

2020 Transportation Technology Deployment Report:

State of Delaware Clean Cities Expanded Edition

March 2021



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.

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 <u>cleancities.energy.gov/accomplishments</u>.

2020 Gallons of Gasoline Equivalent Reduced

1,895,737 gallons





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 <u>www.epa.gov/green-book</u>. To learn more about what your emissions numbers mean, please take the Understanding Emissions or Emissions Compliance courses at <u>Clean Cities University</u>.

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 pe	20 hours				
Other staff hours per week on Clean Cities			10 hours		
How long have you been the	coalition director?		2 years		
	OPERATING INFORMAT	TION			
Coalition organizational stru	cture	Hosted in a stat	e 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	

Yes

\$0

Does the State Energy Office provide any financial support to the coalition or stakeholders?

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

Alternative Fuel & Vehicles

		- .	Number of			
Fleet/Station Name	Vehicle Class	Fuel	Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Chesapeake Utilities Miles traveled per vehicle: 12 000	Light-Duty mi	CNG	13	90% of time	4,168 gal	7.2 tons
Average vehicle fuel economy: 24 Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership Energy Efficient Mobility Systems	: No Partnership: No					
Chesapeake Utilities	Light-Duty	CNG	18	90% of time	7,960 gal	13.7 tons
Miles traveled per vehicle: 12,000 Average vehicle fuel economy: 17 Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership Energy Efficient Mobility Systems	mi 'MPGge : No 5 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 Energy Efficient Mobility Systems	: No s Partnership: No					
* GHG emissions <i>for this project</i> are vehicle type from HDV to LDV.	not estimated to be	e less than an e	quivalent diesel t	fleet. If LPG vehicles	s replace gasoline, pl	ease change
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 Energy Efficient Mobility Systems	: No s 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 Energy Efficient Mobility Systems	: No s Partnership: No					
Prime Care Medical	Light-Duty	Propane	6	100% of time	626 gal	0.9 tons
Miles traveled per vehicle: 11,991 Average vehicle fuel economy: 17 Market: Corporate Fleet Vehicle type: Pickup/SUV/Van Percentage from coalition: 20% National Clean Fleets Partnership Energy Efficient Mobility Systems	mi ′ MPGge : No s Partnership: No					
School Buses	Heavy-Duty	Propane	56	100% of time	72,689 gal	107.9 tons
Miles traveled per vehicle: 12,000 Average vehicle fuel economy: 7 I Market: Commuters Vehicle type: Bus: School Percentage from coalition: 100% National Clean Fleets Partnership Energy Efficient Mobility Systems	mi MPGde : No 5 Partnership: No					

	Vahiele Class	Fuel	Number of	F uel Head	CCE Deduced	
Fleet/Station Name	venicle class	ruei	venicies	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 Energy Efficient Mobility Systems	: Yes 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 Energy Efficient Mobility Systems	: No Partnership : No					
State of Delaware	Light-Duty	E85	427	0% of time	0 gal	0.0 tons
Miles traveled per vehicle: 9,984 m Average vehicle fuel economy: 19 Market: Government - State Vehicle type: Pickup/SUV/Van Percentage from coalition: 65% National Clean Fleets Partnership Energy Efficient Mobility Systems	ni MPG : No 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 Energy Efficient Mobility Systems	: No Partnership : No					
Delaware does not have any E85 sta	ations to fuel vehicle	es.				
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 Energy Efficient Mobility Systems	: No Partnership : No					
Delaware Fleet Services added 5 Fo	ord Transit Shuttle E	Buses to the flee	et with E85 - howe	ver, there are no E	85 stations in the stat	e 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 Energy Efficient Mobility Systems	: Yes 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	Light-Duty	Electric	1	663 gal	4.6 tons
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					
Delaware Transit Corporation	Heavy-Duty	Electric	16	45,585 gal	276.2 tons
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					
State of Delaware Fleet Services	Light-Duty	Electric	70	11,668 gal	96.7 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: 73% National Clean Fleets Partnership: No Workplace Charging Challenge: - Energy Efficient Mobility Systems Partnership: No					
State of Delaware Fleet Services	Light-Duty	HEV	116	8,810 gal	104.5 tons
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					
State of Delaware Fleet Services	Light-Duty	PHEV	55	7,317 gal	62.8 tons
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					
Total:			262	74,491 gal	549 tons
	FUEL ECC	NOMY	/		

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 Par	r tnership: 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 Par	r tnership: 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, 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	; 000 mi 9: 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	-	-

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 Flee	ts, 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 vehicle Audience: General Public	S			
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 vehicle Audience: General Public	S			
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 Tv	vitter - 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 par	tners, resource partners ar	nd prospects. Full year 2020.		
ACT Virtual 2020	08/18/2020, 11/19/2020	Conference Participation	100%	1
Technology: Biodiesel, Electric vehicles, Hybrid elect Audience: Airport, Delivery, Energy and Environment Private Fleets, Transit, Utility, Waste, Other	ric vehicles, Hydrogen, Na al Justice (EEJ) communiti	tural gas vehicles, Propane, F es or representative organiza	Renewable diesel tions, General Public, (Government,
The coordinator attended the ACT (Advanced Clean August through November. Topics covered all alternate Delaware Clean Cities Coalition.	Fransportation) Virtual 2020 ive fuels, infrastructure, po) conference which spanned c licy and upcoming technology	over a 4-month time per . I was the only particip	riod from ant of the
Delaware Futures	07/08/2020, 07/22/2020, 08/05/2020	Meeting - Other	100%	9
Technology: Electric vehicles, Hybrid electric vehicle Audience: Energy and Environmental Justice (EEJ) of	s communities or representat	ive organizations, Other		
Delaware Futures works with at-risk youth during the	school year and the summ	er on enrichment programs to	assist them in prepara	tion for

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