

2019 Transportation Technology Deployment Report:

Denver Metro Clean Cities Coalition

Public Edition – July 2020



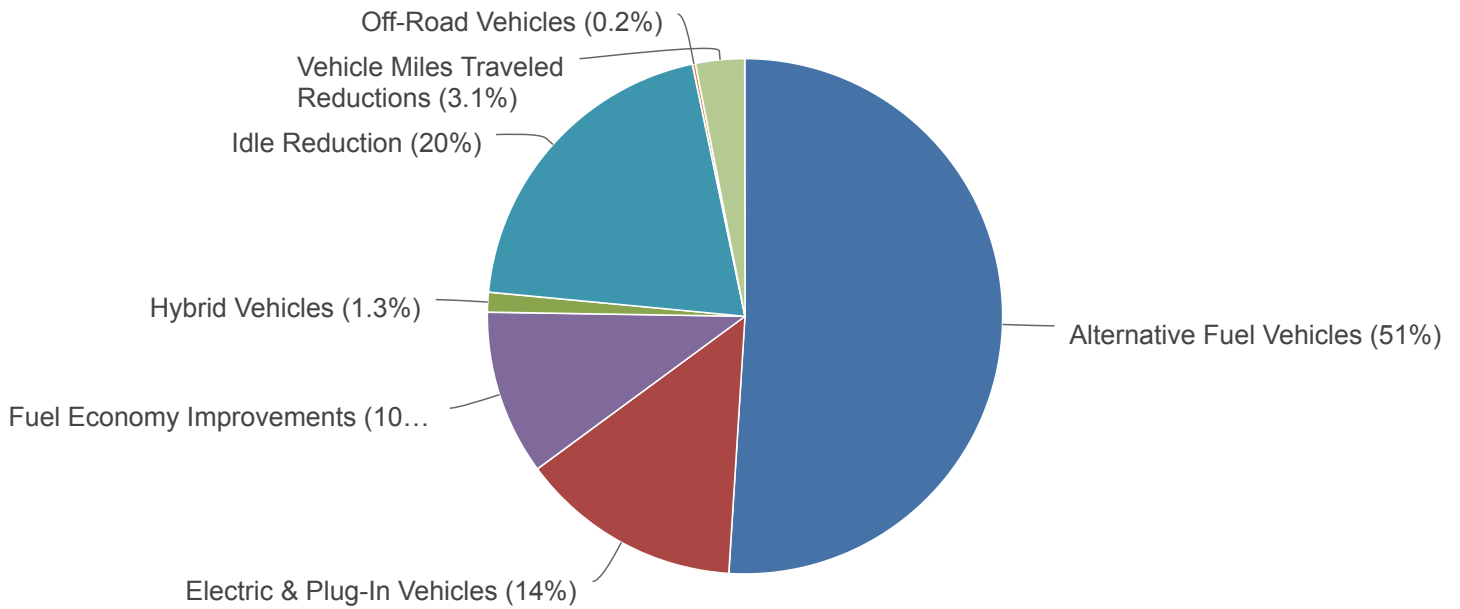
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and 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.

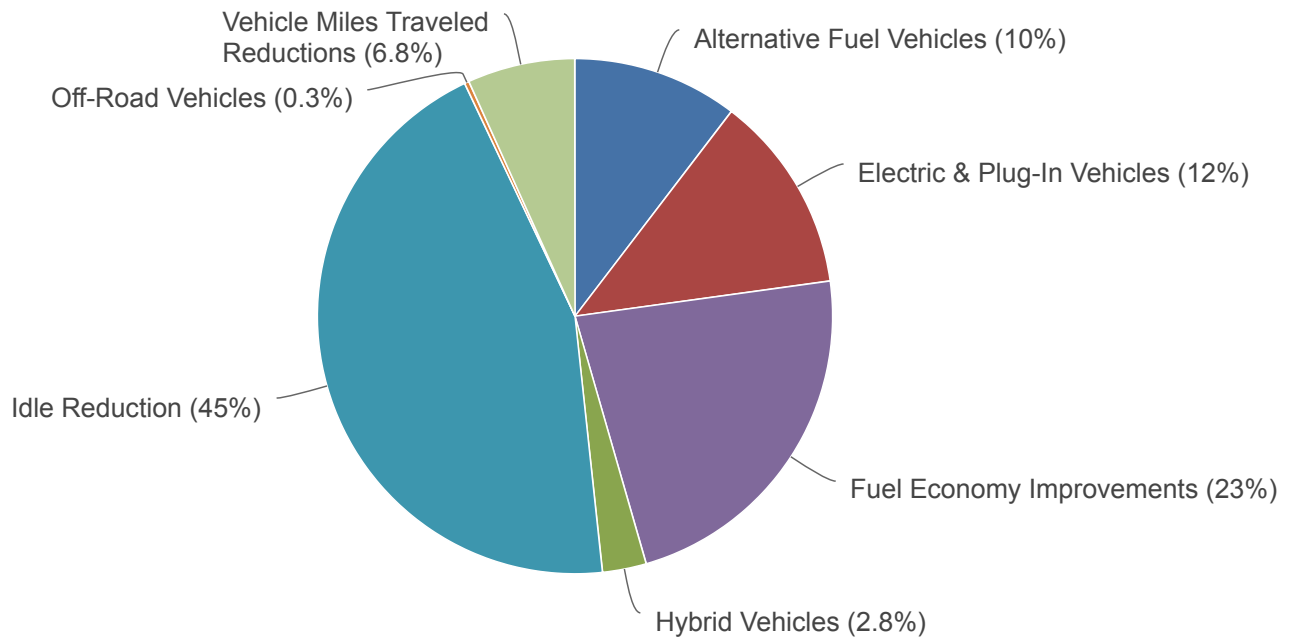
2019 Gallons of Gasoline Equivalent Reduced

12,425,120 gallons

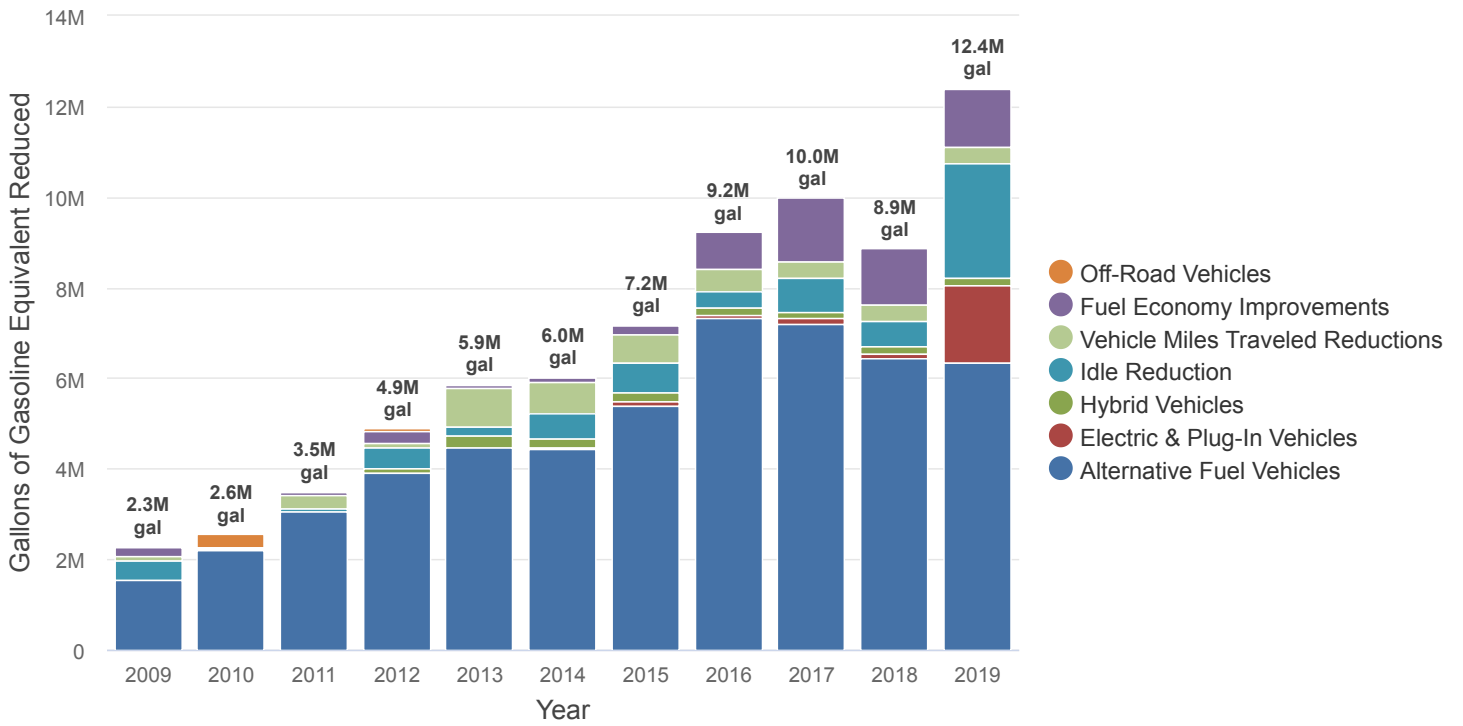


2019 Greenhouse Gas Emissions Reduced

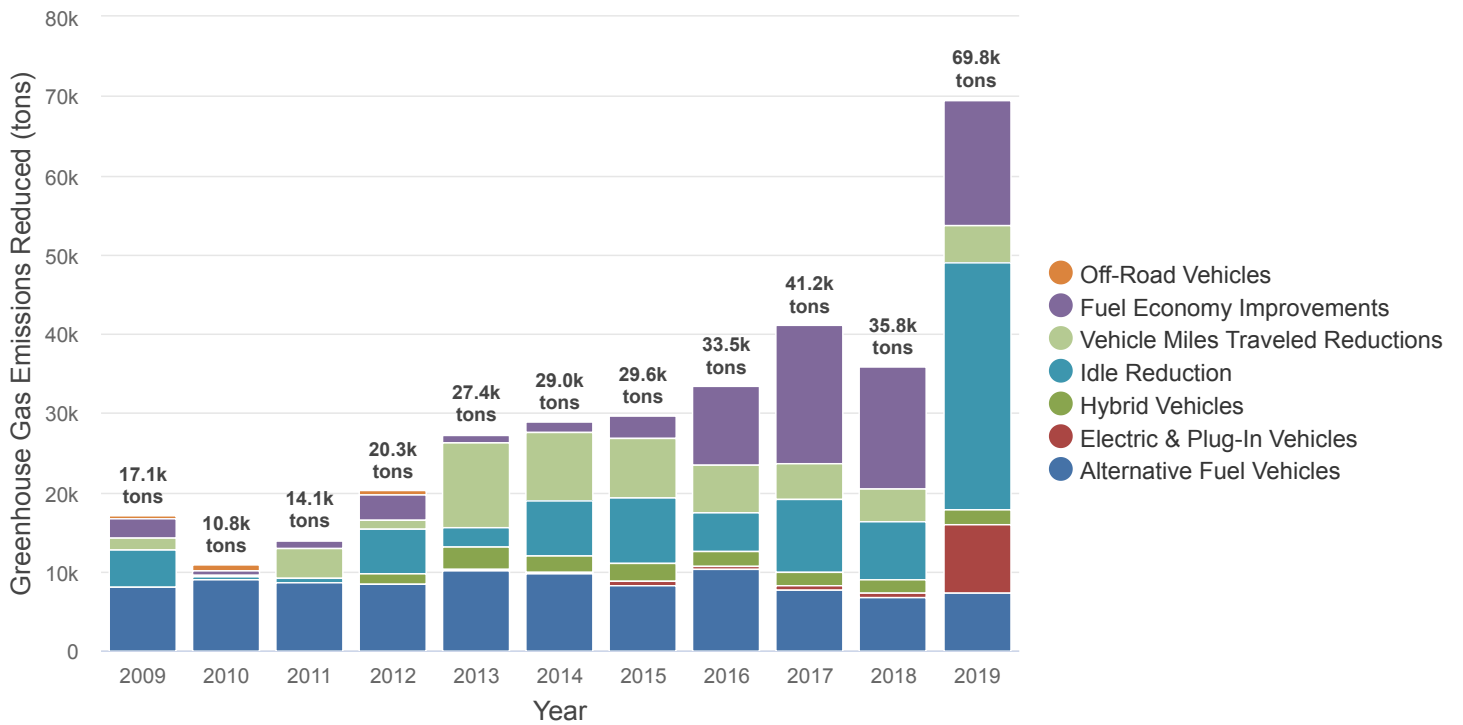
69,762 tons



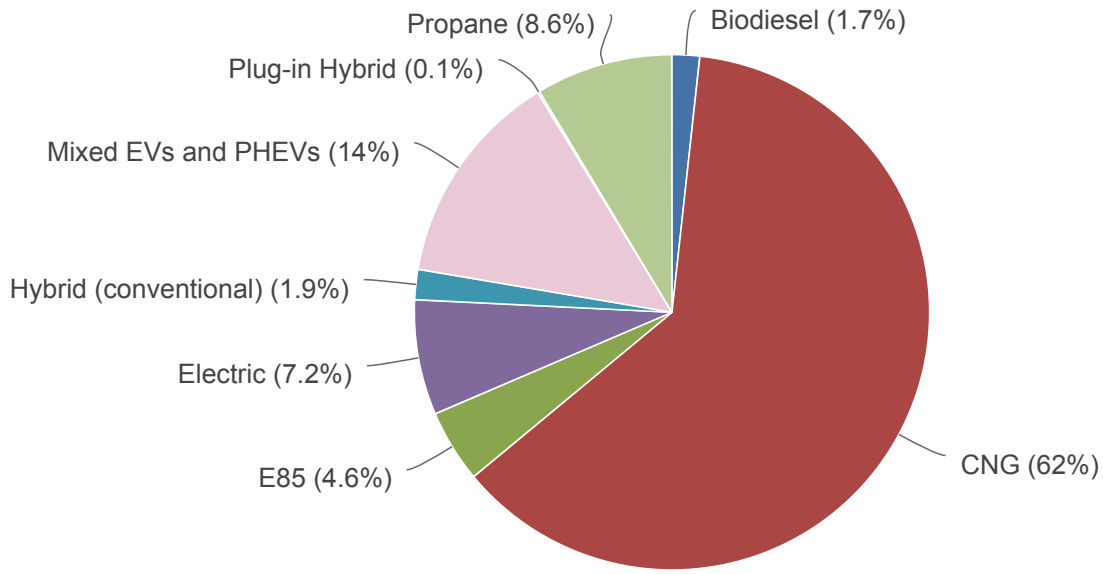
Historical Gallons of Gasoline Equivalent Reduced



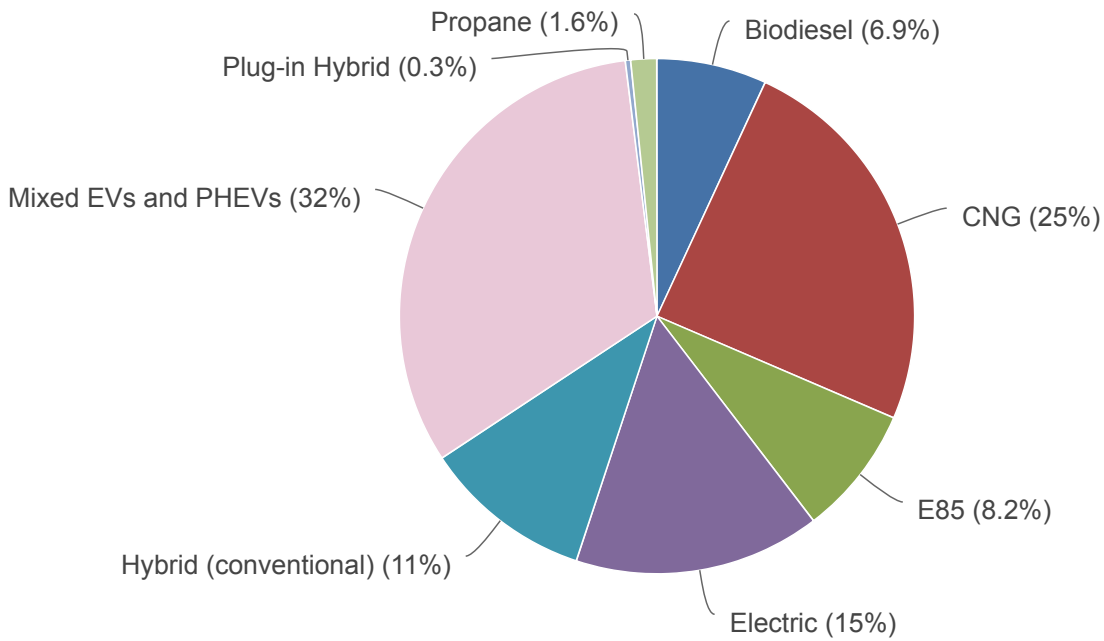
Historical Greenhouse Gas Emissions Reduced



2019 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects
8,245,545 gallons



2019 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects
18,038 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.com).

Reductions by Technology*	NOx	VOC**	PM10	PM2.5
CNG - Compressed Natural Gas	209,760 lb	227 lb	24 lb	19 lb
E85 - 85% Ethanol	0 lb	90 lb	0 lb	0 lb
Electric (all-electric)	8,954 lb	2,842 lb	108 lb	97 lb
Hybrid (conventional)	326 lb	805 lb	0 lb	0 lb
Mixed EVs and PHEVs	4,589 lb	7,619 lb	176 lb	163 lb
Plug-in Hybrid	92 lb	118 lb	4 lb	4 lb
Propane	38,474 lb	-5,282 lb	90 lb	33 lb
VMT Reduction (Gasoline)	1,823 lb	2,913 lb	731 lb	160 lb
Total:	264,019 lb	9,331 lb	1,133 lb	475 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.