U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

2022 Transportation Technology Deployment Report:

State of Delaware Clean Cities

Expanded Edition

March 2023

Clean Cities
U.S. Department of Energy

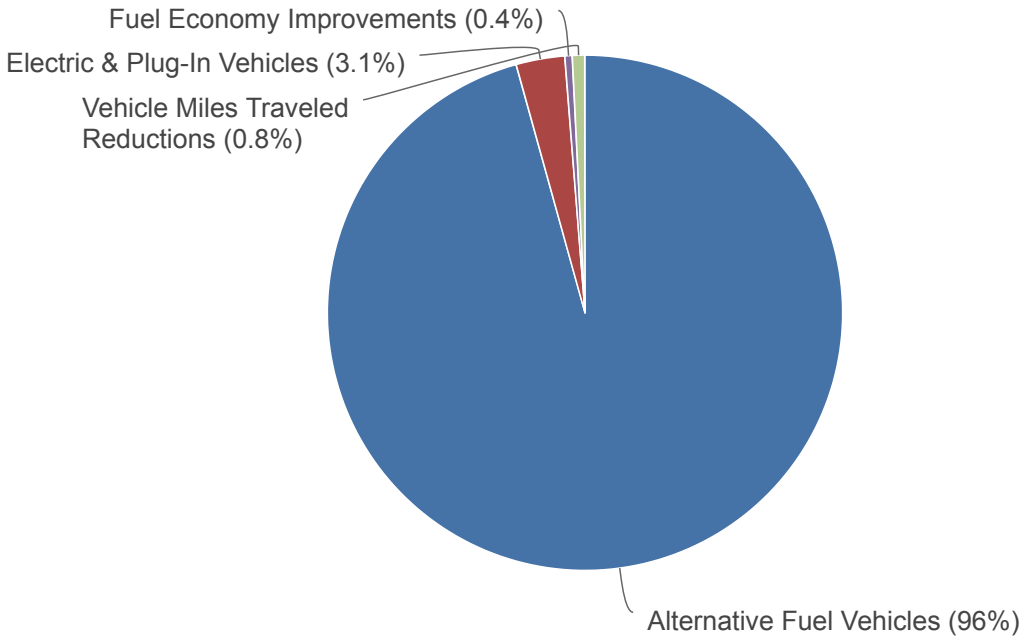
The U.S. Department of Energy's (DOE) Clean Cities Coalition Network fosters the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices. A national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

To view aggregated data for all local coalitions in the network, visit cleancities.energy.gov/accomplishments.

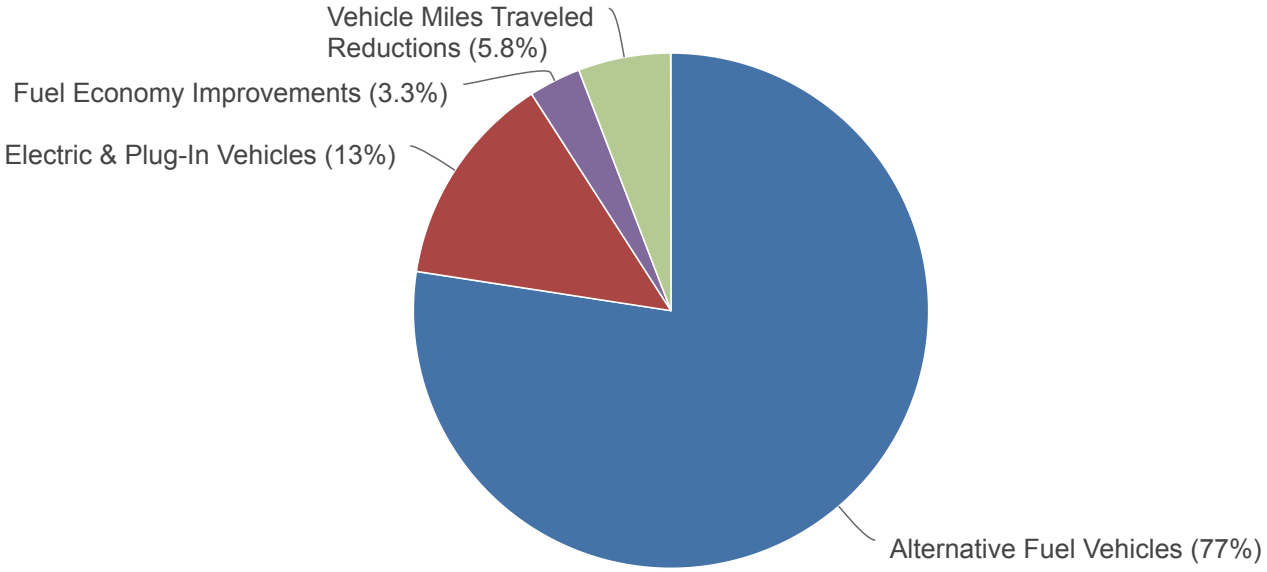
2022 Gallons of Gasoline Equivalent Reduced

2,721,754 gallons

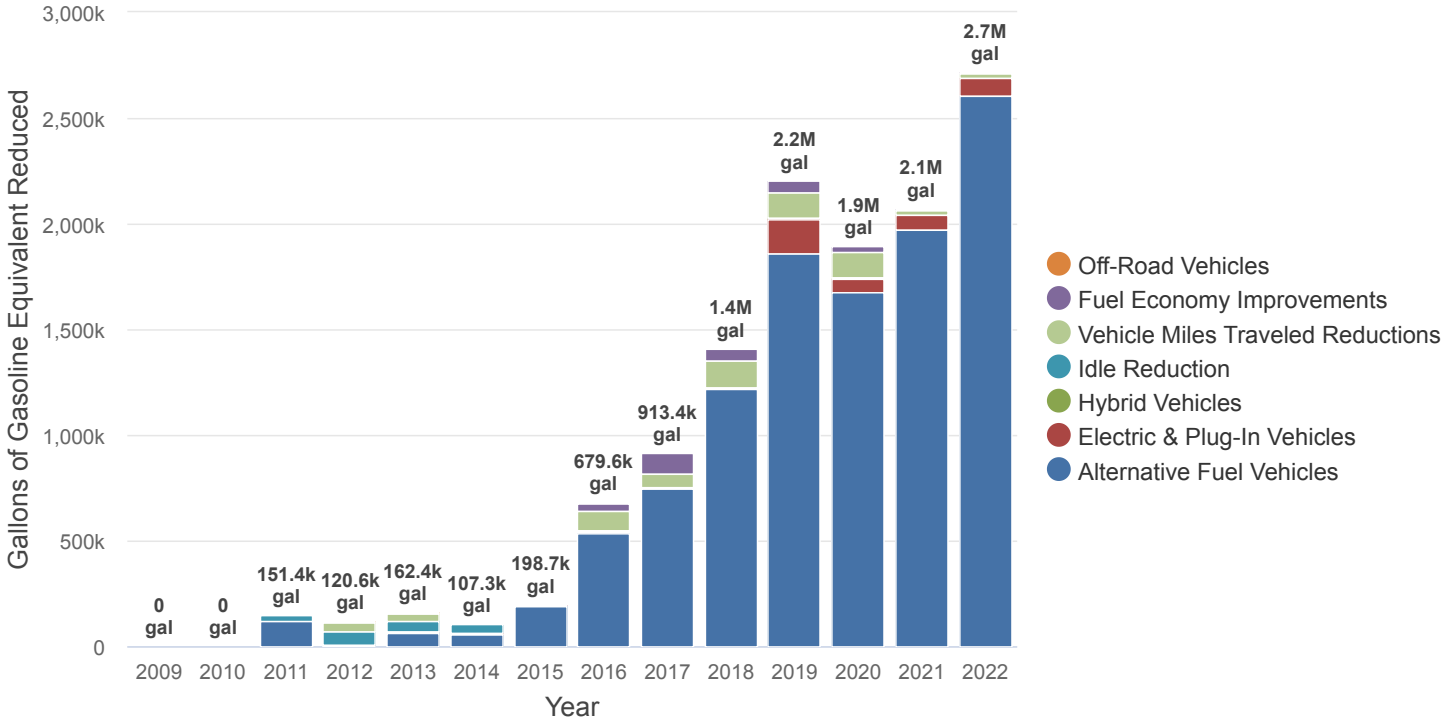


2022 Greenhouse Gas Emissions Reduced

4,368 tons



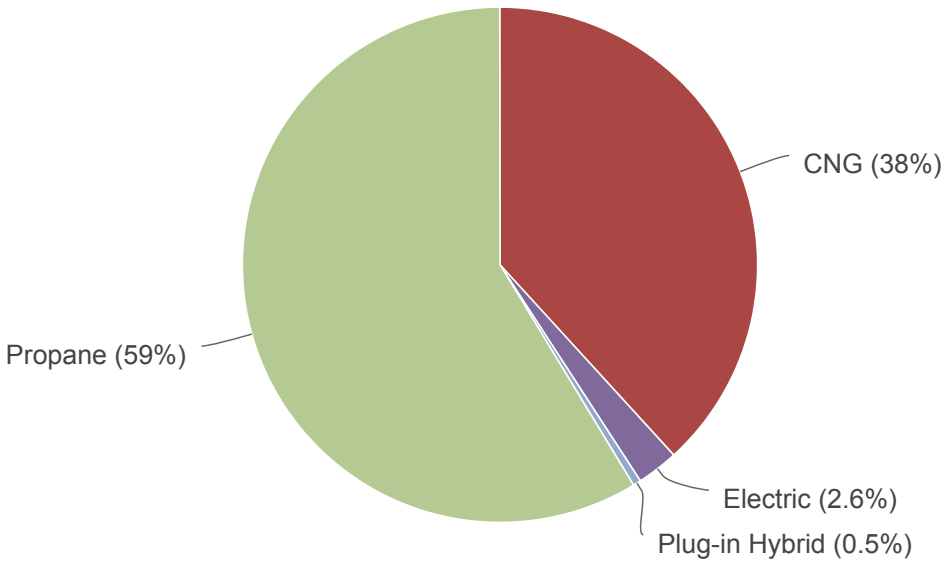
Historical Gallons of Gasoline Equivalent Reduced



Historical Greenhouse Gas Emissions Reduced

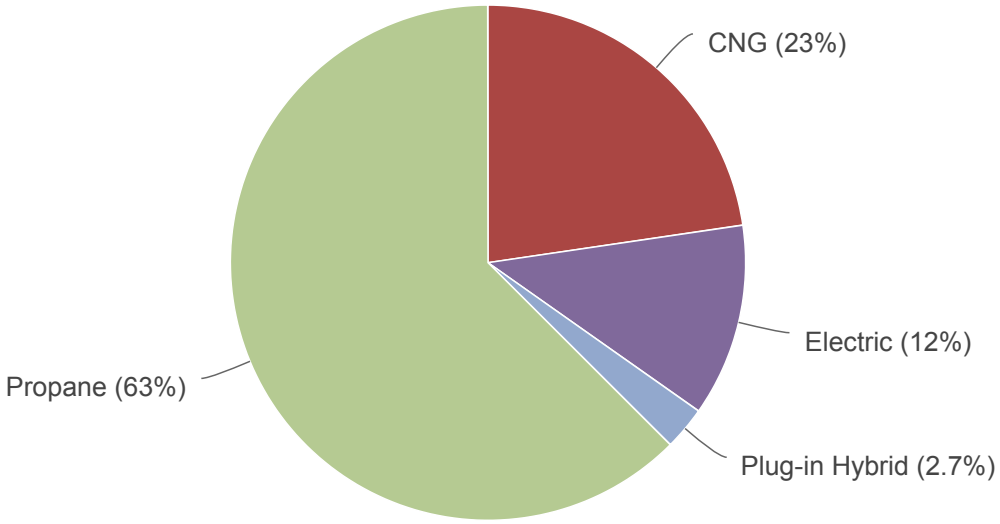
2022 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

2,687,992 gallons



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

3,971 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. 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	CO	NOx	VOC*	PM10	PM2.5
Alternative Fuel Vehicles - CNG	20,361 lb	1,386 lb	726 lb	123 lb	68 lb
Alternative Fuel Vehicles - Propane	0 lb	0 lb	10,676 lb	0 lb	0 lb
Electric, Hybrid & Plug-in Vehicles - Electric	12,995 lb	603 lb	678 lb	29 lb	24 lb
Electric, Hybrid & Plug-in Vehicles - PHEV	2,036 lb	90 lb	180 lb	7 lb	4 lb
Fuel Economy Improvements	1,895 lb	84 lb	167 lb	16 lb	7 lb
Vehicle Miles Traveled Reductions	3,353 lb	149 lb	296 lb	29 lb	12 lb
Total:	**40,640 lb**	**2,312 lb**	**12,724 lb**	**204 lb**	**115 lb**

* 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

State of Delaware Clean Cities - DE

https://dnrec.alpha.delaware.gov/climate-coastal-energy/clean-transportation/delaware-clean-cities-coalition/

Designated: 10/12/1993
Boundaries: Entire state of Delaware

DIRECTORS

	Address	Telephone	Fax
Breanne Preisen	Delaware Department of Natural Resources & Environmental Control 100 W Water St, Ste 10B Dover, DE 19904	302-735-3366	

Number of coalition directors	1
Coalition director(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 coalition director?	4 years

OPERATING INFORMATION

Coalition organizational structure	Hosted in a state government agency
Does the coalition have a non-profit governing board?	No
Does the coalition have a non-governing advisory committee?	No

Stakeholders

Number of stakeholders	56
Number of private stakeholders	40
Stakeholder counting notes	
Does the State Energy Office provide any financial support to the coalition or stakeholders?	Yes
Explain State Energy Office's support	

The SEO provides office space, administrative support and financial support to the director.

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?	No

2022 Outside Funding

Stakeholder dues collected	$0
How much funding is obtained from other sources to cover coalition operating expenses?	$0
Non-DOE or ARRA grant and matching funds spent in 2022	$0
Total non-DOE or ARRA funding in 2022	**$0**

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Chesapeake Utilities	Light-Duty	CNG	26	5,709 GGE	4,068 gal	7.8 tons
Market: Utility **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Delaware Transit Corporation	Light-Duty	Propane	257	1,529,484 gal	1,158,085 gal	1,822.5 tons
Market: Commuters **Vehicle type:** Unknown/Other **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Kent Sussex Industries	Heavy-Duty	Propane	7	15,576 gal	11,793 gal	18.6 tons
Market: Corporate Fleet **Vehicle type:** Bus: Shuttle **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Kent Sussex Industries	Light-Duty	Propane	7	15,576 gal	11,793 gal	18.6 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *KSI confirmed this year that they have 7 shuttle buses and 7 15-passenger vans all fueled by Propane Autogas. They gave me the total number of propane used across both vehicle types so I split the difference across both entries.*						
School Buses	Heavy-Duty	Propane	234	100% of time	303,735 gal	478.0 tons
Miles traveled per vehicle: 12,000 mi **Average vehicle fuel economy:** 7 MPGde **Market:** Commuters **Vehicle type:** Bus: School **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *It has been confirmed with the Delaware Department of Education Transportation Administrator that there are 234 propane school buses in Delaware. 130 owned by the state, 104 privately owned by contractors. I do not have fuel consumption as I would have to contact individual school districts and bus owners.*						
Schwan's - Medium-duty Propane	Light-Duty	Propane	6	21,083 gal	15,963 gal	25.1 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** Yes **Energy Efficient Mobility Systems Partnership:** No						
Sharp Energy	Light-Duty	Propane	36	100,000 gal	75,717 gal	119.2 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *Confirmed with Sharp that the 2022 numbers for the DE are about the same as 2021.*						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Waste Management - Heavy-duty CNG	Heavy-Duty	CNG	128	1,204,140 GGE	1,023,519 gal	892.5 tons
Market: Corporate Fleet **Vehicle type:** Truck: Refuse **Percentage from coalition:** 100% **National Clean Fleets Partnership:** Yes **Energy Efficient Mobility Systems Partnership:** No *Reloading 2021 WM after not reporting. Will not reload in 2023.*						
Total:			**701**		**2,604,674 gal**	**3,382 tons**

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Delaware Department of Transportation	Light-Duty	Electric	4	221 gal	1.9 tons
Average electric fuel economy: 31 kWh/100mi **Miles traveled per vehicle per year:** 1,537 mi **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					
Delaware Electric Cooperative	Light-Duty	Electric	1	699 gal	5.6 tons
Electricity used: 6,962 kWh **Market:** Utility **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					
Delaware Transit Corporation	Heavy-Duty	Electric	14	54,474 gal	347.8 tons
Electricity used: 605,523 kWh **Market:** Commuters **Vehicle type:** Bus: Transit **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					
State of Delaware Fleet Services	Light-Duty	Electric	73	14,828 gal	125.1 tons
Average electric fuel economy: 28 kWh/100mi **Miles traveled per vehicle per year:** 6,500 mi **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					
State of Delaware Fleet Services	Light-Duty	PHEV	83	13,097 gal	108.1 tons
Average electric fuel economy: 41 kWh/100mi **Average vehicle fuel economy:** 90 MPG **Miles traveled per vehicle per year:** 6,500 mi **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Total:			**175**	**83,318 gal**	**588 tons**

FUEL ECONOMY

Fuel Economy Improvements

Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
State of Delaware Fleet Services	23 MPG	25 MPG	55	5,820 mi	835 gal	9.8 tons
Method: Telematics **Vehicle class:** Light-Duty **Market:** Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *I contacted the stakeholders but these numbers are not easy to obtain. This is an estimate from 2021. Which was also an estimate.*						
State of Delaware Fleet Services	23 MPG	27 MPG	249	9,441 mi	11,357 gal	133.6 tons
Method: Telematics **Vehicle class:** Light-Duty **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *I contacted the stakeholders but these numbers are not easy to obtain. This is an estimate from 2021 which was also an estimate.*						
Total:			**304**	**15,261 mi**	**12,192 gal**	**143 tons**

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Delaware Commute Solutions	Other	Light-Duty	6,527 gal	76.8 tons
Fuel saved: 6,527 gallons **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *Delaware Commute Solutions has a VMT program - what is reported through their app combines carpooling, telecommuting, public transportation, etc. They also reported 1,280,754 VMTs through the program.*				
State of Delaware Employees Van Pool	Vanpooling	Light-Duty	15,043 gal	176.9 tons
Fuel type of vehicles driven less: Gasoline **Fuel economy of vehicles driven less:** 23 MPG **Number of vehicles driven less:** 63 **VMT project per vehicle being driven less:** 15,000 mi **Fuel type of additional vehicles:** Gasoline **Fuel economy of additional vehicles:** 20 MPG **Number of additional vehicles:** 10 **VMT per additional vehicle:** 22,000 mi **Percentage from coalition:** 50% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *The stakeholder gave very vague details on this and did not respond to my follow-up questions - this is an estimate. It was reported that there are 10 van pools. That is the information I received.*				
Total:				**21,570 gal**	**254 tons**

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	-	-
CNG - Compressed Natural Gas	-	-
E85 - 85% Ethanol	-	-
EVSE Ports (Chargers): Level 1 & Level 2	412	-
EVSE Ports (Chargers): DC Fast Chargers	-	-
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	-
Total:	**412**	**0**

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Installing EV Charging Stations in Your Municipality	03/09/2022	Workshop Held By Coalition	100%	60
Technology: Electric vehicles **Audience:** Government *First of four webinars focused on preparing Delaware's Local Governments for EVs - series in partnership with the University of Delaware's Institute of Public Administration.*				
Youth Environmental Summit (YES!) EV Talk	04/14/2022	Meeting - Other	100%	75
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** General Public, Other *Conference for Delaware high school students interested in environmental topics. Session was 45 mins on clean transportation and alternative fueled vehicles with a focus on electric vehicles.*				
Ribbon Cutting of the Lewes Line	05/23/2022	Media Event	100%	50
Technology: Idle reduction, Propane, Vehicle miles traveled reduction **Audience:** General Public, Government, Private Fleets, Transit, Other *Delaware Transit Corporation sold a propane shuttle bus to the City of Lewes intended to help alleviate traffic congestion in the city by providing shuttle services into the downtown areas.*				
Building an EV Fleet for Your Town	05/25/2022	Workshop Held By Coalition	100%	45
Technology: Electric vehicles **Audience:** Government *Second of four webinars for Delaware's local governments.*				
Grants for Local Governments	09/21/2022	Workshop Held By Coalition	100%	50
Technology: Electric vehicles **Audience:** Government *Third of four webinars for Delaware's local governments*				
E-Mobility, Diversity, Equity & Inclusion Conference - EVNoire	10/19/2022	Conference Participation	100%	1
Technology: Electric vehicles, Hybrid electric vehicles, Idle reduction, Vehicle miles traveled reduction **Audience:** Airport, Delivery, Energy and Environmental Justice (EEJ) communities or representative organizations, General Public, Government, Private Fleets, Transit, Utility, Waste, Other *Conference was focused on best practices and strategies for engaging diverse communities overburdened by the transportation sector. All technologies could apply.*				

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Delaware Commute Solutions (Formerly RideShare Delaware)	01/01/2022, 12/31/2022	Meeting - Other	100%	443
Technology: Vehicle miles traveled reduction **Audience:** Other				
Year 2022 Total Meetings with Program Partners, Community Partners, Resource Partners and Prospects Commuters and Employers - All modes of Clean Commuting (carpooling, vanpooling, bus, train, walking, biking, teleworking, compressed work weeks)				
Delaware Commute Solutions (Formerly RideShare Delaware)	01/01/2022, 12/31/2022	Meeting - Other	100%	417
Technology: Vehicle miles traveled reduction **Audience:** Other				
Total Direct Commuter Outreach Events - full year 2022. Commuters and Employers - all modes of Clean Commuting (van/car pooling, bus, train, walking, biking, teleworking, compressed work weeks)				
Delaware Commute Solutions (Formerly RideShare Delaware)	01/01/2022, 12/31/2022	Social Media	100%	586
Technology: Vehicle miles traveled reduction **Audience:** Other				
Total Posts on Facebook, Instagram, Linked In, Twitter Commuters and Employers - All modes of Clean Commuting (carpooling, vanpooling, bus, train, walking, biking, teleworking, compressed work weeks)				
Total:				**1,727**