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

2019 Transportation Technology Deployment Report:

State of Delaware Clean Cities

Expanded Edition

March 2020

Clean Cities
U.S. Department of Energy

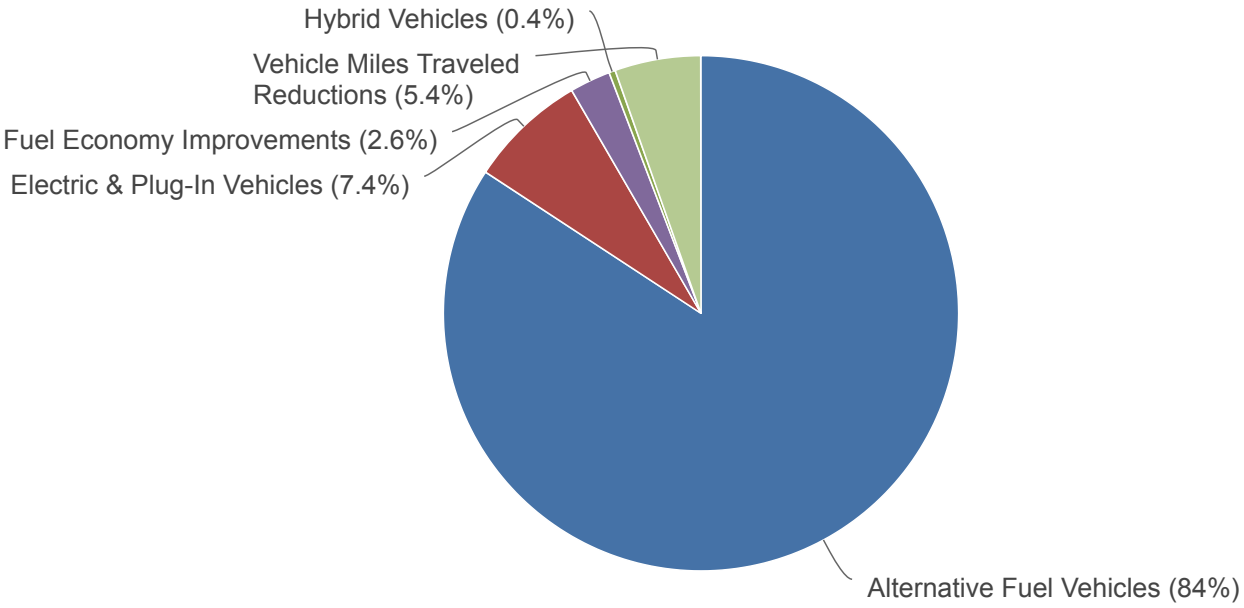
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and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

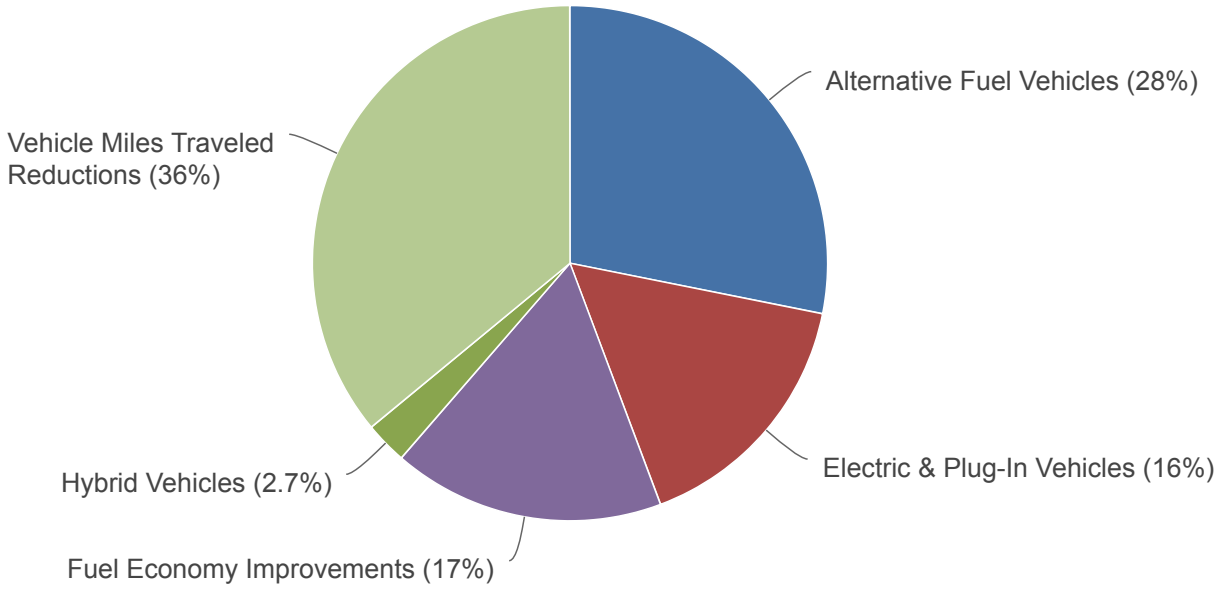
2019 Gallons of Gasoline Equivalent Reduced

2,206,065 gallons

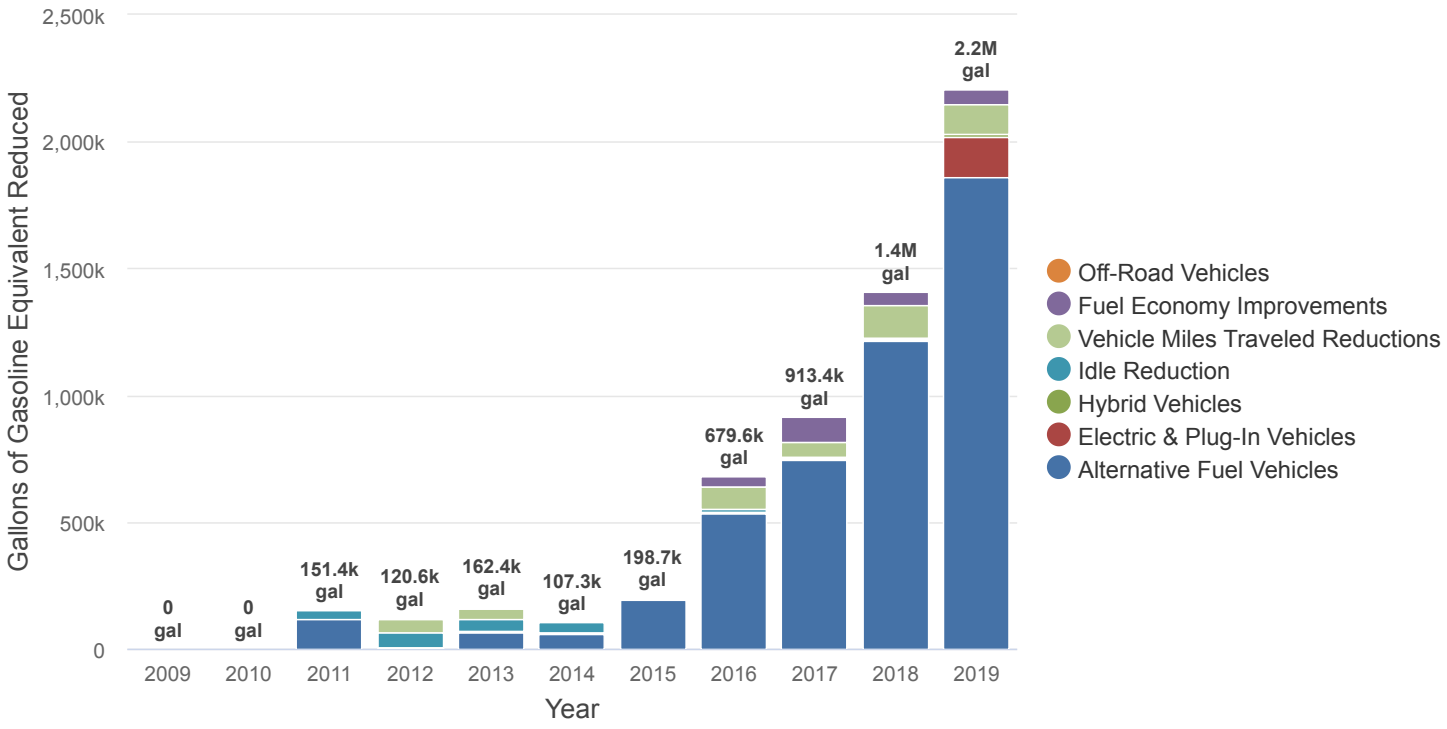


2019 Greenhouse Gas Emissions Reduced

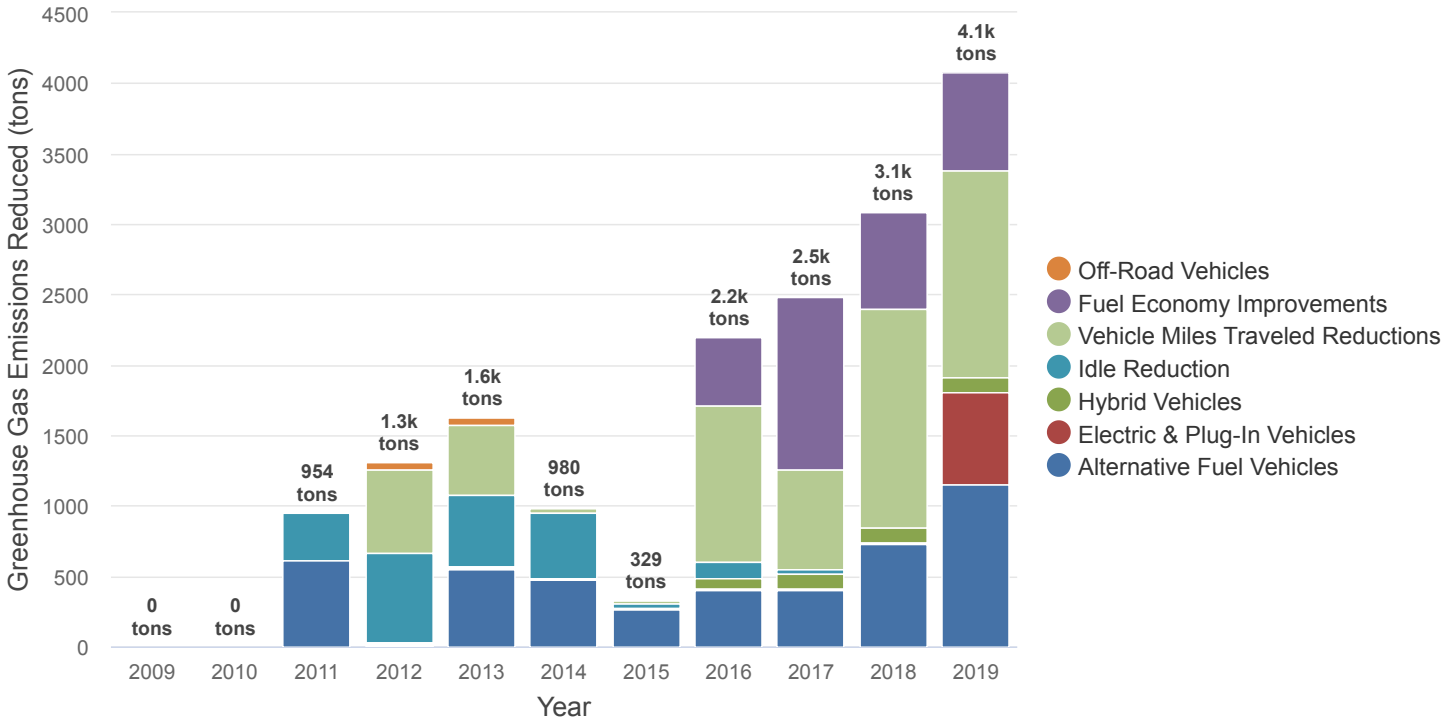
4,082 tons



Historical Gallons of Gasoline Equivalent Reduced

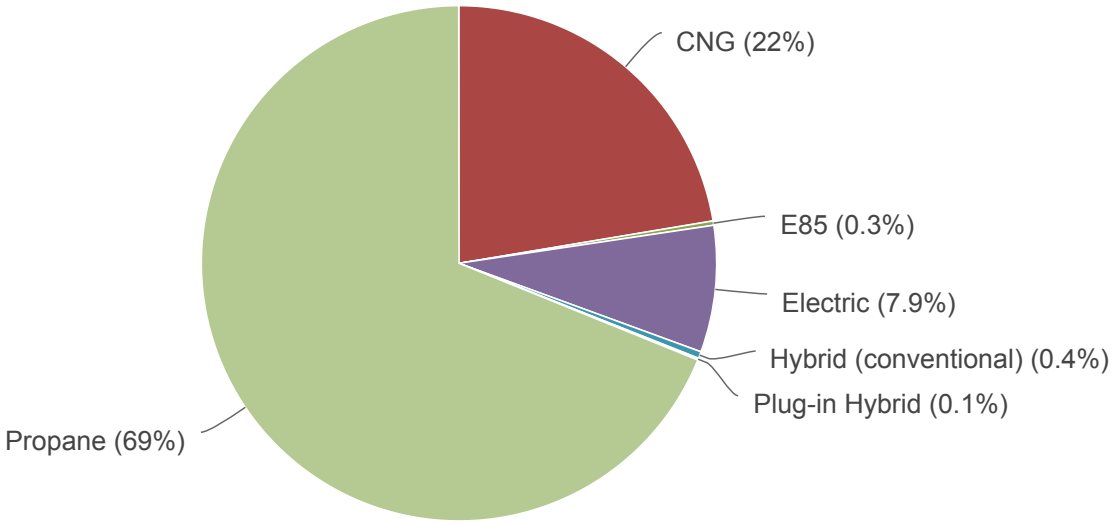


Historical Greenhouse Gas Emissions Reduced



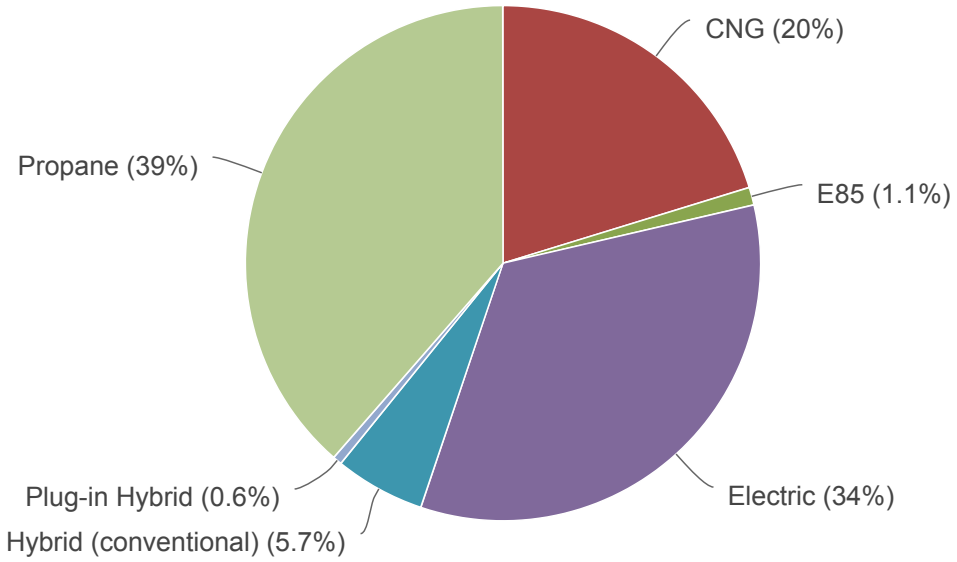
2019 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

2,030,238 gallons



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

1,917 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. 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*	NOx	VOC**	PM10	PM2.5
CNG - Compressed Natural Gas	18,463 lb	20 lb	0 lb	0 lb
E85 - 85% Ethanol	4,387 lb	-75 lb	30 lb	7 lb
Electric (all-electric)	4,737 lb	111 lb	23 lb	22 lb
Hybrid (conventional)	19 lb	52 lb	0 lb	0 lb
Plug-in Hybrid	16 lb	25 lb	1 lb	1 lb
Propane	41,062 lb	-2,789 lb	65 lb	45 lb
VMT Reduction (Gasoline)	576 lb	921 lb	231 lb	51 lb
Total:	**69,260 lb**	**-1,735 lb**	**350 lb**	**125 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

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

COORDINATORS

	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 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?	1 year

OPERATING INFORMATION

Coalition organizational structure	Hosted in a state government agency

Stakeholders

Number of stakeholders	55
Number of private stakeholders	39
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 would you rate the quality of the data on your survey?	Fair
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

2019 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 2019	$0
Total non-DOE or ARRA funding in 2019	**$0**

VEHICLE & FUEL INVENTORY

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	4,388 gal	5.7 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						
Chesapeake Utilities	Light-Duty	CNG	18	90% of time	8,379 gal	10.9 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						
Delaware Transit Corporation	Heavy-Duty	Propane	180	1,040,840 gal	709,124 gal	278.0 tons
Market: Commuters **Vehicle type:** Bus: Shuttle **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
Delaware Transit Corporation	Heavy-Duty	Propane	58	100% of time	186,594 gal	73.1 tons
Miles traveled per vehicle: 22,679 mi **Average vehicle fuel economy:** 8 MPGde **Market:** Commuters **Vehicle type:** Bus: Shuttle **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
Easter Seals	Light-Duty	Propane	1	2,147 gal	1,625 gal	2.3 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
Kent Sussex Industries	Light-Duty	Propane	14	22,535 gal	17,059 gal	24.1 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
Prime Care Medical	Light-Duty	Propane	6	16,973 gal	12,849 gal	18.2 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
School Buses	Heavy-Duty	Propane	35	138,000 gal	94,019 gal	36.9 tons
Market: Commuters **Vehicle type:** Bus: School **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No *These are school buses from 4 different school buses that were replaced using VW funding.*						
School Buses	Heavy-Duty	Propane	71	274,432 gal	186,971 gal	73.3 tons
Market: Commuters **Vehicle type:** Bus: School **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
Schwan's - Medium-duty Propane	Heavy-Duty	Propane	13	50,385 gal	34,327 gal	13.5 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Market: Corporate Fleet **Vehicle type:** Truck: No Trailer **Percentage from coalition:** 100% **National Clean Fleets Partnership:** Yes *Includes 2 Light HD Class 3 vehicles.*						
Sharp Energy	Light-Duty	Propane	33	205,837 gal	155,819 gal	220.2 tons
Market: Corporate Fleet **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No						
State of Delaware	Light-Duty	E85	917	2% of time	3,740 gal	14.6 tons
Miles traveled per vehicle: 9,984 mi **Average vehicle fuel economy:** 19 MPG **Market:** Government - State **Vehicle type:** Car **Percentage from coalition:** 65% **National Clean Fleets Partnership:** No						
State of Delaware	Light-Duty	E85	427	2% of time	1,741 gal	6.8 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						
State of Delaware Fleet Services	Heavy-Duty	E85	20	0% of time	0 gal	0.0 tons
Miles traveled per vehicle: 25,594 mi **Average vehicle fuel economy:** 4 MPG **Market:** Government - State **Vehicle type:** Unknown/Other **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No *Ford Transit Passenger Vehicles. Delaware does not have any E85 stations; therefore, there is no place to fuel.*						
State of Delaware Fleet Services	Light-Duty	E85	119	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No *Dodge Caravan - Delaware does not have any E85 stations to fuel vehicles.*						
State of Delaware Fleet Services	Light-Duty	E85	68	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Car **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No *Delaware does not have any E85 stations to fuel vehicles.*						
State of Delaware Fleet Services	Light-Duty	E85	52	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No *Delaware does not have any E85 stations to fuel vehicles.*						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
State of Delaware Fleet Services	Light-Duty	E85	32	0 gal	0 gal	0.0 tons
Market: Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No *Delaware does not have any E85 stations to fuel vehicles.*						
Waste Management	Heavy-Duty	CNG	9	100% of time	62,239 gal	52.4 tons
Miles traveled per vehicle: 25,000 mi **Average vehicle fuel economy:** 3 MPGde **Market:** Corporate Fleet **Vehicle type:** Truck: Refuse **Percentage from coalition:** 75% **National Clean Fleets Partnership:** Yes						
Waste Management	Heavy-Duty	CNG	32	100% of time	379,361 gal	319.4 tons
Miles traveled per vehicle: 40,000 mi **Average vehicle fuel economy:** 3 MPGde **Market:** Corporate Fleet **Vehicle type:** Truck: Refuse **Percentage from coalition:** 75% **National Clean Fleets Partnership:** Yes						
Total:			**2,118**		**1,858,234 gal**	**1,149 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	2.3 tons
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:** -					
Delaware Sustainable Energy Utility	Light-Duty	Electric	1	867 gal	4.5 tons
Electricity used: 6,070 kWh **Market:** General/Unknown **Vehicle type:** Car **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** -					
Delaware Transit Corporation	Heavy-Duty	Electric	14	158,723 gal	635.5 tons
Average electric fuel economy: 167 kWh/100mi **Miles traveled per vehicle per year:** 34,012 mi **Market:** Commuters **Vehicle type:** Bus: Transit **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** -					
State of Delaware Fleet Services	Light-Duty	Electric	6	1,028 gal	5.3 tons
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:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** -					

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
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:** -	Light-Duty	HEV	111	8,430 gal	103.8 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:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No **Workplace Charging Challenge:** -	Light-Duty	HEV	5	380 gal	4.7 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:** -	Light-Duty	PHEV	16	2,128 gal	11.1 tons
Total:			**157**	**172,004 gal**	**767 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 **Method:** Telematics **Vehicle class:** Light-Duty **Market:** Government - State **Vehicle type:** Pickup/SUV/Van **Percentage from coalition:** 75% **National Clean Fleets Partnership:** No	23 MPG	25 MPG	2,418	8,973 mi	56,600 gal	697.2 tons
Total:			**2,418**	**8,973 mi**	**56,600 gal**	**697 tons**

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
RideShare Delaware **Fuel saved:** 80,029 gallons **Percentage from coalition:** 100% **National Clean Fleets Partnership:** No	Carpooling	Light-Duty	80,029 gal	985.8 tons
State of Delaware Employees Van Pool	Vanpooling	Light-Duty	39,198 gal	482.8 tons

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
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:** 23 **VMT per additional vehicle:** 22,000 mi **Percentage from coalition:** 50% **National Clean Fleets Partnership:** No				
Total:			**119,227 gal**	**1,469 tons**

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	-	-
CNG - Compressed Natural Gas	-	1
E85 - 85% Ethanol	-	-
Electric Charging Outlets: Level 1 & Level 2	-	-
Electric Charging Outlets: DC Fast Chargers	-	-
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	-
Propane	-	5
Total:	**0**	**6**

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Wilmington Earth/Arbor Day	04/17/2019	Literature Distribution	100%	250
Technology: Electric vehicles, Natural gas vehicles, Propane **Audience:** General Public *At this year's event, the Coalition presented information on the new alternative fuel infrastructure that has been installed throughout the state over the past year including the new EV charging stations. This also allowed for the Coalition to promote the new grants and rebates that are available in the State of Delaware for individuals and fleets.*				
Sustainable Fleet Management Summit	04/02/2019	Conference Participation	100%	100
Technology: Electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit, Utility, Waste *This summit, which the Coalition sponsored, was hosted by Chesapeake Utilities consisted of presentations from a variety of organizations and partners, tabling, and a CNG station ribbon cutting.*				
Stakeholder Meeting	03/06/2019, 05/29/2019	Meeting - Stakeholder	100%	15
Technology: Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit, Utility				
Ribbon Cutting for Energy Lane CNG	02/20/2019	Media Event	100%	200
Technology: Natural gas vehicles **Audience:** Delivery, General Public, Private Fleets, Transit, Utility, Waste				
National Drive Electric Week Event	09/21/2019	Workshop Held By Coalition	100%	100

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** General Public, Private Fleets, Transit				
Drive Change Drive Electric	11/07/2019	Meeting - Other	75%	50
Technology: Electric vehicles, Hybrid electric vehicles **Audience:** Government, Other				
Delaware Resilient and Sustainable Communities Summit	11/15/2019	Conference Participation	100%	200
Technology: Electric vehicles, Hybrid electric vehicles, Natural gas vehicles, Propane **Audience:** General Public, Government, Private Fleets, Transit				
Total:				**915**