

# 2022 Transportation Technology Deployment Report:

Southern California Clean Cities Coalition  
Expanded Edition

March 2023



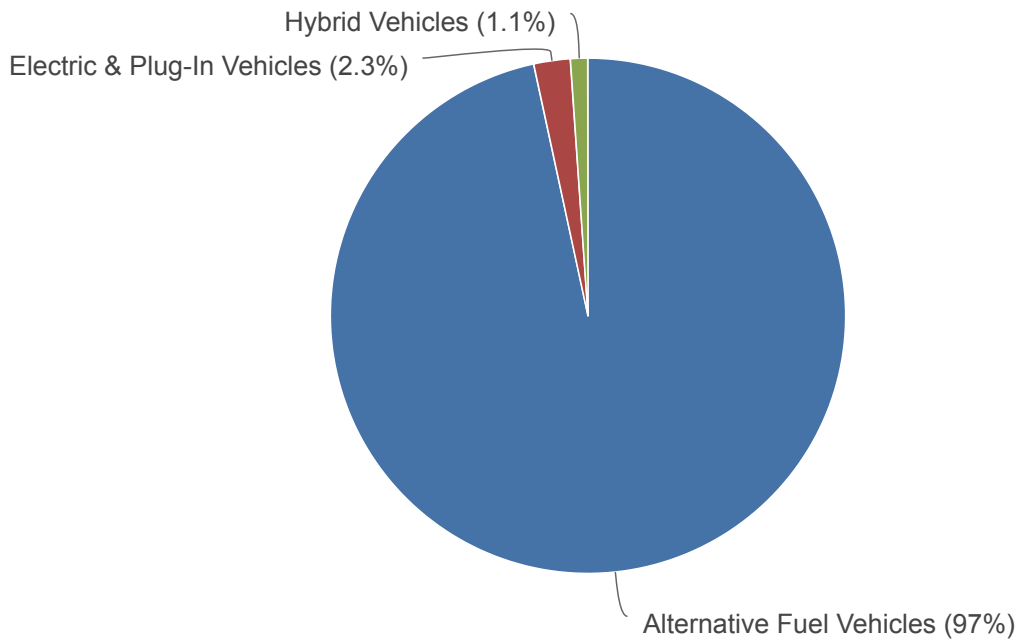
The U.S. Department of Energy's (DOE) Clean Cities Coalition Network fosters the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices. A national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

To view aggregated data for all local coalitions in the network, visit [cleancities.energy.gov/accomplishments](https://cleancities.energy.gov/accomplishments).

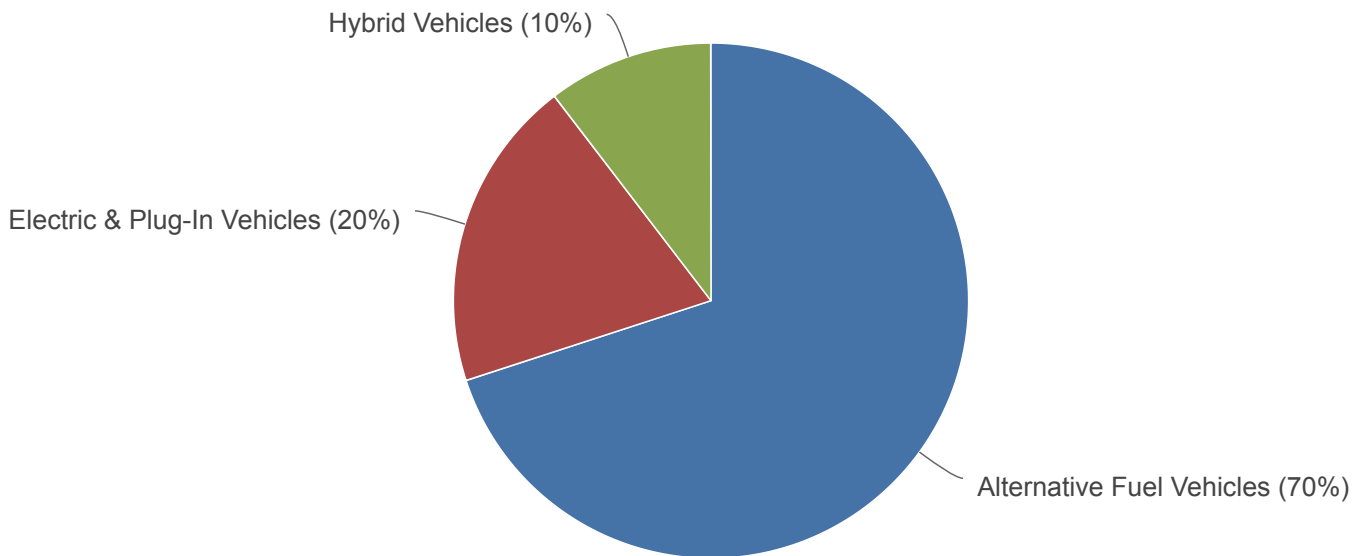
### 2022 Gallons of Gasoline Equivalent Reduced

16,925,611 gallons

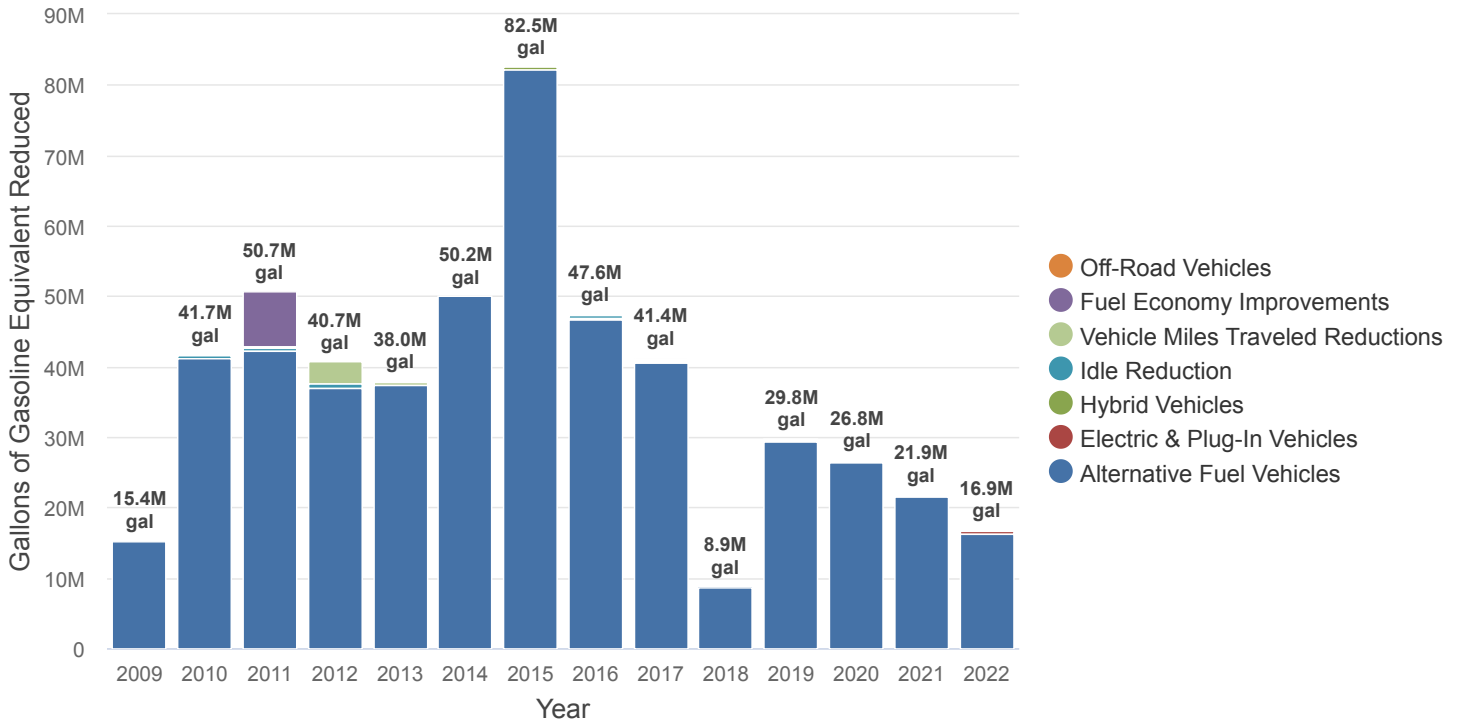


### 2022 Greenhouse Gas Emissions Reduced

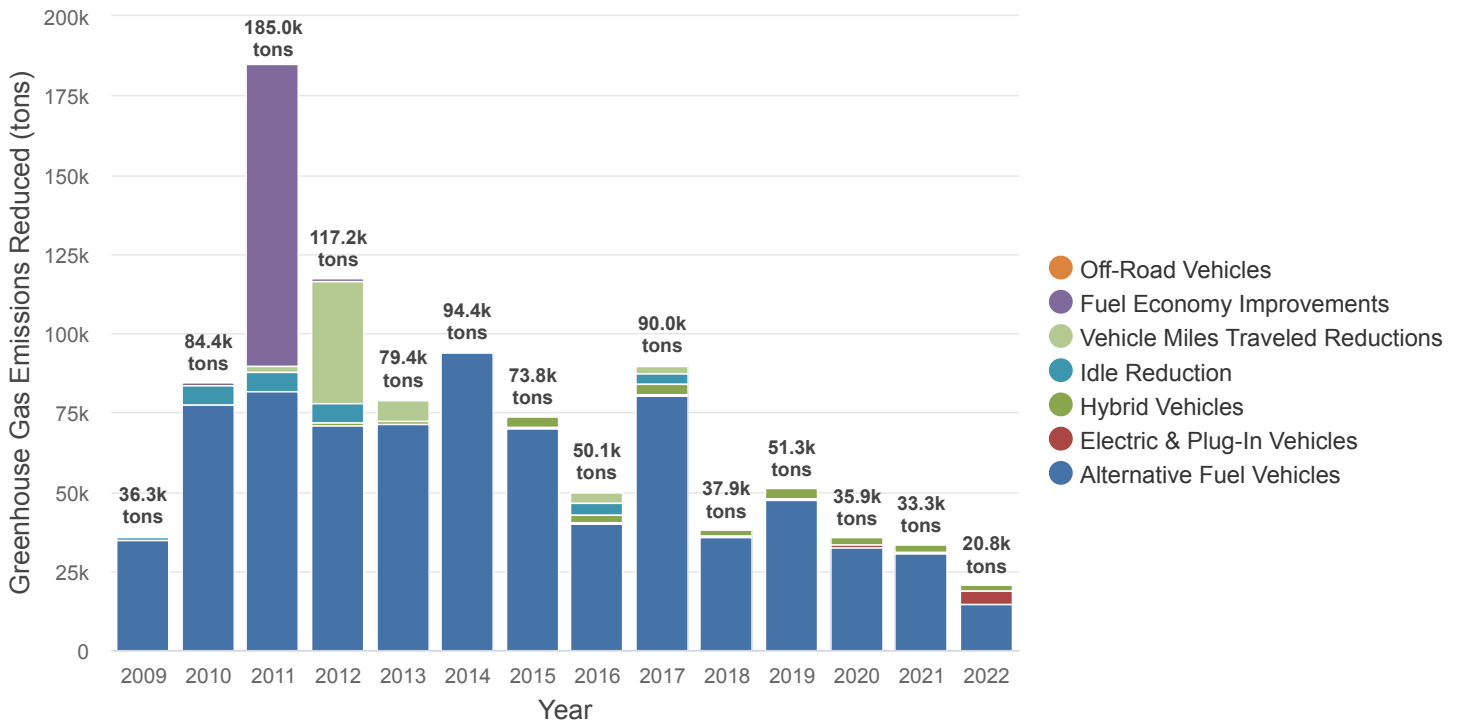
20,828 tons



## Historical Gallons of Gasoline Equivalent Reduced

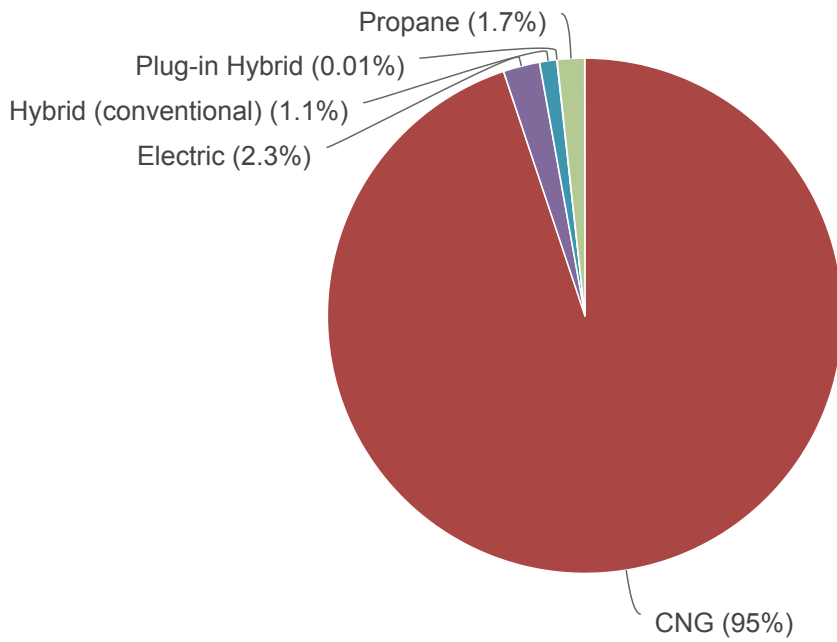


## Historical Greenhouse Gas Emissions Reduced



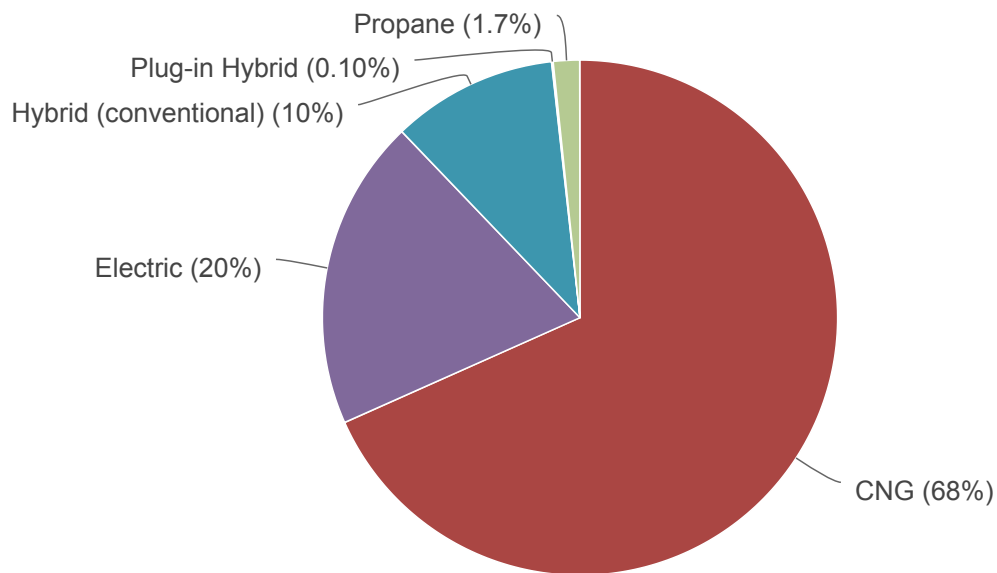
### 2022 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

16,925,611 gallons



### 2022 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

20,828 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](http://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](http://CleanCitiesUniversity.com).

Reductions by Technology	CO	NOx	VOC*	PM10	PM2.5
Alternative Fuel Vehicles - CNG	318,203 lb	21,631 lb	11,848 lb	1,924 lb	1,058 lb
Alternative Fuel Vehicles - Propane	423 lb	47 lb	1,583 lb	1 lb	1 lb
Electric, Hybrid & Plug-in Vehicles - Electric	74,713 lb	3,497 lb	3,315 lb	504 lb	227 lb
Electric, Hybrid & Plug-in Vehicles - HEV	31,847 lb	1,456 lb	2,048 lb	271 lb	110 lb
Electric, Hybrid & Plug-in Vehicles - PHEV	416 lb	19 lb	24 lb	2 lb	1 lb
<b>Total:</b>	<b>425,601 lb</b>	<b>26,650 lb</b>	<b>18,819 lb</b>	<b>2,702 lb</b>	<b>1,397 lb</b>

\* 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

## Southern California Clean Cities Coalition - CA

<https://scag.ca.gov/clean-cities>

**Designated:** 03/01/1996

**Boundaries:** Counties (including tribal lands): Imperial, Los Angeles, Orange, San Bernardino, Ventura

## DIRECTORS

	Address	Telephone	Fax
<b>Marisa Laderach</b>		(213) 236-1927	
<b>Roland Ok</b>	Southern California Association of Governments 900 Wilshire Blvd Los Angeles, CA 90017		
<b>Number of coalition directors</b>			1
<b>Coalition director(s) hours per week on Clean Cities</b>			20 hours
<b>Other staff hours per week on Clean Cities</b>			20 hours
<b>How long have you been the coalition director?</b>			2 years

## OPERATING INFORMATION

<b>Coalition organizational structure</b>	Hosted in a planning organization (COG/MPO/RPC)
<b>Does the coalition have a non-profit governing board?</b>	No
<b>Does the coalition have a non-governing advisory committee?</b>	No

### Stakeholders

<b>Number of stakeholders</b>	277
<b>Number of private stakeholders</b>	30
<b>Stakeholder counting notes</b>	Our stakeholders are SCAG's member agencies from local jurisdictions. We also work with transit providers throughout 6 counties. We do additional outreach with local businesses and the general public. The number above includes 197 cities, roughly 40 transit agency stakeholders, and 40 miscellaneous.
<b>Does the State Energy Office provide any financial support to the coalition or stakeholders?</b>	No

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

## 2022 Outside Funding

Stakeholder dues collected	\$0
How much funding is obtained from other sources to cover coalition operating expenses?	\$7,500
Non-DOE or ARRA grant and matching funds spent in 2022	\$0
<b>Total non-DOE or ARRA funding in 2022</b>	<b>\$7,500</b>

## VEHICLE & FUEL INVENTORY

### Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
City of Gardena's GTrans <i>Market: Government - Local Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No Energy Efficient Mobility Systems Partnership: No Average number of miles traveled per vehicle per year: 531,953</i>	Heavy-Duty	CNG	18	205,214 GGE	174,432 gal	152.1 tons
City of Laguna Beach - LPG Bus <i>Market: Government - Local Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No Energy Efficient Mobility Systems Partnership: No average number of miles traveled per vehicle per year: 10150</i>	Heavy-Duty	Propane	25	94,500 gal	59,627 gal	N/A
* GHG emissions for this project are not estimated to be less than an equivalent diesel fleet. If LPG vehicles replace gasoline, please change vehicle type from HDV to LDV.						
City of Redondo Beach <i>Miles traveled per vehicle: 11,130 mi Average vehicle fuel economy: 8 MPGde Market: General/Unknown Vehicle type: Bus: Shuttle Percentage from coalition: 65% National Clean Fleets Partnership: No Energy Efficient Mobility Systems Partnership: No</i>	Heavy-Duty	CNG	7	100% of time	6,622 gal	17.1 tons
City of Redondo Beach <i>Miles traveled per vehicle: 38,800 mi Average vehicle fuel economy: 3 MPGde Market: General/Unknown Vehicle type: Truck: Refuse Percentage from coalition: 65% National Clean Fleets Partnership: No Energy Efficient Mobility Systems Partnership: No</i>	Heavy-Duty	CNG	12	100% of time	91,873 gal	80.1 tons
City of Redondo Beach	Light-Duty	CNG	1	100% of time	295 gal	0.6 tons



Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
<b>Miles traveled per vehicle:</b> 8,400 mi <b>Average vehicle fuel economy:</b> 18 MPGe <b>Market:</b> General/Unknown <b>Vehicle type:</b> Pickup/SUV/Van <b>Percentage from coalition:</b> 65% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No						
City of Whittier	Heavy-Duty	CNG	13	100% of time	6,293 gal	5.5 tons
<b>Miles traveled per vehicle:</b> 3,303 mi <b>Average vehicle fuel economy:</b> 6 MPGe <b>Market:</b> Government - Local <b>Vehicle type:</b> Unknown/Other <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No <i>Some data based on previous year entry 2021: vehicle class and Percent of time alternative fuel was used.</i>						
Los Angeles County Metropolitan Transit Authority Orange Line	Heavy-Duty	CNG	2,059	24,967,980 GGE	14,855,948 gal	12,954.3 tons
<b>Market:</b> Commuters <b>Vehicle type:</b> Bus: Transit <b>Percentage from coalition:</b> 70% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No <i>Caley increased % contribution due to change in policy</i>						
Schwan's - Medium-duty Propane	Light-Duty	Propane	5	18,673 gal	14,139 gal	22.3 tons
<b>Market:</b> Corporate Fleet <b>Vehicle type:</b> Pickup/SUV/Van <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> Yes <b>Energy Efficient Mobility Systems Partnership:</b> No						
UPS - Heavy-duty Propane	Heavy-Duty	Propane	41	288,838 gal	218,700 gal	344.2 tons
<b>Market:</b> Corporate Fleet <b>Vehicle type:</b> Truck: No Trailer <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> Yes <b>Energy Efficient Mobility Systems Partnership:</b> No						
Victor Valley Transit Authority	Heavy-Duty	CNG	57	841,050 GGE	714,893 gal	623.4 tons
<b>Market:</b> Corporate Fleet <b>Vehicle type:</b> Bus: Transit <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No <i>average number of miles traveled per vehicle per year: 44016</i>						
Victor Valley Transit Authority	Heavy-Duty	CNG	38	121,044 GGE	123,465 gal	318.9 tons
<b>Market:</b> Corporate Fleet <b>Vehicle type:</b> Bus: Shuttle <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No <i>average number of miles traveled per vehicle per year: 19420</i>						
Victor Valley Transit Authority - CNG Bus	Heavy-Duty	CNG	8	96,484 GGE	82,011 gal	71.5 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
<b>Market:</b> Commuters <b>Vehicle type:</b> Bus: Transit <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No <i>average number of miles traveled per vehicle per year: 43866</i>						
Victor Valley Transit Authority - CNG Car	Light-Duty	CNG	6	4,896 GGE	4,651 gal	8.9 tons
<b>Market:</b> Corporate Fleet <b>Vehicle type:</b> Car <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Energy Efficient Mobility Systems Partnership:</b> No						
<b>Total:</b>			<b>2,290</b>		<b>16,352,949 gal</b>	<b>14,579 tons</b>

## Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Antelope Valley Transit Authority	Light-Duty	Electric	8	3,077 gal	-11.3 tons
<b>Average electric fuel economy:</b> 120 kWh/100mi <b>Miles traveled per vehicle per year:</b> 10,000 mi <b>Market:</b> General/Unknown <b>Vehicle type:</b> Car <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Workplace Charging Challenge:</b> - <b>Energy Efficient Mobility Systems Partnership:</b> No					
City of Gardena's Gtrans - Battery Bus	Heavy-Duty	Electric	6	1,355 gal	8.7 tons
<b>Electricity used:</b> 15,064 kWh <b>Market:</b> Government - Local <b>Vehicle type:</b> Bus: Transit <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Workplace Charging Challenge:</b> - <b>Energy Efficient Mobility Systems Partnership:</b> No <i>Average number of miles traveled per vehicle per year: 6,768</i>					
City of Gardena's Gtrans - Hybrid Bus	Heavy-Duty	HEV	44	87,003 gal	1,034.1 tons
<b>Average vehicle fuel economy:</b> 4 MPG <b>Miles traveled per vehicle per year:</b> 20,559 mi <b>Market:</b> Government - Local <b>Vehicle type:</b> Bus: Transit <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Workplace Charging Challenge:</b> - <b>Energy Efficient Mobility Systems Partnership:</b> No <i>Total miles driven in 2021 was 819,900.</i>					
City of Laguna Beach - Hybrid Car	Light-Duty	HEV	8	291 gal	3.4 tons
<b>Average vehicle fuel economy:</b> 20 MPG <b>Miles traveled per vehicle per year:</b> 1,695 mi <b>Market:</b> Government - Local <b>Vehicle type:</b> Car <b>Percentage from coalition:</b> 100% <b>National Clean Fleets Partnership:</b> No <b>Workplace Charging Challenge:</b> - <b>Energy Efficient Mobility Systems Partnership:</b> No					
City of Whittier	Light-Duty	HEV	2,439	88,025 gal	1,035.3 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average vehicle fuel economy: 35 MPG  Miles traveled per vehicle per year: 2,756 mi  Market: Government - Local  Vehicle type: Car  Percentage from coalition: 100%  National Clean Fleets Partnership: No  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p> <p><i>Fuel economy data based on Whittier's 2021 data.</i></p>					
City of Whittier	Light-Duty	HEV	16	2,988 gal	35.1 tons
<p>Average vehicle fuel economy: 35 MPG  Miles traveled per vehicle per year: 14,259 mi  Market: Government - Local  Vehicle type: Patrol Car  Percentage from coalition: 100%  National Clean Fleets Partnership: No  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p> <p><i>Fuel economy data based on Whittier's 2021 numbers.</i></p>					
Los Angeles County Metropolitan Transit Authority Orange Line	Heavy-Duty	Electric	44	318,092 gal	3,647.8 tons
<p>Average electric fuel economy: 30 kWh/100mi  Miles traveled per vehicle per year: 33,929 mi  Market: Commuters  Vehicle type: Bus: Transit  Percentage from coalition: 60%  National Clean Fleets Partnership: No  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p> <p><i>Fuel economy estimate is based on online data from the manufacturer of the bus. 60' foot articulated bus.  <a href="https://www.newflyer.com/site-content/uploads/2023/01/Xcelsior-CHARGE-NG.pdf">https://www.newflyer.com/site-content/uploads/2023/01/Xcelsior-CHARGE-NG.pdf</a></i></p>					
UPS - Medium-duty Hybrids	Heavy-Duty	HEV	5	1,602 gal	19.0 tons
<p>Average vehicle fuel economy: 24 MPG  Miles traveled per vehicle per year: 2,527 mi  Market: Corporate Fleet  Vehicle type: Truck: No Trailer  Percentage from coalition: 100%  National Clean Fleets Partnership: Yes  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p> <p><i>UPS indicates that their hybrid vehicles see up to 4x improvement in fuel economy compared to their conventional counterparts.</i></p>					
UPS - Medium-duty PHEV	Heavy-Duty	PHEV	6	1,448 gal	10.1 tons
<p>Electricity used: 14,391 kWh  Market: Corporate Fleet  Vehicle type: Truck: No Trailer  Percentage from coalition: 100%  National Clean Fleets Partnership: Yes  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p>					
Victor Valley Transit Authority	Heavy-Duty	Electric	12	60,907 gal	388.8 tons
<p>Electricity used: 677,035 kWh  Market: Corporate Fleet  Vehicle type: Bus: Transit  Percentage from coalition: 100%  National Clean Fleets Partnership: No  Workplace Charging Challenge: -  Energy Efficient Mobility Systems Partnership: No</p>					
Victor Valley Transit Authority	Light-Duty	HEV	6	3,207 gal	37.7 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Average vehicle fuel economy: 50 MPG Miles traveled per vehicle per year: 17,814 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - Energy Efficient Mobility Systems Partnership: No					
Victor Valley Transit Authority	Light-Duty	PHEV	3	874 gal	10.3 tons
Average electric fuel economy: 30 kWh/100mi Average vehicle fuel economy: 25 MPG Miles traveled per vehicle per year: 19,444 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 65% National Clean Fleets Partnership: No Workplace Charging Challenge: - Energy Efficient Mobility Systems Partnership: No  <i>Average fuel economy of electric vehicles based on a broad average of plug in hybrid vehicles on fueleconomy.gov</i>					
Victor Valley Transit Authority - Battery Car	Light-Duty	Electric	6	3,795 gal	30.6 tons
Electricity used: 28,362 kWh Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - Energy Efficient Mobility Systems Partnership: No					
<b>Total:</b>			<b>2,603</b>	<b>572,662 gal</b>	<b>6,250 tons</b>

## FUEL STATIONS

### New Stations

Fuel	Public Stations	Private Stations
Biodiesel	-	-
CNG - Compressed Natural Gas	-	-
E85 - 85% Ethanol	-	-
EVSE Ports (Chargers): Level 1 & Level 2	-	-
EVSE Ports (Chargers): DC Fast Chargers	-	21
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	-
<b>Total:</b>	<b>0</b>	<b>21</b>

## OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Listening secessions to understand and assist cities with EV permit streamlining challenges and opportunities. Multiple cities,	01/01/2022, 12/31/2022	Meeting - Stakeholder	100%	30

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
<b>Technology:</b> Electric vehicles, Hybrid electric vehicles <b>Audience:</b> Government <i>The dates above reflect a range. This was a recurring activity throughout the year, totaling 18 meetings between April 2021- Jan 2023.</i>				
Ciclovía and other Community Events	01/01/2022, 12/31/2022	Meeting - Other	100%	400
<b>Technology:</b> Electric vehicles <b>Audience:</b> Energy and Environmental Justice (EEJ) communities or representative organizations, General Public, Government, Private Fleets, Transit, Other <i>SCAG had a table at roughly 11 prescheduled community events to distribute EV literature, a survey and address community questions. The dates above reflect a range. This was a recurring activity throughout the year. Persons reached is an estimate, roughly 15-30 per event with some larger events drawing a larger interest.</i>				
SCAG General Assembly, ZE Technology Panel	05/05/2022	Workshop Held By Coalition	100%	250
<b>Technology:</b> Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Idle reduction, Natural gas vehicles, Renewable diesel, Vehicle miles traveled reduction <b>Audience:</b> Energy and Environmental Justice (EEJ) communities or representative organizations, General Public, Government, Private Fleets, Utility, Other <i>SCAG hosted a panel at our annual General Assembly on the topic of "The Region's Transition to Zero Emission Transportation." SCAG hosted 4 panelists and one moderator, including an expert on workforce development, an OEM, Southern California Gas, Southern California Edison, a climate focused non-profit and Sunline Transit.</i>				
Alt Car Expo	10/27/2022	Meeting - Other	5%	200
<b>Technology:</b> Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Hydrogen, Vehicle miles traveled reduction <b>Audience:</b> <i>AltCar Expo Live, hosted by the Western Riverside Council of Governments (WRCOG), brought together fleet managers, sustainability directors, business owners, industry professionals and the general public in a forum for alternative fuels and vehicles. The event was hosted by WRCOG, with sponsorship from SCAG and others including but not limited to the South Coast Air Quality Management District, California Air Resources Board, and Governor's Office of Business and Economic Development (GoBiz). SCAG's Clean Cities Coalition Director spoke about SCAG's Clean Technology Program on a panel with other experts. SCAG's Clean Cities Coalition Director also led a listening session for fleets to share information about best practices. Event advertising reached over 3000 through communication through SCAG newsletter</i>				
Presentations to SCAG Policy Committees	01/01/2022, 12/31/2022	Meeting - Other	100%	75
<b>Technology:</b> Electric vehicles, Hybrid electric vehicles, Hydrogen, Natural gas vehicles, Renewable diesel, Vehicle miles traveled reduction <b>Audience:</b> General Public, Government, Private Fleets, Utility, Other <i>Coalition staff gave several presentations to the SCAG Policy Committees about efforts to advance zero emission transportation in the region. We also facilitated presentations from stakeholders such as So Cal Edison, So Cal Natural Gas and California Public Utilities Commission. Additionally, we hosted a panel of experts to share plans to prepare the CA energy supply for electric vehicles.</i>				
ToolBox Tuesday on EV Planning	12/13/2022	Workshop Held By Coalition	100%	70
<b>Technology:</b> Electric vehicles, Hybrid electric vehicles <b>Audience:</b> Energy and Environmental Justice (EEJ) communities or representative organizations, General Public, Government, Private Fleets, Utility, Other <i>Coalition staff shared lessons learned on EV planning from a recent study called the Electric Vehicle Site Suitability Study.</i>				
<b>Total:</b>				<b>1,025</b>

## GRANTS

Name	Grantor	Total Grant Amount	Total Matching Funds	Total Project Funding	Grant Amount Spent in 2022	Matching Funds Spent in 2022	Total Project Funding Spent in 2022

Name	Grantor	Total Grant Amount	Total Matching Funds	Total Project Funding	Grant Amount Spent in 2022	Matching Funds Spent in 2022	Total Project Funding Spent in 2022
AI-Based Mobility Monitoring System and Analytics Demonstration P	USDOE via Regents of the University of California	\$30,000	-	\$30,000	\$7,500	\$0	\$7,500
<b>Length of grant:</b> 4 years <b>Year grant began:</b> 2021 <b>Sources of the grant:</b> U.S. Department of Energy <b>Technologies:</b> Electricity, Idle Reduction, Vehicle-Miles Traveled Reductions							
<b>Total:</b>		<b>\$30,000</b>	<b>\$0</b>	<b>\$30,000</b>	<b>\$7,500</b>	<b>\$0</b>	<b>\$7,500</b>