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

2020 Transportation Technology Deployment Report:

State of Delaware Clean Cities

Expanded Edition

March 2021

Clean Cities
U.S. Department of Energy

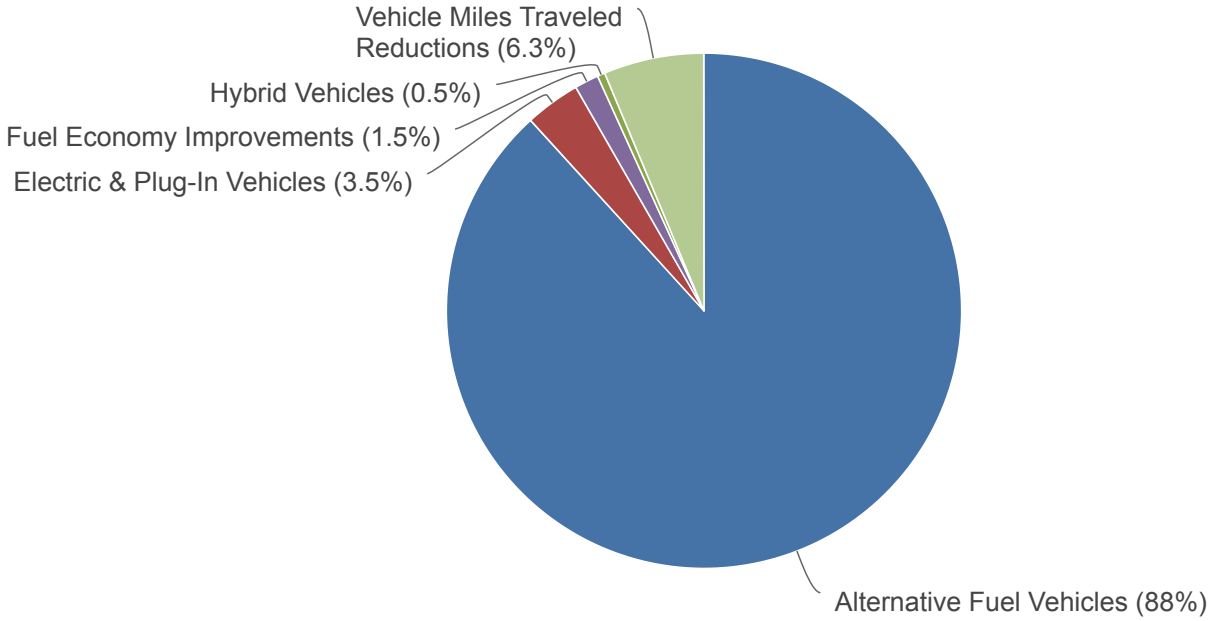
The U.S. Department of Energy's (DOE) Clean Cities Coalition Network fosters the nation's economic, environmental, and energy security by working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices. A national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

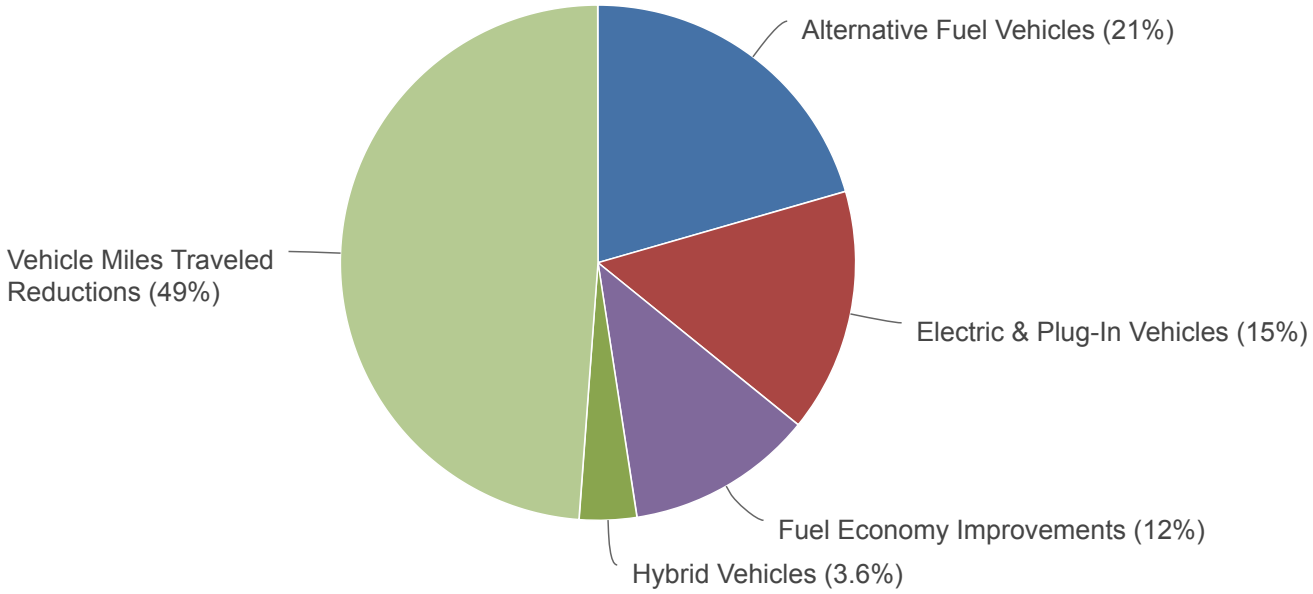
2020 Gallons of Gasoline Equivalent Reduced

1,895,737 gallons

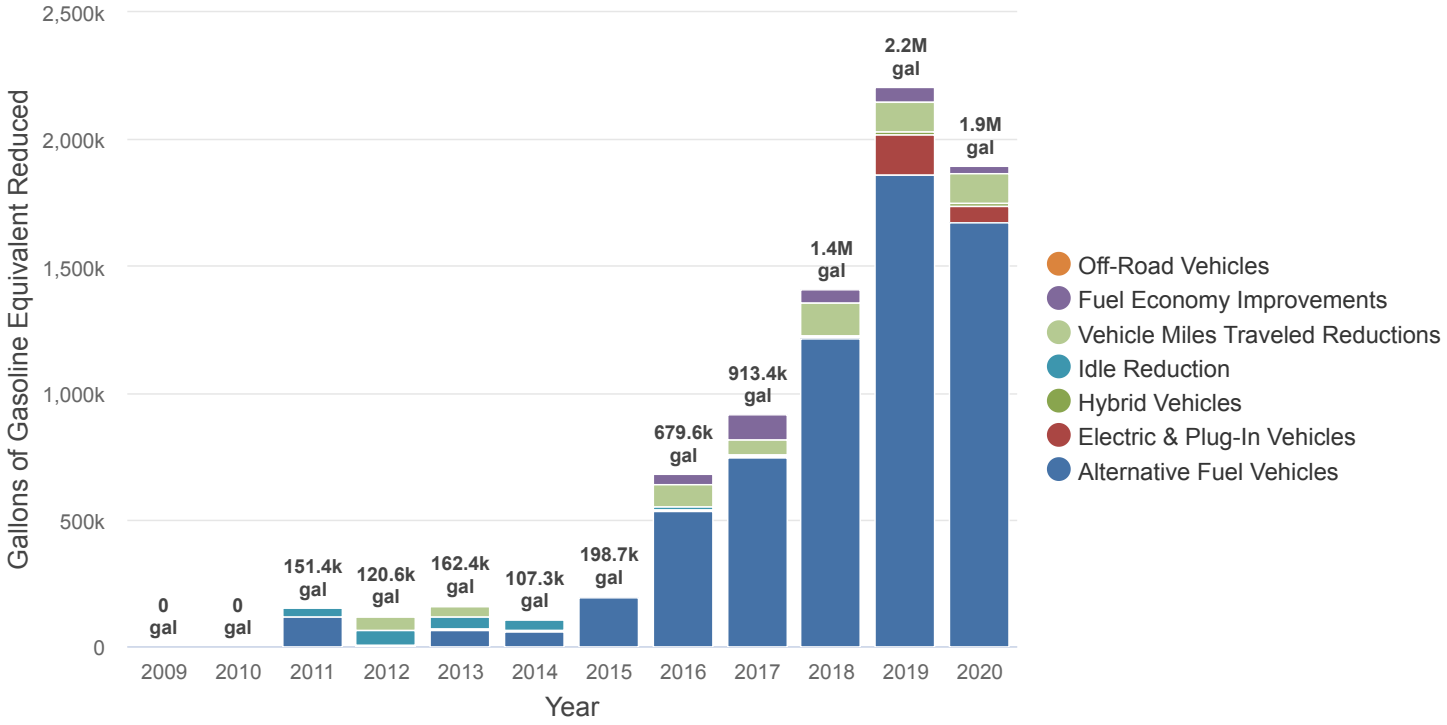


2020 Greenhouse Gas Emissions Reduced

2,903 tons



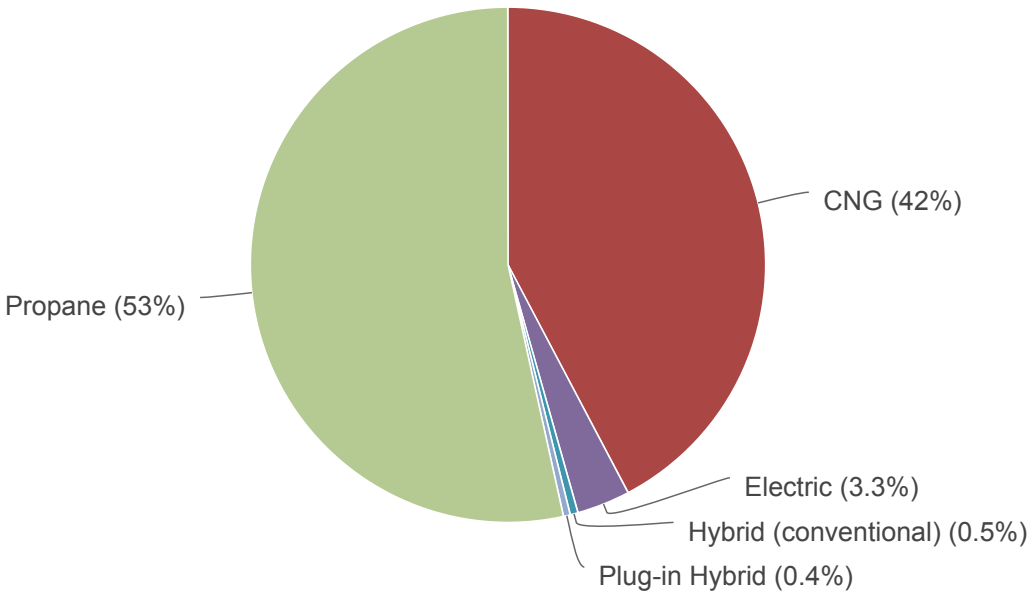
Historical Gallons of Gasoline Equivalent Reduced



Historical Greenhouse Gas Emissions Reduced

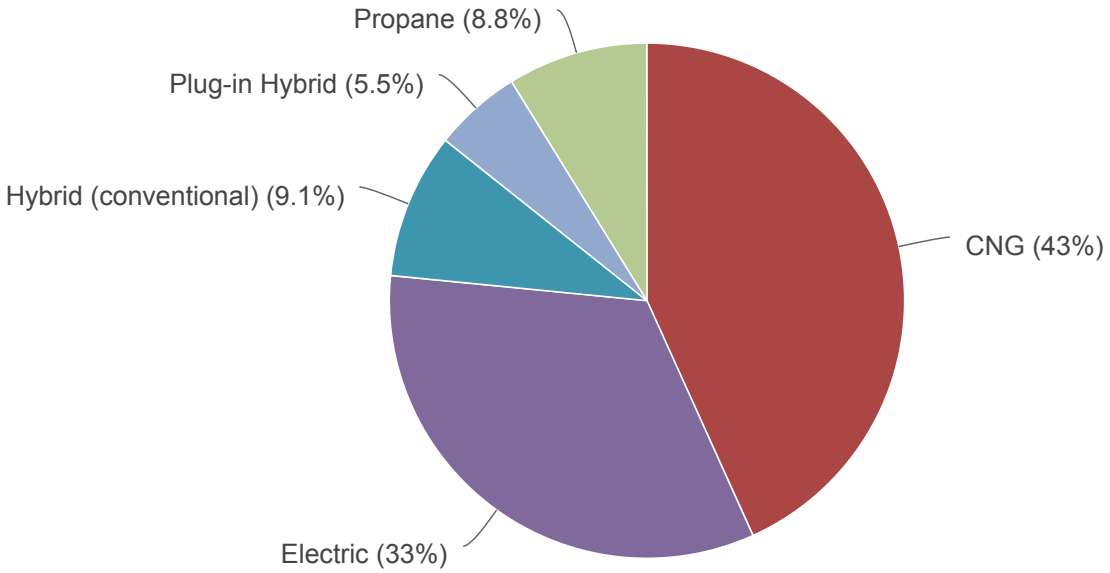
2020 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

1,747,570 gallons



2020 Greenhouse Gas Emissions Reduced by Fuel Type for Alternative Fuel Projects

1,145 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	-95,702 lb	24,965 lb	20 lb	0 lb	0 lb
Alternative Fuel Vehicles - E85	0 lb	0 lb	62 lb	0 lb	0 lb
Alternative Fuel Vehicles - Propane	-31,276 lb	22,959 lb	-929 lb	35 lb	28 lb
Electric, Hybrid & Plug-in Vehicles - Electric	2,295 lb	1,433 lb	144 lb	10 lb	9 lb
Electric, Hybrid & Plug-in Vehicles - HEV	0 lb	19 lb	52 lb	0 lb	0 lb
Electric, Hybrid & Plug-in Vehicles - PHEV	1,584 lb	56 lb	87 lb	2 lb	2 lb
Vehicle Miles Traveled Reductions	16,138 lb	563 lb	899 lb	226 lb	49 lb
Total:	**-106,961 lb**	**49,995 lb**	**336 lb**	**273 lb**	**88 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?	2 years

OPERATING INFORMATION

Coalition organizational structure	Hosted in a state government agency
Does the coalition have a non-profit governing board?	-
Does the coalition have a non-governing advisory committee?	-

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 State Energy Office provides office space, administrative support, and financial support for the coordinator.

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

2020 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 2020	$0
Total non-DOE or ARRA funding in 2020	**$0**

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Chesapeake Utilities	Light-Duty	CNG	13	90% of time	4,168 gal	7.2 tons
Miles traveled per vehicle: 12,000 mi **Average vehicle fuel economy:** 24 MPGge **Market:** Utility **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Chesapeake Utilities	Light-Duty	CNG	18	90% of time	7,960 gal	13.7 tons
Miles traveled per vehicle: 12,000 mi **Average vehicle fuel economy:** 17 MPGge **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	Heavy-Duty	Propane	273	1,040,840 gal	656,745 gal	N/A
Market: Commuters **Vehicle type:** Bus: Shuttle **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
* 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.						
Easter Seals	Light-Duty	Propane	1	2,147 gal	325 gal	0.5 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 20% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Kent Sussex Industries	Light-Duty	Propane	14	22,535 gal	17,063 gal	25.3 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
Prime Care Medical	Light-Duty	Propane	6	100% of time	626 gal	0.9 tons
Miles traveled per vehicle: 11,991 mi **Average vehicle fuel economy:** 17 MPGge **Market:** Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 20% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
School Buses	Heavy-Duty	Propane	56	100% of time	72,689 gal	107.9 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						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Schwan's - Medium-duty Propane	Light-Duty	Propane	10	40,736 gal	30,844 gal	45.8 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	33	205,837 gal	155,854 gal	231.3 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
State of Delaware	Light-Duty	E85	427	0% of time	0 gal	0.0 tons
Miles traveled per vehicle: 9,984 mi **Average vehicle fuel economy:** 19 MPG **Market:** Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 65% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No						
State of Delaware Fleet Services	Light-Duty	E85	1,260	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *Delaware does not have any E85 stations to fuel vehicles.*						
State of Delaware Fleet Services	Light-Duty	E85	5	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No *Delaware Fleet Services added 5 Ford Transit Shuttle Buses to the fleet with E85 - however, there are no E85 stations in the state of Delaware.*						
Waste Management - Heavy-duty CNG	Heavy-Duty	CNG	126	1,140,086 GGE	726,805 gal	474.3 tons
Market: Corporate Fleet **Vehicle type:** Truck: Refuse **Percentage from coalition:** 75% **National Clean Fleets Partnership:** Yes **Energy Efficient Mobility Systems Partnership:** No						
Total:			**2,242**		**1,673,079 gal**	**596 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	449 gal	3.8 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Average electric fuel economy: 31 kWh/100mi **Miles traveled per vehicle per year:** 2,346 mi **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No					
Delaware Sustainable Energy Utility **Electricity used:** 6,070 kWh **Market:** General/Unknown **Vehicle type:** Car **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No	Light-Duty	Electric	1	663 gal	4.6 tons
Delaware Transit Corporation **Electricity used:** 506,718 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	Heavy-Duty	Electric	16	45,585 gal	276.2 tons
State of Delaware Fleet Services **Average electric fuel economy:** 28 kWh/100mi **Miles traveled per vehicle per year:** 5,480 mi **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 73% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No	Light-Duty	Electric	70	11,668 gal	96.7 tons
State of Delaware Fleet Services **Average vehicle fuel economy:** 40 MPG **Miles traveled per vehicle per year:** 5,480 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	Light-Duty	HEV	116	8,810 gal	104.5 tons
State of Delaware Fleet Services **Average vehicle fuel economy:** 90 MPG **Miles traveled per vehicle per year:** 5,480 mi **Market:** National Parks **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** - **Energy Efficient Mobility Systems Partnership:** No	Light-Duty	PHEV	55	7,317 gal	62.8 tons
Total:			**262**	**74,491 gal**	**549 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	9.9 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						
State of Delaware Fleet Services	23 MPG	25 MPG	1,837	5,820 mi	27,890 gal	330.9 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						
Total:			**1,892**	**11,640 mi**	**28,725 gal**	**341 tons**

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
RideShare Delaware	Carpooling	Light-Duty	76,943 gal	912.9 tons
Fuel saved: 76,943 gallons **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No				
State of Delaware Employees Van Pool	Vanpooling	Light-Duty	42,498 gal	504.2 tons
Fuel type of vehicles driven less: Gasoline **Fuel economy of vehicles driven less:** 23 MPG **Number of vehicles driven less:** 159 **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:** 17 **VMT per additional vehicle:** 22,000 mi **Percentage from coalition:** 50% **National Clean Fleets Partnership:** No **Energy Efficient Mobility Systems Partnership:** No				
Total:			**119,441 gal**	**1,417 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	48	-
EVSE Ports (Chargers): DC Fast Chargers	-	-
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	-

Fuel	Public Stations	Private Stations
Total:	**48**	**0**

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Delaware EVSE Rebate Program - Webinar	04/14/2020	Meeting - Other	100%	75
Technology: Electric vehicles **Audience:** General Public, Government, Private Fleets, Transit, Utility				
Charging Forward With Electric Vehicles Webinar with DE Sierra Club	09/23/2020	Workshop Held By Coalition	100%	200
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** General Public				
Drive Clean & Green Webinar with the DE Sustainable Energy Utility	12/03/2020	Workshop Held By Coalition	100%	1,042
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** General Public				
RideShare Delaware	01/01/2020, 12/31/2020	Meeting - Other	100%	405
Technology: Vehicle miles traveled reduction **Audience:** Other				
Total Direct Commuter Outreach Events - Full year of 2020				
RideShare Delaware	01/01/2020, 12/31/2020	Social Media	100%	459
Technology: Vehicle miles traveled reduction **Audience:** Other				
Total posts on Facebook, Instagram, LinkedIn, and Twitter - Full year 2020				
RideShare Delaware	01/01/2020, 12/31/2020	Meeting - Stakeholder	100%	506
Technology: Vehicle miles traveled reduction **Audience:**				
Total meetings with program partners, community partners, resource partners and prospects. Full year 2020.				
ACT Virtual 2020	08/18/2020, 11/19/2020	Conference Participation	100%	1
Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles, Hydrogen, Natural gas vehicles, Propane, Renewable diesel **Audience:** Airport, Delivery, Energy and Environmental Justice (EEJ) communities or representative organizations, General Public, Government, Private Fleets, Transit, Utility, Waste, Other				
The coordinator attended the ACT (Advanced Clean Transportation) Virtual 2020 conference which spanned over a 4-month time period from August through November. Topics covered all alternative fuels, infrastructure, policy and upcoming technology. I was the only participant of the Delaware Clean Cities Coalition.				
Delaware Futures	07/08/2020, 07/22/2020, 08/05/2020	Meeting - Other	100%	9
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** Energy and Environmental Justice (EEJ) communities or representative organizations, Other				
Delaware Futures works with at-risk youth during the school year and the summer on enrichment programs to assist them in preparation for college. During the summer of 2020, the program had gone virtual and they hosted a 4 week, project oriented session for about 33 high school students. There were 3 industries there one of which was environmental. A group of 9 students was interested in the environmental career field. Students were expected to come up with solutions to the problems we, as environmental professionals, presented them. The presented problem was how to work with their respective communities on the importance of driving electric vehicles and what was the best way to get out the messaging. The professionals and the students gathered three times to talk about the challenges and the problems, the solutions they came up with, and how to implement those solutions.				

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Stakeholder Meeting	10/21/2020	Meeting - Stakeholder	100%	18
Technology: Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit, Utility				
Stakeholder Meeting	02/05/2020	Meeting - Stakeholder	100%	22
Technology: Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit, Utility				
Stakeholder Meeting	05/04/2020	Meeting - Stakeholder	100%	14
Technology: Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit, Utility				
Total:				**2,751**