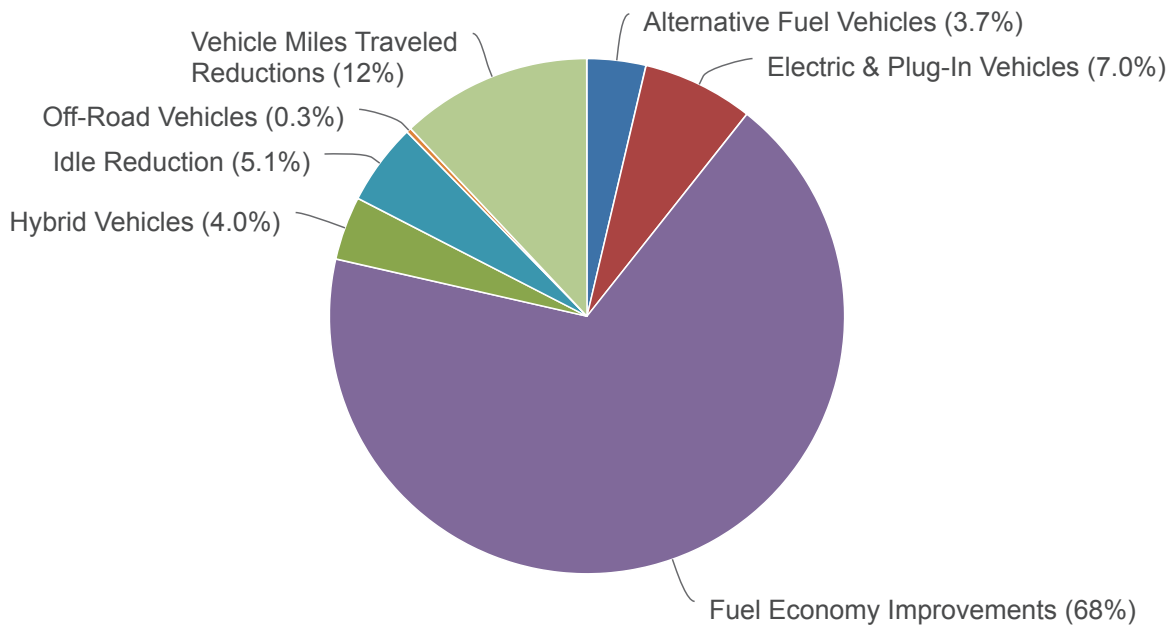
2020 Gallons of Gasoline Equivalent Reduced

1,536,459 gallons

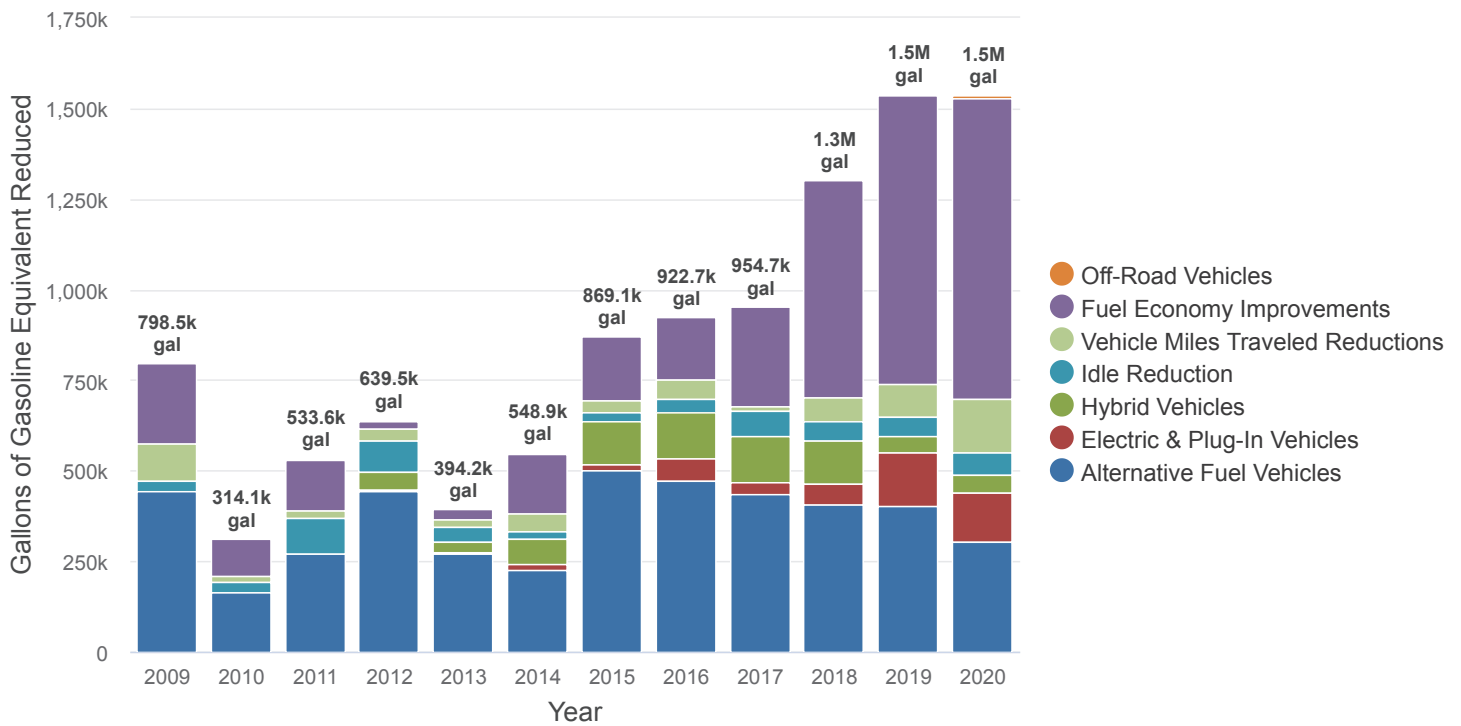


2020 Greenhouse Gas Emissions Reduced

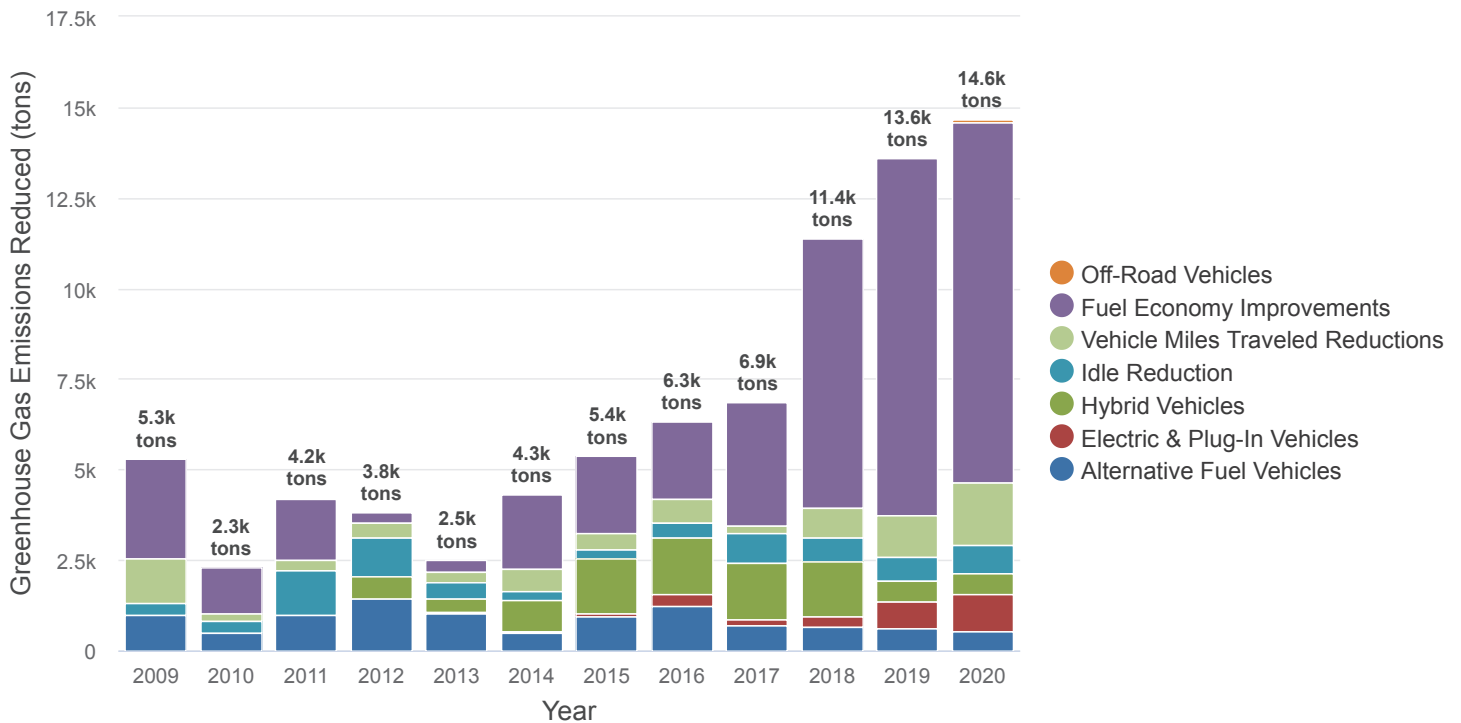
14,647 tons



Historical Gallons of Gasoline Equivalent Reduced

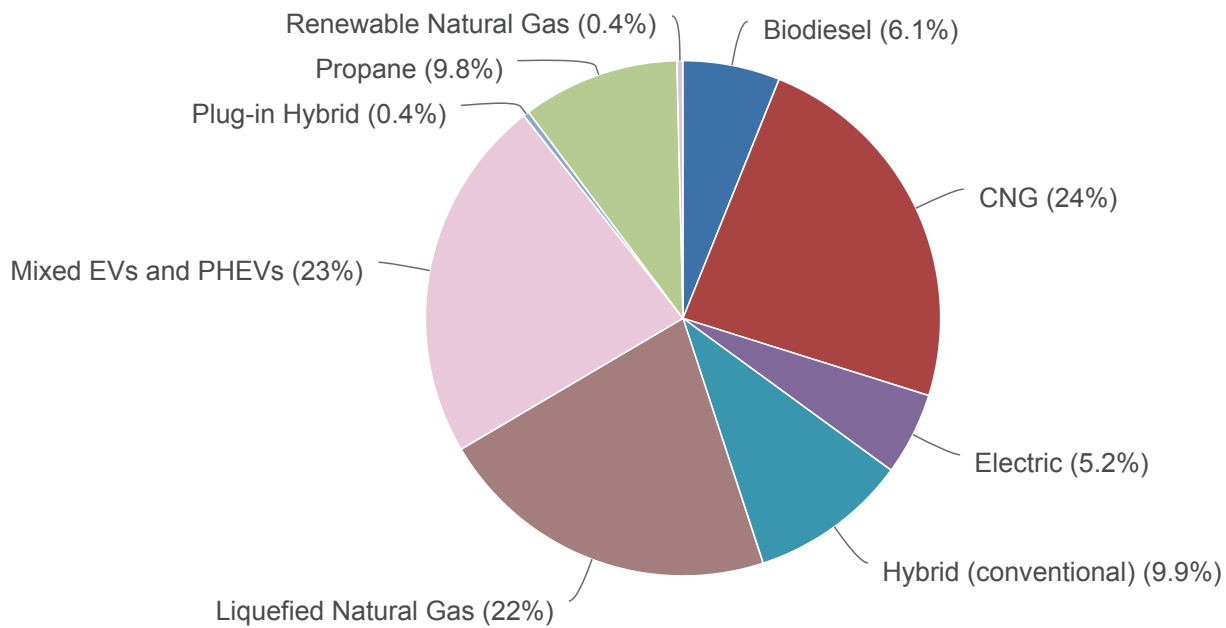


Historical Greenhouse Gas Emissions Reduced



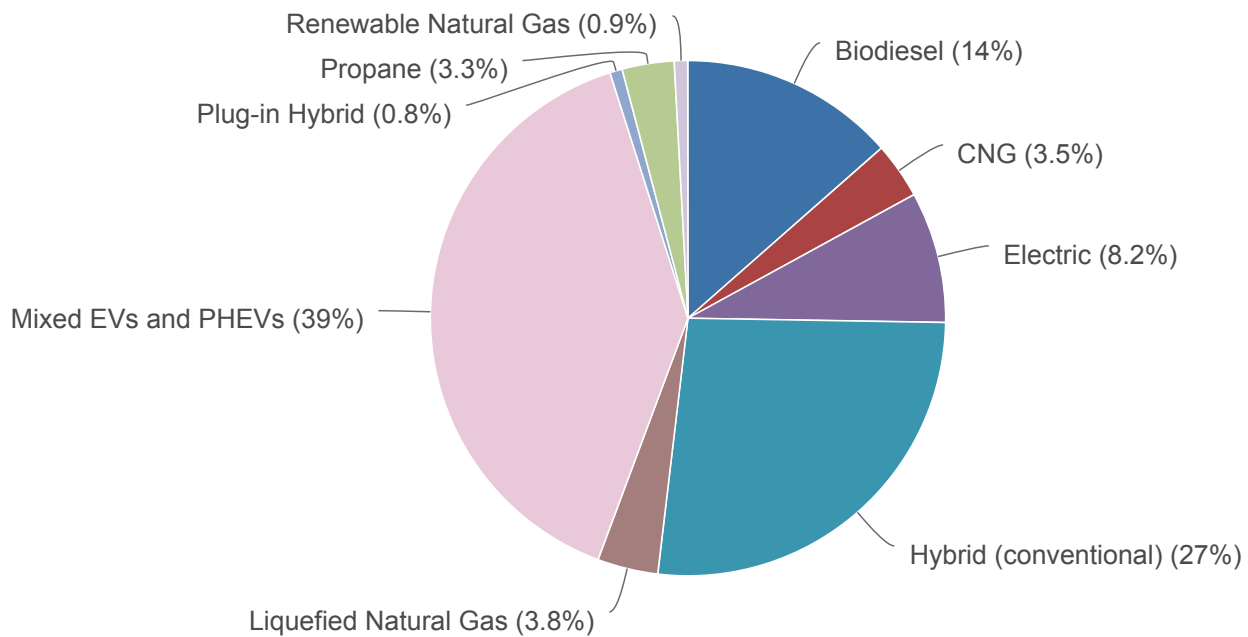
2020 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

495,435 gallons



2020 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

2,191 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	3,941 lb	2 lb	0 lb	0 lb
Electric (all-electric)	146 lb	112 lb	4 lb	3 lb
Hybrid (conventional)	84 lb	225 lb	0 lb	0 lb
LNG - Liquefied Natural Gas	6,994 lb	0 lb	0 lb	0 lb
Mixed EVs and PHEVs	294 lb	504 lb	11 lb	10 lb
Plug-in Hybrid	24 lb	37 lb	1 lb	1 lb
Propane	0 lb	19 lb	0 lb	0 lb
VMT Reduction (Diesel)	430 lb	9 lb	12 lb	3 lb
VMT Reduction (Gasoline)	572 lb	915 lb	230 lb	50 lb
Total:	12,485 lb	1,821 lb	258 lb	68 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.