

2018 Transportation Technology Deployment Report:

Central Coast Clean Cities

Expanded Edition

March 2019

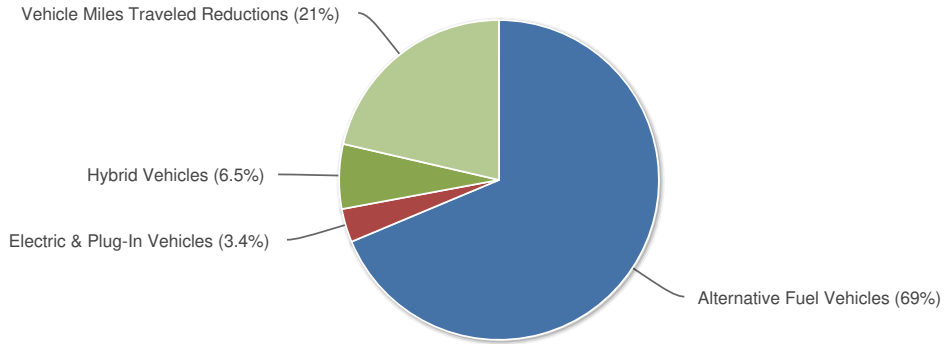


The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and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

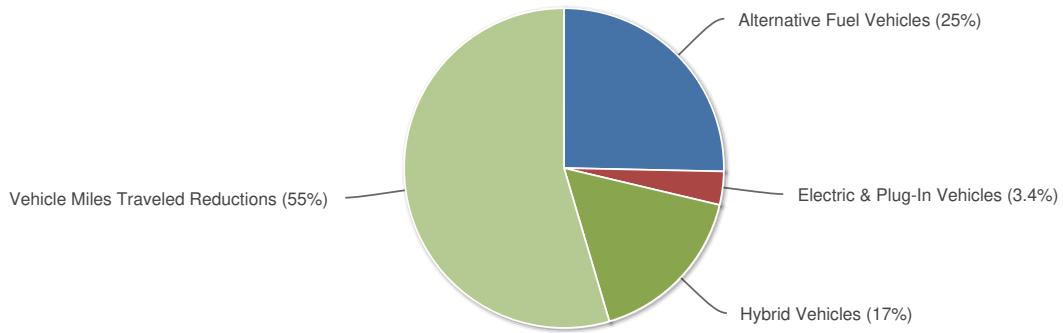
Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition coordinators, who lead the local coalitions, provide information and data via an online database managed by the National Renewable Energy Laboratory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

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

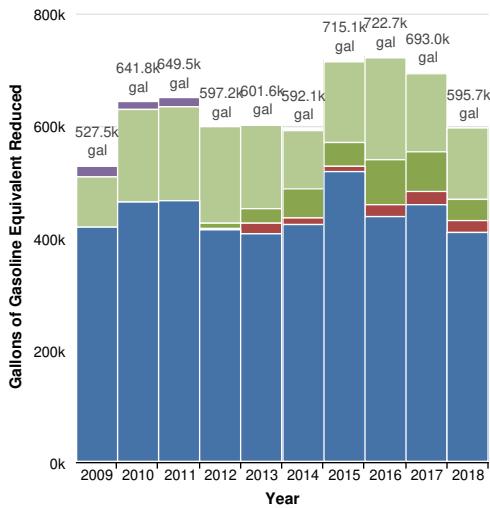
2018 Gallons of Gasoline Equivalent Reduced
595,721 gallons



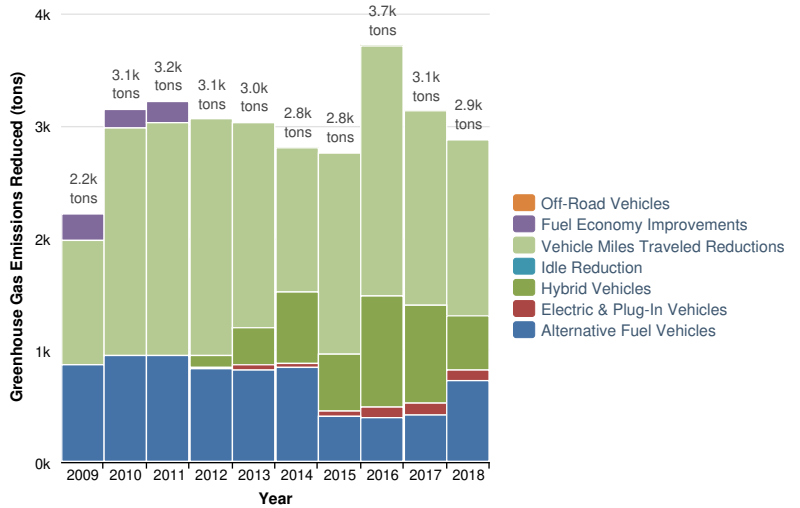
2018 Greenhouse Gas Emissions Reduced
2,874 tons



Historical Gallons of Gasoline Equivalent Reduced

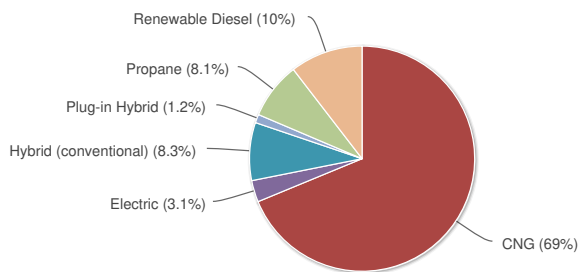


Historical Greenhouse Gas Emissions Reduced



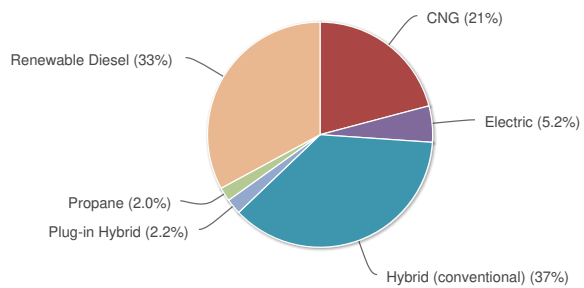
2018 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

468,375 gallons



2018 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

1,305 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. 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. This means that they omit emissions from sources such as electric power plants, refineries, and biofuel feedstock farms (where emissions are sufficiently removed from populations in order to minimize health effects). 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.

Reductions by Fuel Type*	NOx	VOC	CO	PM10	PM2.5
CNG - Compressed Natural Gas	15,940 lb	5 lb	-16,350 lb	2 lb	2 lb
Electric (all-electric)	274 lb	95 lb	2,064 lb	5 lb	4 lb
Hybrid (conventional)	62 lb	162 lb	0 lb	0 lb	0 lb
Plug-in Hybrid	53 lb	52 lb	1,263 lb	3 lb	2 lb
Propane	1,339 lb	-90 lb	-2,286 lb	9 lb	2 lb
Renewable Diesel	0 lb	0 lb	0 lb	0 lb	0 lb
VMT Reduction (Gasoline)	519 lb	829 lb	14,877 lb	208 lb	46 lb
Total:	18,186 lb	1,052 lb	-432 lb	227 lb	56 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.

COALITION

Central Coast Clean Cities - CA

<https://www.c-5.org>

Designated: 08/25/2006

Boundaries: Boundaries span along Highways 1 and 101 from the cities of Arroyo Grande and Grover Beach in south San Luis Obispo County to San Simeon and Paso Robles in the north, encompassing the city of San Luis Obispo and the coastal towns of Morro Bay and Los Osos.

COORDINATORS

	Address	Telephone	Fax
Melissa Guise	3940-7 Broad St, Ste 120 San Luis Obispo, CA 93401		

Number of coordinators	1
Coordinator(s) hours per week on Clean Cities	25 hours
Other staff hours per week on Clean Cities	20 hours
How long have you been the coordinator?	13 years

OPERATING INFORMATION

Coalition organizational structure

Hosted in a nonprofit organization

Stakeholders

Number of stakeholders	75
Number of private stakeholders	53
Does the State Energy Office provide any financial support to the coalition or stakeholders?	No
How would you rate the quality of the data on your survey?	Good
How do you obtain most of your data for the survey?	Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders
Has your coalition registered with www.grants.gov ?	Yes

2018 Outside Funding

Stakeholder dues collected	\$500
How much funding is obtained from other sources to cover coalition operating expenses?	\$0
Non-DOE or ARRA grant and matching funds spent in 2018	\$0
Total non-DOE or ARRA funding in 2018	\$500

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Local Government	Heavy-Duty	Renewable Diesel	65	55,430 gal	47,975 gal	420.2 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Local Government	Light-Duty	CNG	3	978 GGE	697 gal	0.9 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Local Government	Light-Duty	Renewable Diesel	9	950 gal	987 gal	9.0 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Miscellaneous	Heavy-Duty	CNG	43	58,101 GGE	39,218 gal	33.0 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Heavy-Duty	CNG	39	341,790 GGE	230,708 gal	194.3 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Heavy-Duty	Propane	15	52,925 gal	27,043 gal	10.6 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Light-Duty	CNG	2	560 GGE	399 gal	0.5 tons
Market: General/Unknown Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Light-Duty	Propane	6	19,575 gal	11,114 gal	15.7 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Schools K-12	Heavy-Duty	CNG	4	3,600 GGE	2,430 gal	2.0 tons
Market: Government - State Vehicle type: Bus: School Percentage from coalition: 75% National Clean Fleets Partnership: No						
State Government	Heavy-Duty	CNG	14	69,260 GGE	46,751 gal	39.4 tons
Market: Government - State Vehicle type: Bus: Shuttle Percentage from coalition: 75% National Clean Fleets Partnership: No						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Universities	Light-Duty	CNG	18	2,666 GGE	1,900 gal	2.5 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Total:			218		409,221 gal	728 tons

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Individuals	Light-Duty	Electric	18	1,412 gal	7.3 tons
Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 11,507 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 15% National Clean Fleets Partnership: No					
Individuals	Light-Duty	HEV	80	11,518 gal	141.9 tons
Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 11,370 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No					
Local Government	Light-Duty	PHEV	17	5,631 gal	29.3 tons
Average vehicle fuel economy: 60 MPG Miles traveled per vehicle per year: 11,507 mi Market: Government - Local Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Local Government	Light-Duty	HEV	86	9,481 gal	116.8 tons
Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 9,575 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No					
Local Governments	Light-Duty	Electric	11	4,077 gal	21.2 tons
Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 8,895 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No					
Schools K-12	Light-Duty	HEV	2	196 gal	2.4 tons
Average vehicle fuel economy: 40 MPG Miles traveled per vehicle per year: 9,600 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 50% National Clean Fleets Partnership: No					
State Government	Light-Duty	Electric	3	327 gal	1.7 tons
Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 3,200 mi Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No					

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
State Universities Average electric fuel economy: 52 kWh/100mi Miles traveled per vehicle per year: 250 mi Market: Government - State Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 75% National Clean Fleets Partnership: No	Light-Duty	Electric	190	1,619 gal	8.4 tons
Transit Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 35,000 mi Market: General/Unknown Vehicle type: Bus: Transit Percentage from coalition: 50% National Clean Fleets Partnership: No	Heavy-Duty	HEV	18	14,522 gal	178.9 tons
Transit Electricity used: 116,408 kWh Market: General/Unknown Vehicle type: Bus: Transit Percentage from coalition: 50% National Clean Fleets Partnership: No	Heavy-Duty	Electric	12	6,424 gal	25.7 tons
Univeristies Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 2,500 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No	Light-Duty	Electric	8	682 gal	3.5 tons
Universities Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 11,370 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No	Light-Duty	HEV	20	3,264 gal	40.2 tons
Total:			465	59,154 gal	577 tons

FUEL ECONOMY

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
RideShare Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 22 MPG Number of vehicles driven less: 1,467 VMT reduction per vehicle being driven less: 2,485 mi Percentage from coalition: 75% National Clean Fleets Partnership: No	Other	Light-Duty	124,278 gal	1,530.8 tons
SLO Car Free Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 22 MPG Number of vehicles driven less: 225 VMT reduction per vehicle being driven less: 300 mi Percentage from coalition: 100% National Clean Fleets Partnership: No	Other	Light-Duty	3,068 gal	37.8 tons
Total:			127,346 gal	1,569 tons

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
GHG Stakeholder Meeting Technology: Electric vehicles, Hydrogen Audience: Government <i>C5 gave a presentation to the Greenhouse Gas (GHG) stakeholder group, providing updates on infrastructure development, available grants and incentives for alternative fuel vehicles, and invited attendees to a grant workshop on January 18, 2018 to learn more about various alternative fuel vehicle grants for both light duty and heavy duty vehicles. C5 also discussed Subtask 3.4, "Alternative Fuels, Resiliency and Emergency Response." The group is made up of city and county planners who are responsible for developing GHG Resiliency and Adaptation Plans.</i>	01/11/2018	Meeting - Other	100%	15
GHG Stakerholder Meeting Technology: Electric vehicles, Hydrogen Audience: Government <i>C5 gave a presentation to the Greenhouse Gas (GHG) stakeholder group, providing updates on infrastructure development on the central coast, available grants and incentives for alternative fuel vehicles, and ongoing work related to the alternative fuel corridor in San Luis Obispo County.</i>	05/10/2018	Meeting - Other	100%	12
National Drive Electric Week Workshop Technology: Electric vehicles Audience: General Public, Government, Private Fleets, Utility, Other <i>C5 working with the San Luis Obispo Climate Coalition hosted a workshop entitled "Electrify your Commute". There were 15 vendors present sharing information about electric cars, bikes and related products and services. A networking session was followed by presentations from PG&E Meteorologist, John Lindsey, on his transformation from climate skeptic to climate activist and electric vehicle owner, SLO Climate Coalition EV Specialist, Barry Rands, on the multiple benefits of driving electric, C5's Melissa Guise on the many programs and incentives that are making it easier to own and operate an EV, and a panel discussion of local area residents who have electrified their commutes.</i>	09/12/2018	Workshop held by coalition	50%	40
National Drive Electric Week Electric Car Show Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public, Government, Private Fleets, Utility, Other <i>C5 hosted an Electric Car Show in San Luis Obispo at the Farmers' Market as part of National Drive Electric week. The show featured electric vehicles from a variety of manufactures including Tesla (Model 3, Model S, Model X), Nissan Leaf, BMW i3, Honda Clarity, Chevy Bolt, Chevy Spark, and a variety of electric bicycles.</i>	09/13/2018	Workshop held by coalition	100%	500
GHG Stakeholder Meeting Technology: Electric vehicles, Hydrogen Audience: Government <i>C5 gave updates to the Greenhouse Gas (GHG) stakeholder group on infrastructure development on the central coast, available grants /incentives for alternative fuel vehicles, hydrogen infrastructure development, alternative fuel corridor development, and alternative fuels in emergency applications.</i>	09/20/2018	Meeting - Other	100%	17
Gold Coast Fleet Association Meeting Presentation Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles, Hydrogen Audience: Government <i>C5 met with the Gold Coast Fleet Association (GCFA), in Santa Barbara on October 17th. The GCFA, is a group of fleet managers representing municipal fleets in San Luis Obispo, Santa Barbara and San Luis Obispo County. There were 12 fleet representatives in attendance. C5 was represented at the meeting by Melissa Guise, Alex Economou, and Arjun Sarkar. C5 gave a brief presentation on the iREV program and tools followed by a general discussion, questions and comments period. The level of support for alternative fuel vehicles was mixed although mainly positive for use of these vehicle in fleet operations. However, the general consensus was there are not enough heavy and medium duty vehicles manufactured or available at this time to be a viable choice for use in emergency response operations.</i>	10/17/2018	Meeting - Other	100%	12
Hydrogen Grant Webinar Technology: Hydrogen Audience: Other <i>December 17, 2018 C5 co-hosted a hydrogen grant webinar to answer questions regarding the San Luis Obispo County Air Pollution Control District's hydrogen infrastructure request for proposal.</i>	12/17/2018	Workshop held by coalition	50%	17

Total: **613**

GRANTS

Grantor	Total Grant Amount	Total Matching Funds	Total Project Funding	Grant Amount Spent in 2018	Matching Funds Spent in 2018	Total Project Funding Spent in 2018
California Energy Commission	\$13,890	\$0	\$13,890	-	-	\$0
<p>Length of grant: 2 Year grant began: 2017 Sources of the grant: State Government Partners: Santa Barbara and Ventura Counties Technologies: Electricity, H2 - Hydrogen Purpose: Zero-Emission Vehicles Readiness Implementation for the Tri-County Region</p> <p><i>The goal of the grant is to lay the foundation for continued development and deployment of electric vehicle on the Central Coast of California in support of the Governors' statewide goal of 1.5 million EVs on the road by 2025.</i></p>						
Total:	\$13,890	\$0	\$13,890	\$0	\$0	\$0