

2023 Transportation Technology Deployment Report:

Drive Clean Colorado Expanded Edition

March 2024



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.

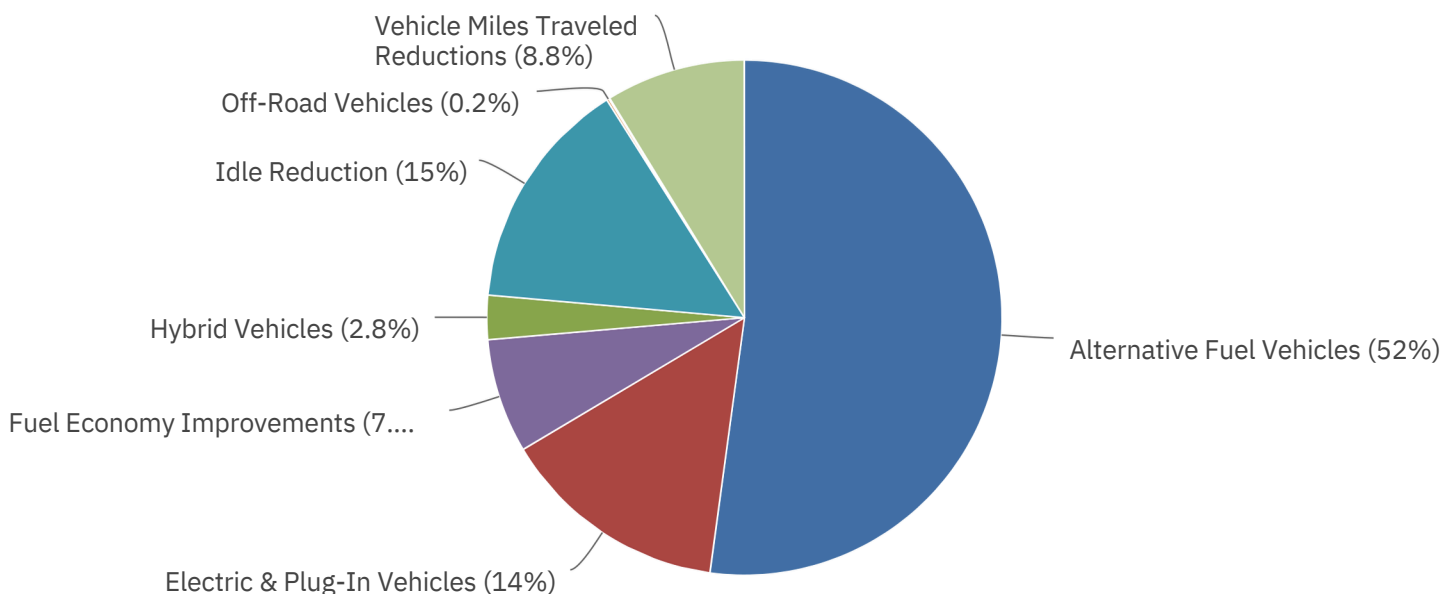
Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition directors, who lead the local coalitions, provide information and data via an online database managed by the National Renewable Energy Laboratory (NREL). 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 Drive Clean Colorado.

To view aggregated data for all local coalitions in the network, visit

cleancities.energy.gov/accomplishments.

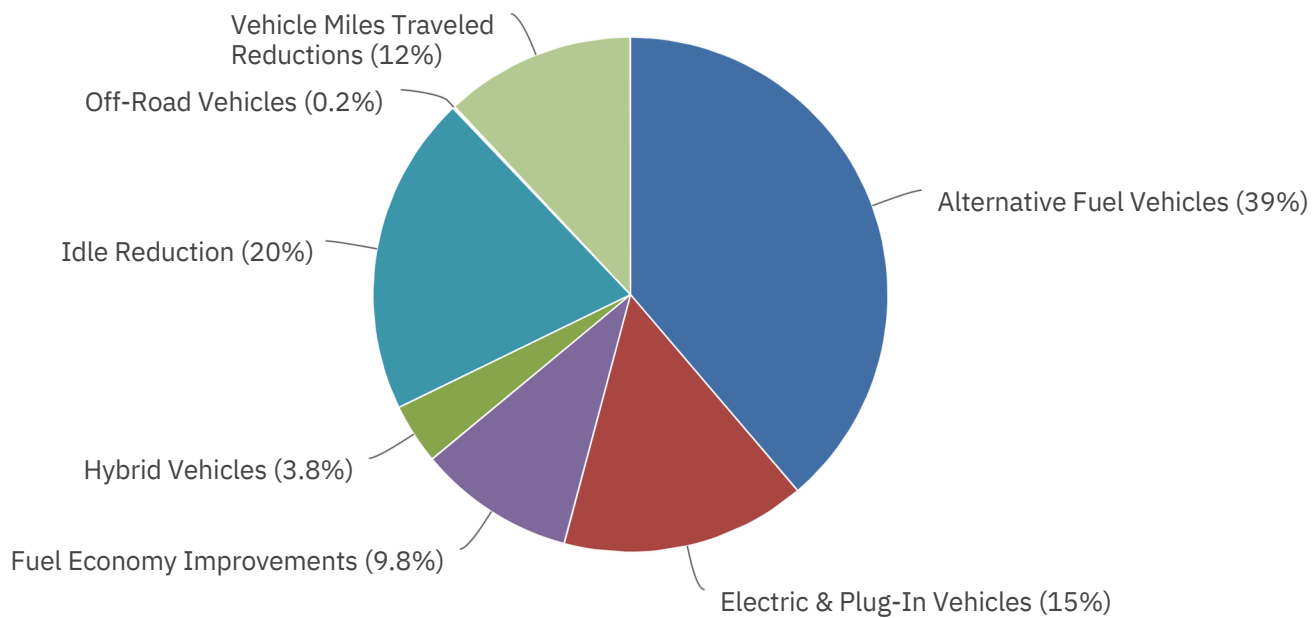
2023 Gallons of Gasoline Equivalent Reduced

19,156,454 gallons

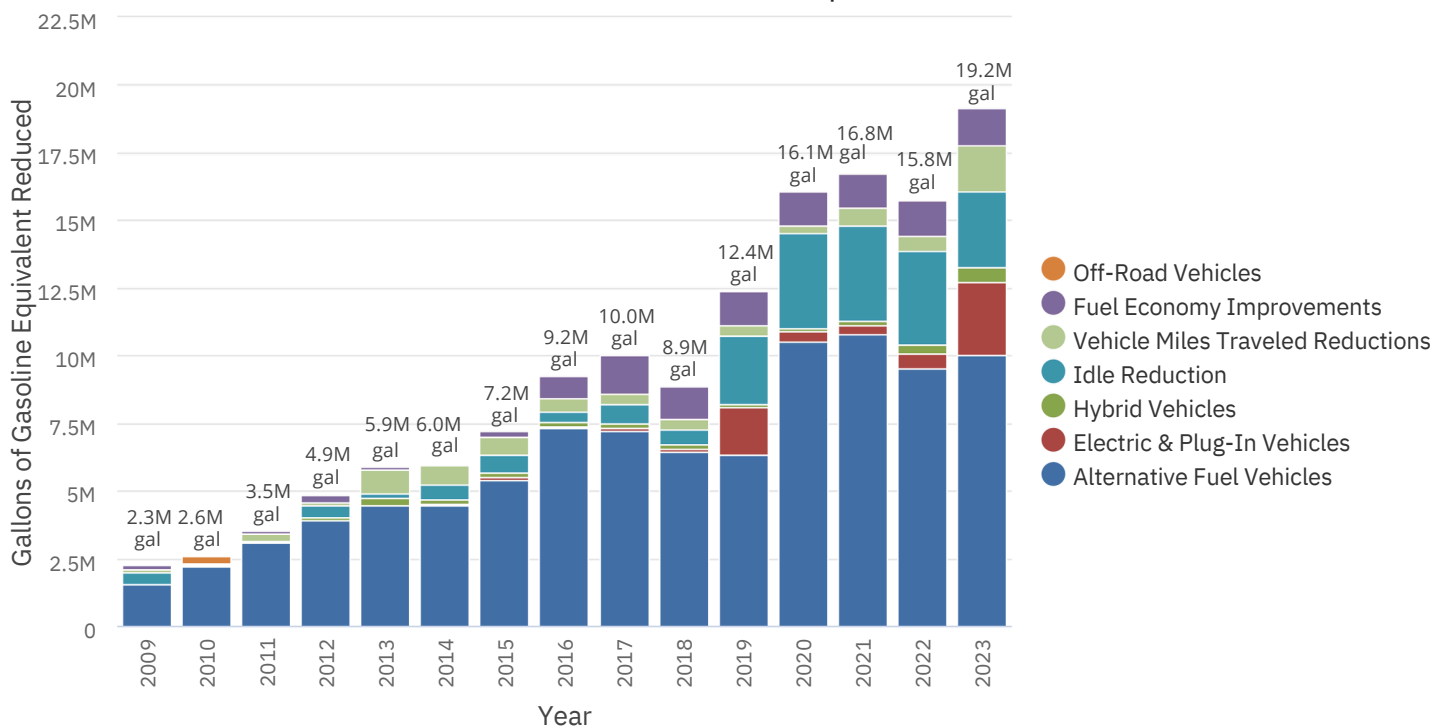


2023 Greenhouse Gas Emissions Reduced

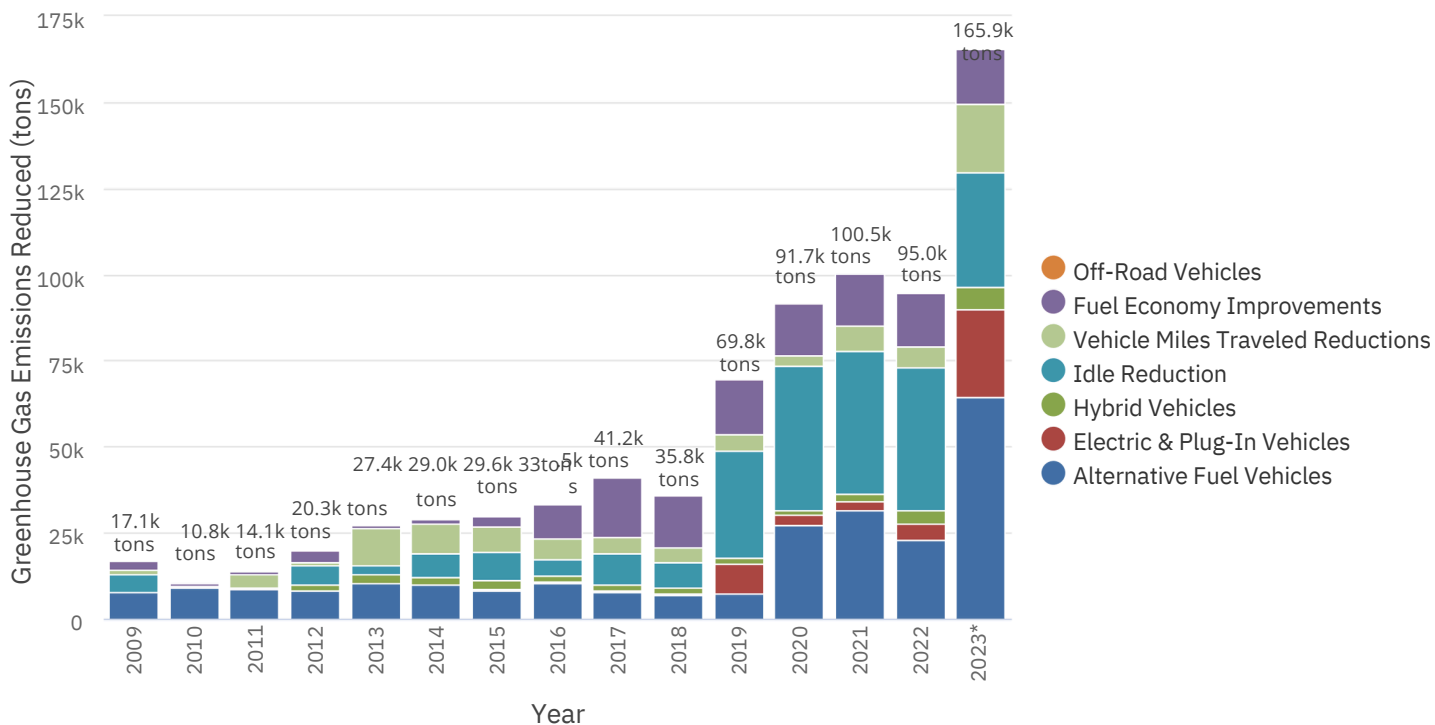
165,948 tons



Historical Gallons of Gasoline Equivalent Reduced



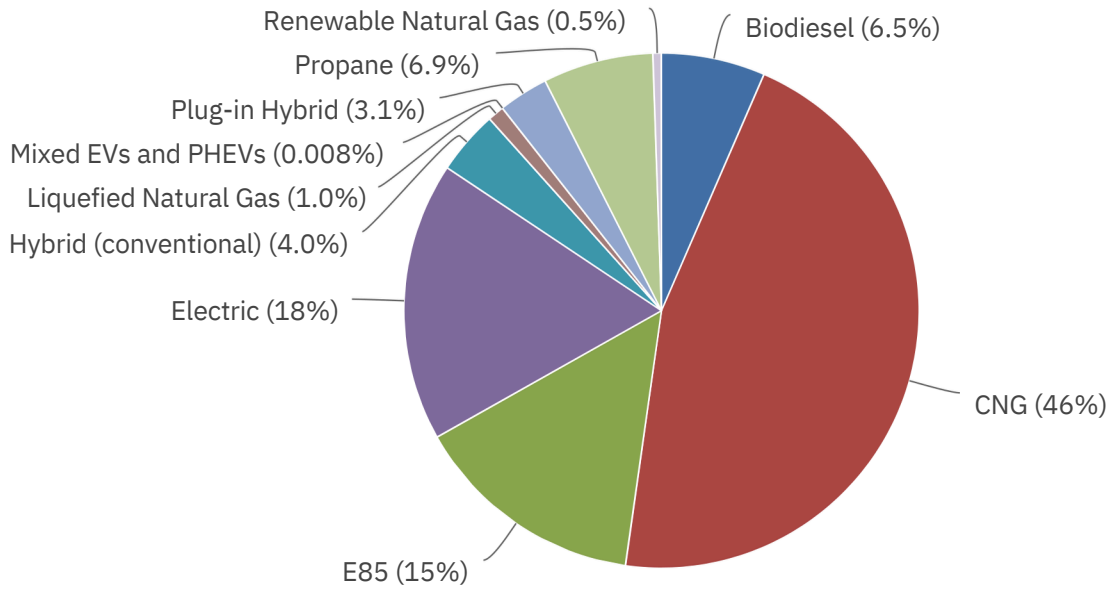
Historical Greenhouse Gas Emissions Reduced



* GHGs displaced from CNG and LNG projects increased in 2023 because Clean Cities and Communities began accounting for the RNG sold into the vehicle fuel market through trading mechanisms set up through the Renewable Fuel Standard and the California Low Carbon Fuel Standard. Please see the Clean Cities and Communities Coalitions 2023 Annual Activity Report for details as to how and why this was allocated.

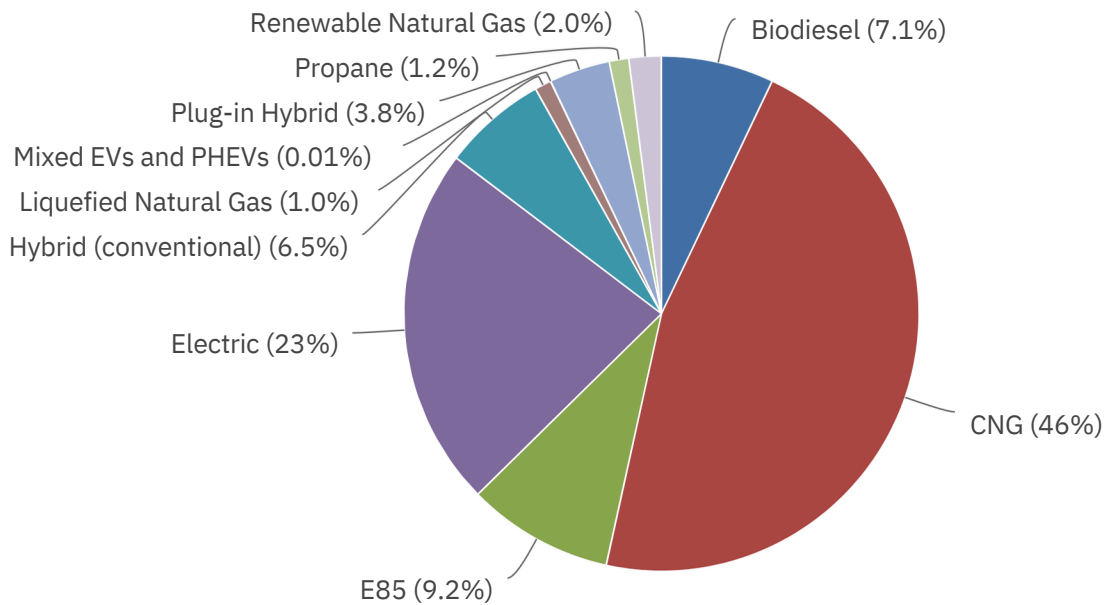
2023 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

13,302,339 gallons



2023 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

96,436 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 and Communities 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 and Communities eLearning](#).

Reductions by Technology	CO	NOx	VOC*	PM10	PM2.5
Alternative Fuel Vehicles - Biodiesel	-380 lb	-7 lb	330 lb	0 lb	0 lb
Alternative Fuel Vehicles - CNG	368,214 lb	7,838 lb	38,755 lb	667 lb	-39 lb
Alternative Fuel Vehicles - E85	-162 lb	-5 lb	2,682 lb	-3 lb	-1 lb
Alternative Fuel Vehicles - Hydrogen	11 lb	0 lb	1 lb	0 lb	0 lb
Alternative Fuel Vehicles - LNG	9,510 lb	201 lb	811 lb	16 lb	-1 lb
Alternative Fuel Vehicles - Propane	6,583 lb	126 lb	8,048 lb	-6 lb	-5 lb
Alternative Fuel Vehicles - Renewable Natural Gas	4,936 lb	105 lb	421 lb	8 lb	-1 lb
Electric, Hybrid & Plug-in Vehicles - EV & PHEV Mixed	174 lb	5 lb	15 lb	2 lb	0 lb
Electric, Hybrid & Plug-in Vehicles - Electric	407,565 lb	11,969 lb	29,482 lb	3,167 lb	599 lb
Electric, Hybrid & Plug-in Vehicles - HEV	106,015 lb	3,033 lb	6,320 lb	1,146 lb	238 lb
Electric, Hybrid & Plug-in Vehicles - PHEV	65,762 lb	1,977 lb	5,515 lb	478 lb	89 lb
Fuel Economy Improvements	279,240 lb	7,960 lb	16,162 lb	2,983 lb	616 lb
Idle Reduction	647,753 lb	18,031 lb	30,225 lb	6,386 lb	1,291 lb
Off-Road Vehicles	1,553 lb	43 lb	156 lb	8 lb	1 lb
Truck Stop Electrification	633 lb	17 lb	27 lb	6 lb	1 lb
Vehicle Miles Traveled Reductions	267,210 lb	8,018 lb	22,195 lb	3,348 lb	719 lb
Total:	2,164,619 lb	59,311 lb	161,145 lb	18,206 lb	3,507 lb

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