

2019 Transportation Technology Deployment Report:

Central Coast Clean Cities Coalition
Expanded Edition

March 2020



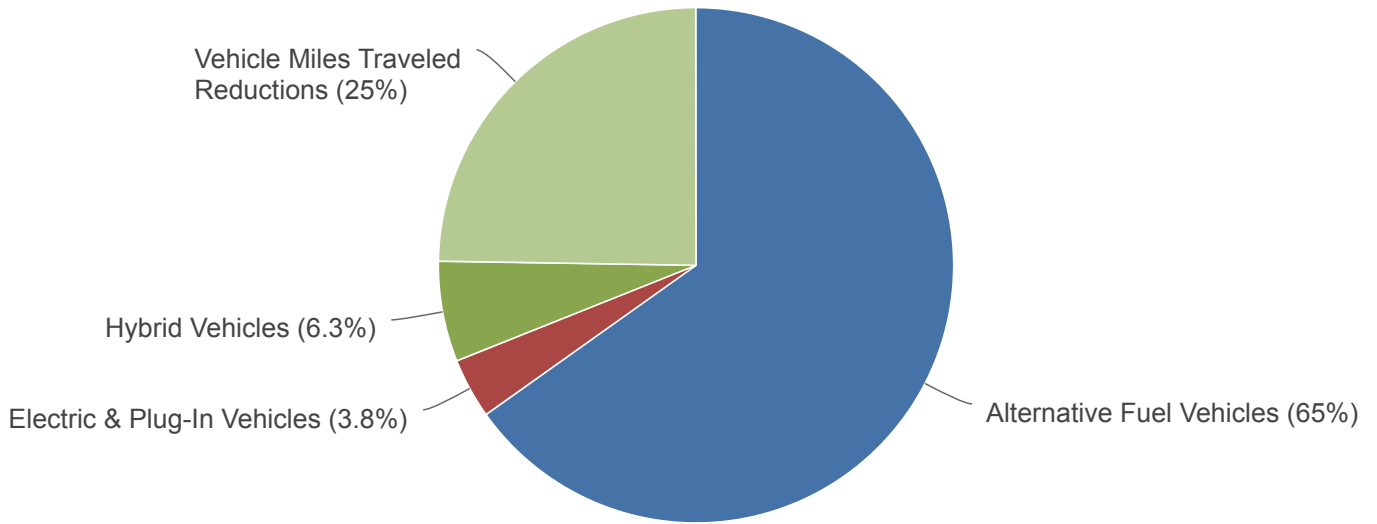
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and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

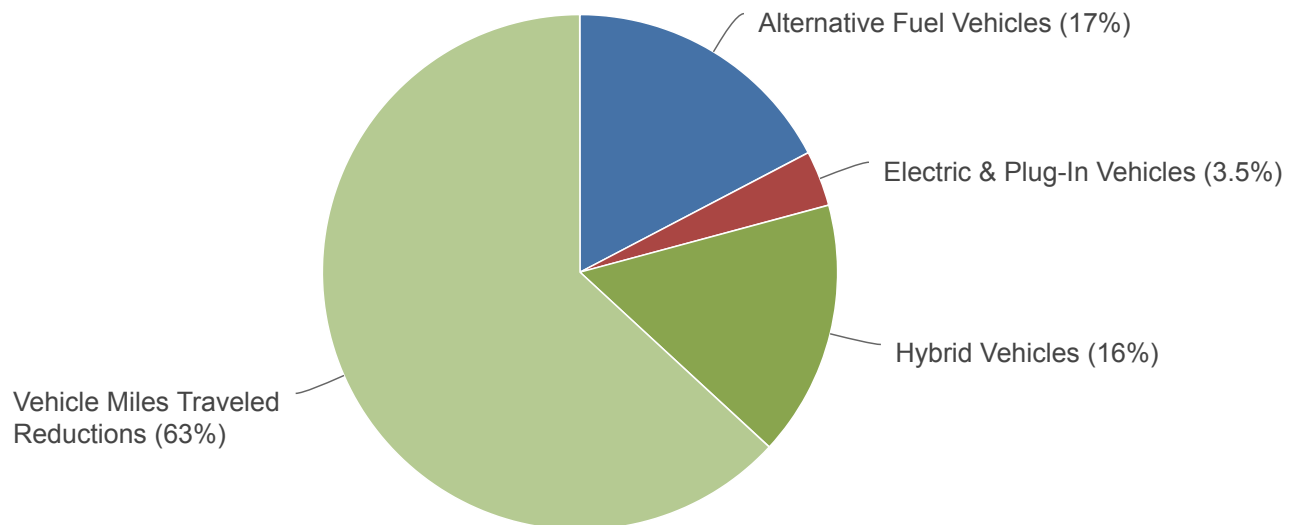
2019 Gallons of Gasoline Equivalent Reduced

627,028 gallons

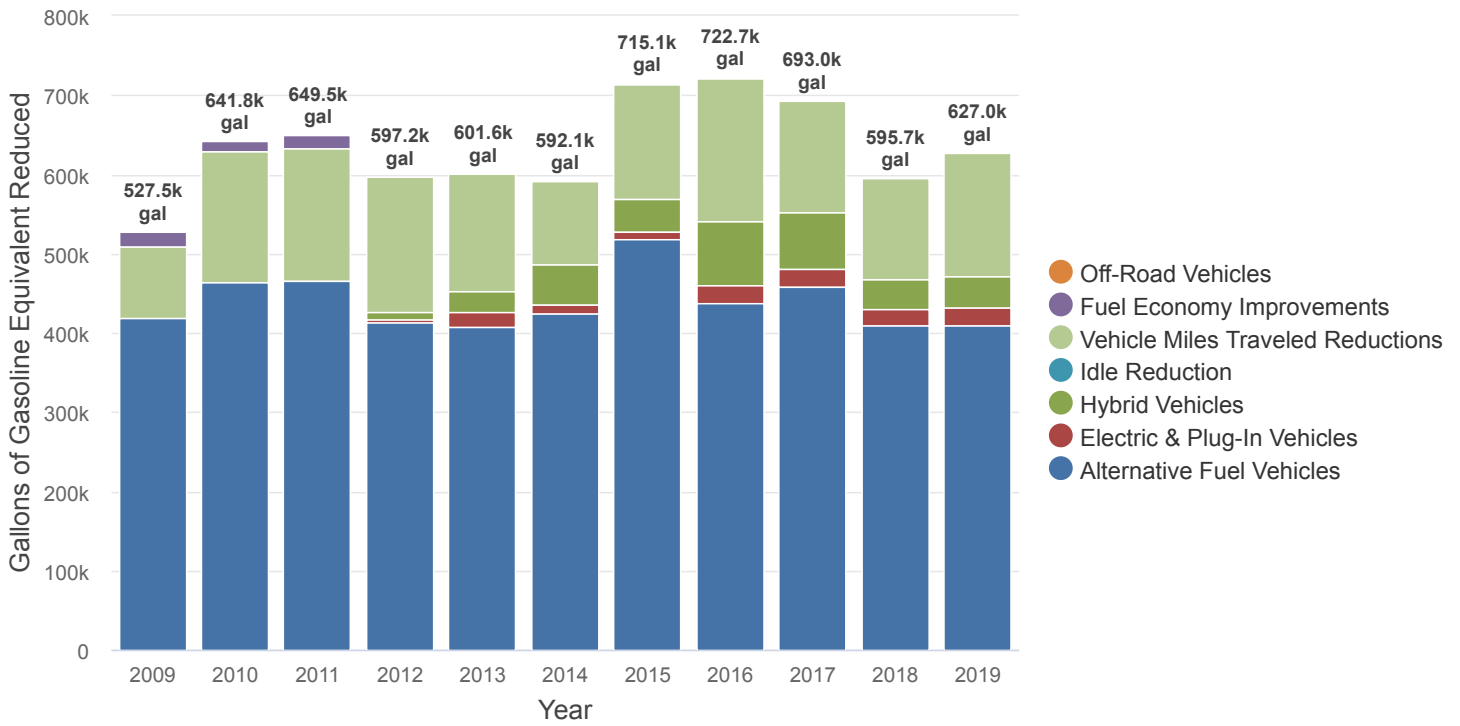


2019 Greenhouse Gas Emissions Reduced

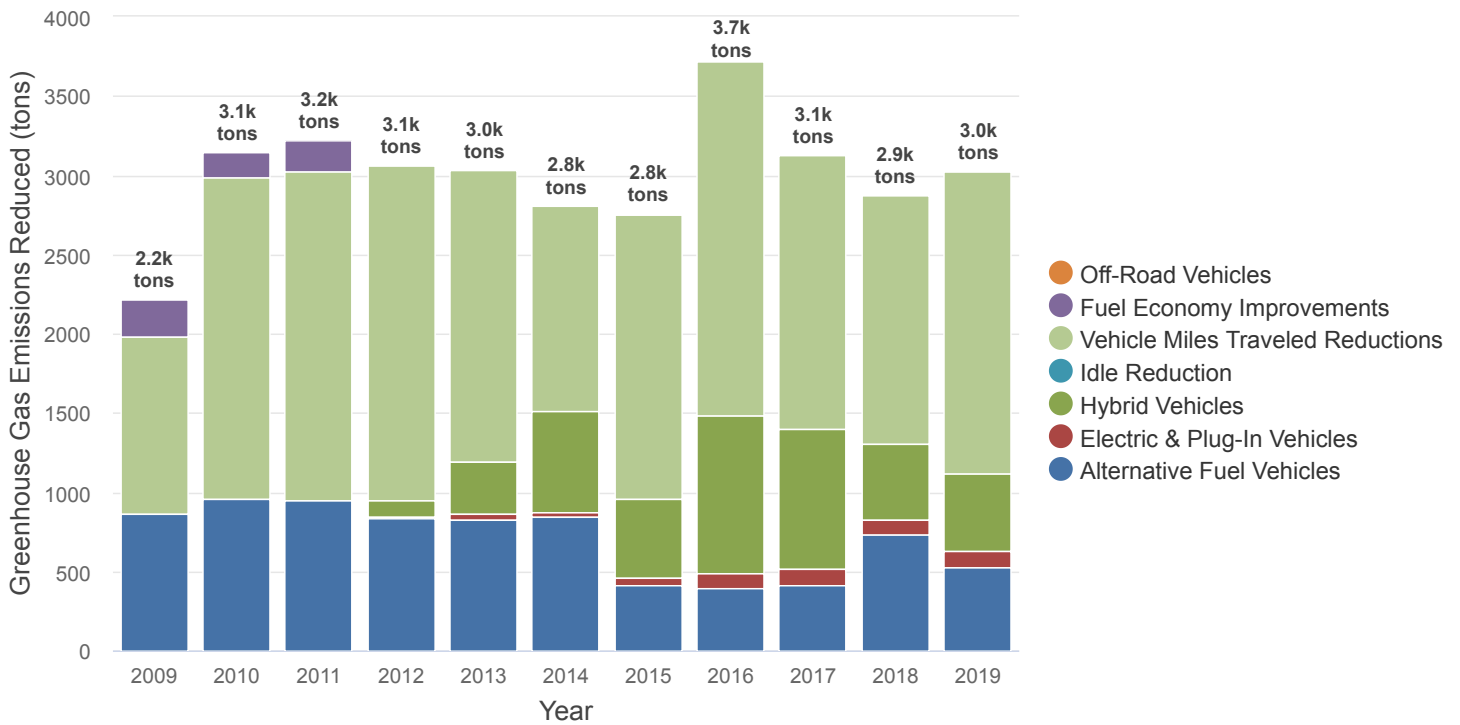
3,027 tons



Historical Gallons of Gasoline Equivalent Reduced

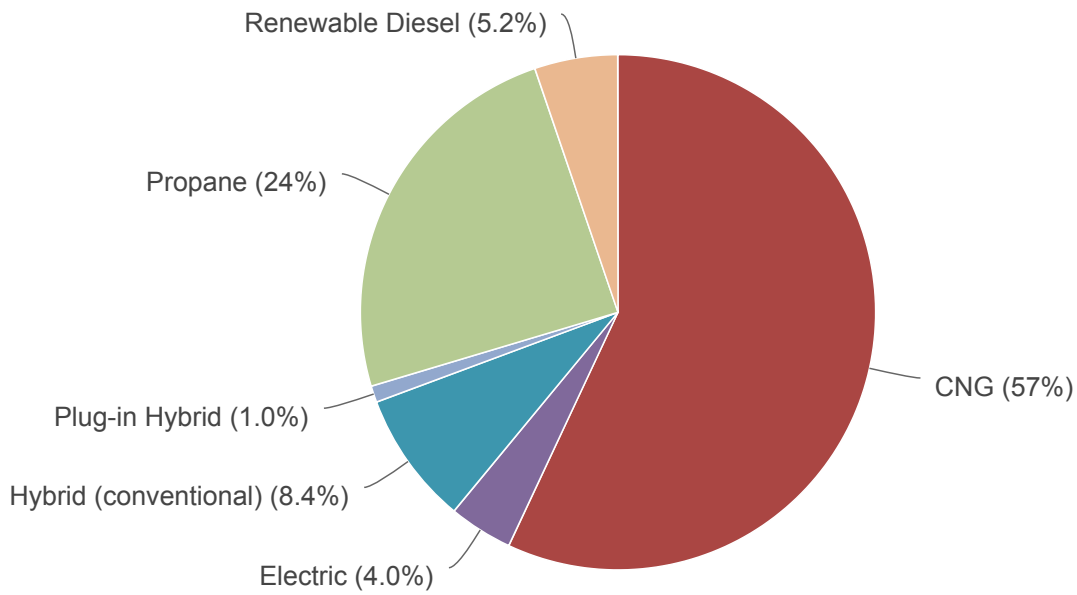


Historical Greenhouse Gas Emissions Reduced



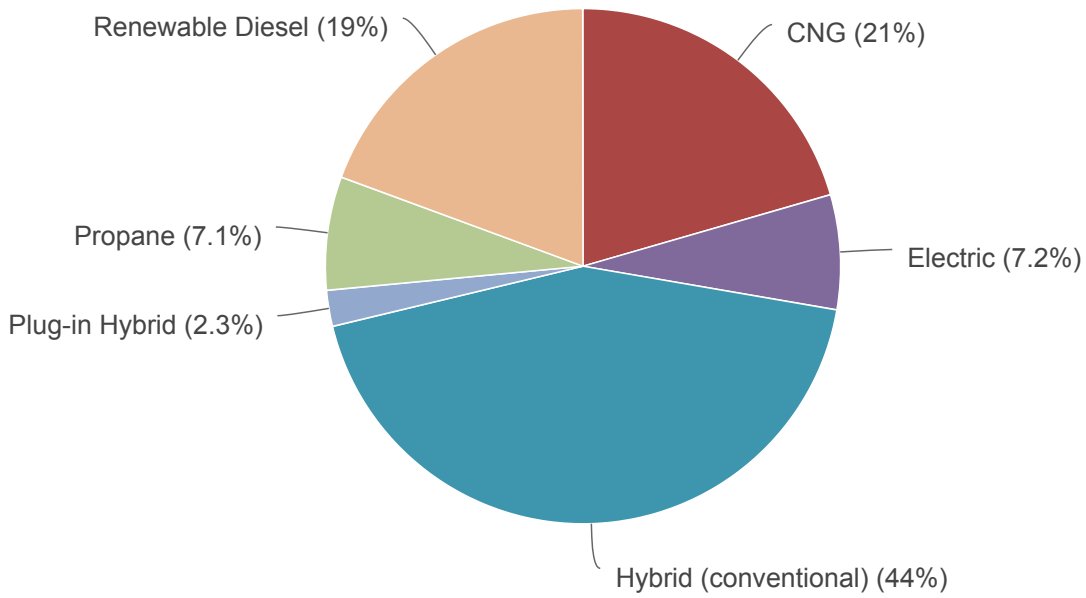
2019 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

471,863 gallons



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

1,116 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 (NO_x) 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.

Reductions by Technology*	NO _x	VOC**	PM10	PM2.5
CNG - Compressed Natural Gas	14,161 lb	7 lb	0 lb	0 lb
Electric (all-electric)	504 lb	80 lb	5 lb	4 lb
Hybrid (conventional)	49 lb	116 lb	0 lb	0 lb
Plug-in Hybrid	49 lb	47 lb	2 lb	2 lb
Propane	4,038 lb	-270 lb	28 lb	7 lb
VMT Reduction (Gasoline)	632 lb	1,010 lb	254 lb	56 lb
Total:	19,433 lb	990 lb	289 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.

COALITION

Central Coast Clean Cities Coalition - CA

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

Designated: 08/25/2006

Boundaries: Counties: San Luis Obispo, Santa Barbara

COORDINATORS

	Address	Telephone	Fax
Alex Economou	260 N San Antonio Rd #A Santa Barbara, CA 93110	805-961-8894	

Number of coordinators	1
Coordinator(s) hours per week on Clean Cities	20 hours
Other staff hours per week on Clean Cities	10 hours
How long have you been the coordinator?	14 years

OPERATING INFORMATION

Coalition organizational structure Standalone nonprofit (self-managed)

Stakeholders

Number of stakeholders	55
Number of private stakeholders	25
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?	Coalition records, Estimates, Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders
Has your coalition registered with www.grants.gov?	Yes

2019 Outside Funding

Stakeholder dues collected	\$1,250
How much funding is obtained from other sources to cover coalition operating expenses?	\$0
Non-DOE or ARRA grant and matching funds spent in 2019	\$0
Total non-DOE or ARRA funding in 2019	\$1,250

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Miscellaneous	Heavy-Duty	CNG	87	386,884 GGE	261,147 gal	219.9 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Heavy-Duty	Propane	31	159,634 gal	81,569 gal	32.0 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Light-Duty	CNG	2	5,600 GGE	3,990 gal	5.2 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Private	Light-Duty	Propane	19	59,042 gal	33,521 gal	47.4 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Schools K-12	Heavy-Duty	CNG	3	2,554 GGE	1,724 gal	1.5 tons
Market: Government - State Vehicle type: Bus: School Percentage from coalition: 75% National Clean Fleets Partnership: No						
Transit	Heavy-Duty	Renewable Diesel	80	42,795 gal	24,693 gal	216.3 tons
Market: General/Unknown Vehicle type: Bus: Transit Percentage from coalition: 50% National Clean Fleets Partnership: No						
Universities	Light-Duty	CNG	19	2,779 GGE	1,980 gal	2.6 tons
Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Total:			241		408,623 gal	525 tons

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Individuals	Light-Duty	Electric	19	1,188 gal	6.2 tons
Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 10,000 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 15% National Clean Fleets Partnership: No Workplace Charging Challenge: -					
Individuals	Light-Duty	HEV	40	5,065 gal	62.4 tons
Average vehicle fuel economy: 35 MPG Miles traveled per vehicle per year: 10,000 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -					

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Local Government Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 2,011 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	Electric	8	731 gal	3.8 tons
Local Government Average vehicle fuel economy: 55 MPG Miles traveled per vehicle per year: 10,480 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	PHEV	17	4,859 gal	25.3 tons
Local Government Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 10,500 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	HEV	56	8,440 gal	104.0 tons
Local Government Average vehicle fuel economy: 41 MPG Miles traveled per vehicle per year: 11,370 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	HEV	31	6,089 gal	75.0 tons
Schools K-12 Average vehicle fuel economy: 40 MPG Miles traveled per vehicle per year: 12,520 mi Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 50% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	HEV	2	209 gal	2.6 tons
Transit Electricity used: 274,876 kWh Market: General/Unknown Vehicle type: Bus: Transit Percentage from coalition: 50% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Heavy-Duty	Electric	25	15,169 gal	60.7 tons
Transit Average vehicle fuel economy: 4 MPG Miles traveled per vehicle per year: 16,453 mi Market: General/Unknown Vehicle type: Bus: Transit Percentage from coalition: 50% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Heavy-Duty	HEV	18	18,618 gal	229.3 tons
Universities	Light-Duty	Electric	19	1,619 gal	8.4 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 2,500 mi Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -					
Universities	Light-Duty	Electric	22	225 gal	1.2 tons
Average electric fuel economy: 11 kWh/100mi Miles traveled per vehicle per year: 300 mi Market: Government - State Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -					
Universities	Light-Duty	HEV	2	93 gal	1.1 tons
Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 3,250 mi Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -					
Universities	Light-Duty	HEV	13	933 gal	11.5 tons
Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 5,000 mi Market: Government - State Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -					
Total:			272	63,239 gal	591 tons

FUEL ECONOMY

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Rideshare Programs in SB County	Other	Light-Duty	588 gal	7.2 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 22 MPG Number of vehicles driven less: 53 VMT project per vehicle being driven less: 1,627 mi Percentage from coalition: 15% National Clean Fleets Partnership: No				
RideShare Programs in SLO County	Other	Light-Duty	150,705 gal	1,856.3 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 22 MPG Number of vehicles driven less: 2,059 VMT project per vehicle being driven less: 2,147 mi Percentage from coalition: 75% National Clean Fleets Partnership: No <i>The trip reduction program includes car sharing, vanpooling, bike riding, and bus trips.</i>				
SLO Car Free	Other	Light-Duty	3,873 gal	47.7 tons

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 22 MPG Number of vehicles driven less: 284 VMT project per vehicle being driven less: 300 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Total:			155,165 gal	1,911 tons

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	-	-
CNG - Compressed Natural Gas	-	-
E85 - 85% Ethanol	-	-
Electric Charging Outlets: Level 1 & Level 2	64	-
Electric Charging Outlets: DC Fast Chargers	1	-
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	-
Total:	65	0

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
County Sustainability Committee Presentation	07/17/2019	Meeting - Other	100%	20
Technology: Electric vehicles Audience: Government <p>On July 17, 2019, the Central Coast Clean Cities Coalition (C5) gave a presentation to the County Sustainability Committee (CSC). The CSC is comprised of various County departments, including the Santa Barbara County Air Pollution Control District and the Santa Barbara County Association of Governments. CSC meetings are led by the staff of the Sustainability Division and convene on a bi-monthly basis to discuss sustainability-related topics that are relevant to the group. The presentation provided information to the group about C5's mission and the current projects that the coalition is working on in the region. The presentation also introduced the CSC to various DOE tools that are available such as the AFDC website, Station Locator, Vehicle Cost Calculator, EVI-Pro Lite, AFLEET, FuelEconomy.gov, and IdleBox. The group was very interested in the resources and the County expressed interest in becoming a member of C5 in the future. The presentation slides were shared with the committee members and updates on C5 projects will be shared at future meetings</p>				
Electric Vehicle Car Show - National Drive Electric Week	09/19/2019	Meeting - Other	75%	100
Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public <p>On September 19, 2019, the Central Coast Clean Cities Coalition (C5) hosted a Green Car Show at Farmers' Market in San Luis Obispo, in conjunction with the San Luis Obispo Climate Coalition. The show was part of the National Drive Electric Event which showcases the many benefits of electric vehicles. The show featured eighteen electric vehicles showcasing the latest vehicle technologies with local experts and owners available to answer questions and discuss the many advantages of driving an electric vehicle. Vehicles on display included the Kia Niro, Chevy Bolt, Nissan Leaf, BMW i3, Honda Clarity, Toyota Prius plug-in, eFiat, Tesla Model S and 3 electric bicycles 2 were used by the San Luis Obispo Police Department and 1 electric motorcycle was used by the Morro Bay Police Department.</p>				
Renewable Natural Gas Workshop	07/22/2019	Workshop Held By Coalition	100%	26

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
<p>Technology: Natural gas vehicles Audience: General Public, Government, Private Fleets, Waste, Other</p> <p><i>On July 22, 2019, the Central Coast Clean Cities Coalition (C5) hosted a renewable CNG workshop. C5 worked with the key partners (Revolution CNG, So Cal Gas Company, CNG fuel providers and stakeholders). The workshop provided education information for fleets and individuals on the many benefits of RNG. The workshop was kicked off with representatives from Southern California Gas who gave an overview of how RNG plays a critical role in a balanced energy strategy, a statewide perspective on RNG and legislative updates. Two representatives from the private sector gave presentations on two RNG facilities (green waste anaerobic digester and a dairy digester). Revolution CNG gave a presentation on upgrades that were made to the storage and dispensing equipment at the JB Dewar facility in San Luis Obispo, and the local air districts and Cal Start provided information on state and local grants. Following the workshop, there was a tour of a local anaerobic digester which is using biogas to generate electricity.</i></p>				
University of Santa Barbara Sustainability Summit	10/16/2019	Meeting - Other	25%	200
<p>Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public, Government, Other</p> <p><i>October 16, 2019, UCSB hosted the 9th annual Central Coast Sustainability Summit. The C5 was a sponsor of the event. The summit was an all-day conference, primarily attended by stakeholders from Ventura, Santa Barbara, and San Luis Obispo Counties. The Central Coast Sustainability Summit is an opportunity to learn about various sustainability-related successes and challenges faced locally, as well as learn from case studies and build capacity for regional collaboration. Summit sessions covered a variety of topics including; Energy Incentives, Transportation, Water, Climate & Energy, Waste, and Regional Collaboration. For the transportation segment, a case study was presented outlining the success of growing transit use at the University of California Santa Barbara (UCSB) thanks to a lasting and evolving partnership between UCSB and Santa Barbara Metropolitan Transit District, investing in housing and moving the community sustainably. A presentation was also given on the Ventura County Electric Vehicle Ready Blueprint to accelerate and support electric vehicles and charging infrastructure deployment in Ventura County.</i></p>				
Earth Day Santa Barbara	04/27/2019	Meeting - Other	50%	2,500
<p>Technology: Electric vehicles, Hybrid electric vehicles, Hydrogen, Natural gas vehicles Audience: Other</p> <p><i>On April 27-28, 2019, the Community Environmental Council and its partners (including C5) hosted the 2019 Santa Barbara Earth Day Festival at Alameda Park in downtown Santa Barbara. Every year, the Earth Day Festival is one of the largest events on the Central Coast, drawing crowds of over 36,000 people to the festival over the course of the two-day event. The 2019 edition of the Earth Day was the 49th such Earth Day Festival, and featured a Green Car Show, concerts, public square, bike valet and delicious local food and drinks. The Green Car Show was one of the highlights of the Earth Day Festival, and featured car dealerships, an owner's circle, transit agencies, electric bikes, utility programs, state rebate incentives. There was also a ride and drive featuring several electric vehicles and hydrogen fuel cell electric vehicles. The Central Coast Clean Cities Coalition served a dual function of helping to organize and run the Green Car Show, as well as staffing a booth to engage with the public. At the C5 booth, coalition staff engaged with the public about the benefits of driving alternative fuel vehicles and the availability of alternative fueling stations on the Central Coast. C5 staff also enlightened festival goers about all of the national, state and local incentive programs that are currently available for purchasing zero emission vehicles and installing electric vehicle charging stations</i></p>				
Earth Day San Luis Obispo	04/27/2019	Meeting - Other	100%	100
<p>Technology: Electric vehicles Audience: Other</p> <p><i>On April 27 the Central Coast Clean Cities Coalition hosted the 2019 Earth Day Green Car Show at Laguna Lake Park in San Luis Obispo. Each year the Earth Day Alliance sponsors the Earth Day event in San Luis Obispo, and the Central Coast Clean Cities Coalition (C5) organizes the Green Car Show as part of the festival. The Green Car Show was one of the highlights of the Earth Day Festival, with 12 electric and hybrid vehicles on display along with an owner's circle, and infrastructure display. At the C5 booth, coalition staff engaged with the public about the benefits of driving alternative fuel vehicles and the availability of alternative fueling stations on the Central Coast and provided literature and information about numerous incentive programs available for purchasing zero emission vehicles and installing electric vehicle charging stations.</i></p>				
Total:				2,946