

2019 Transportation Technology Deployment Report:

Vermont Clean Cities
Expanded Edition

March 2020



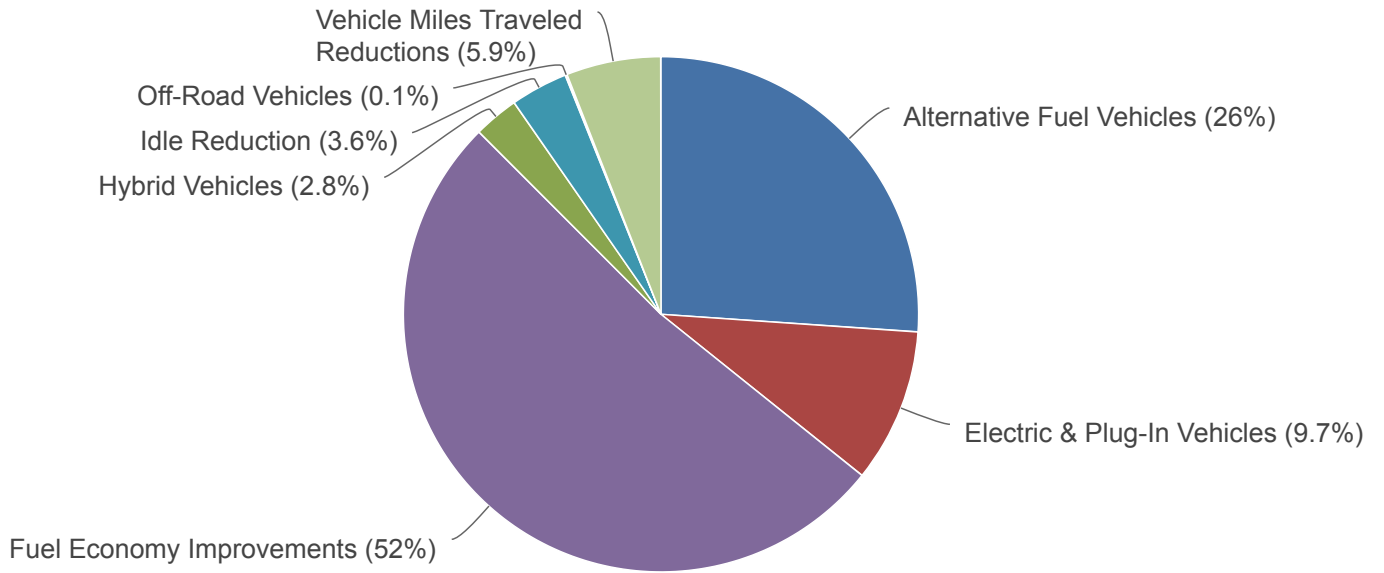
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and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

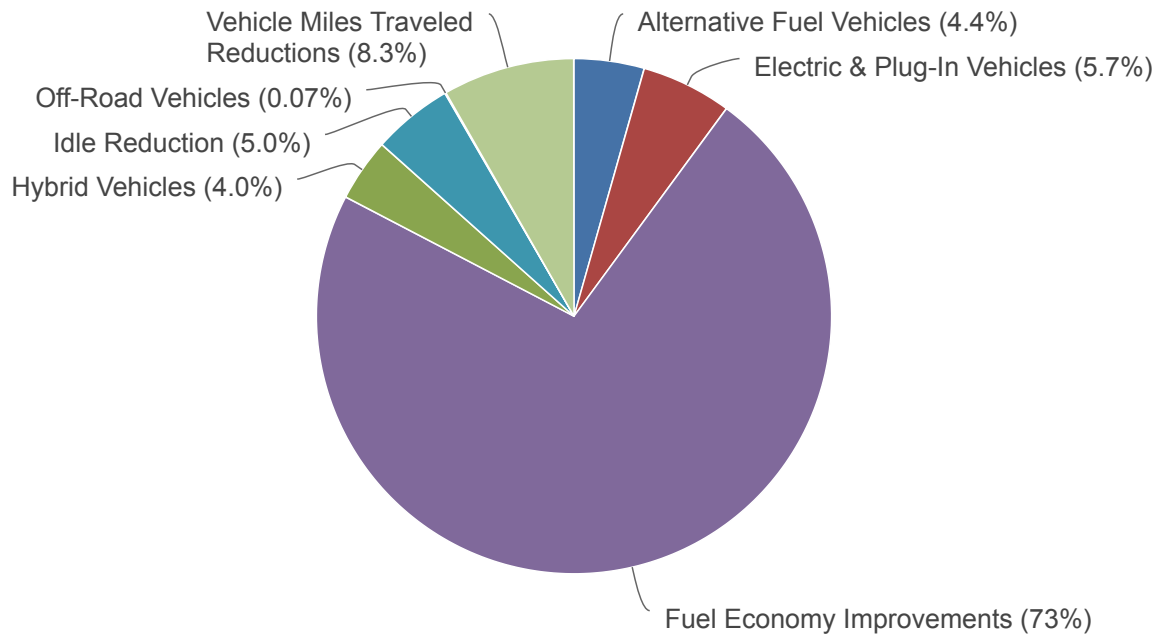
2019 Gallons of Gasoline Equivalent Reduced

1,539,975 gallons

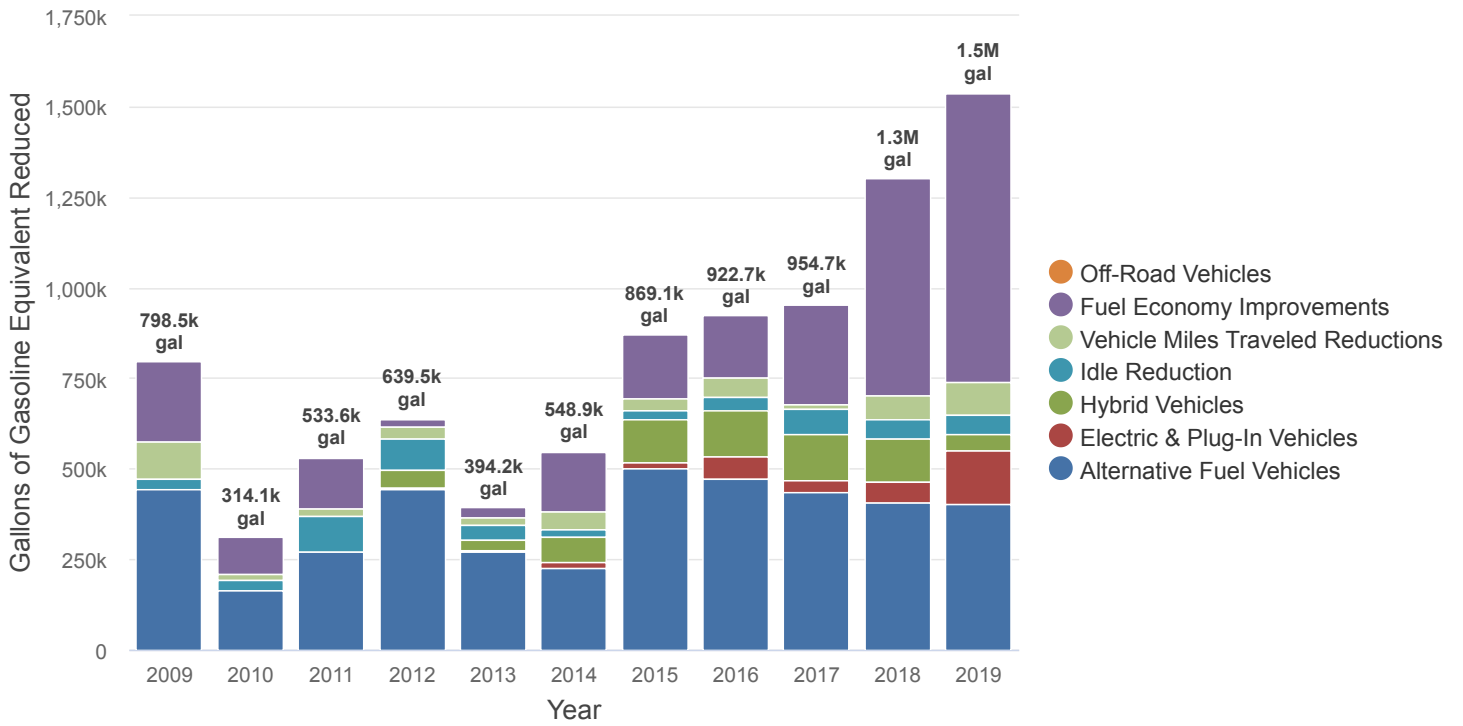


2019 Greenhouse Gas Emissions Reduced

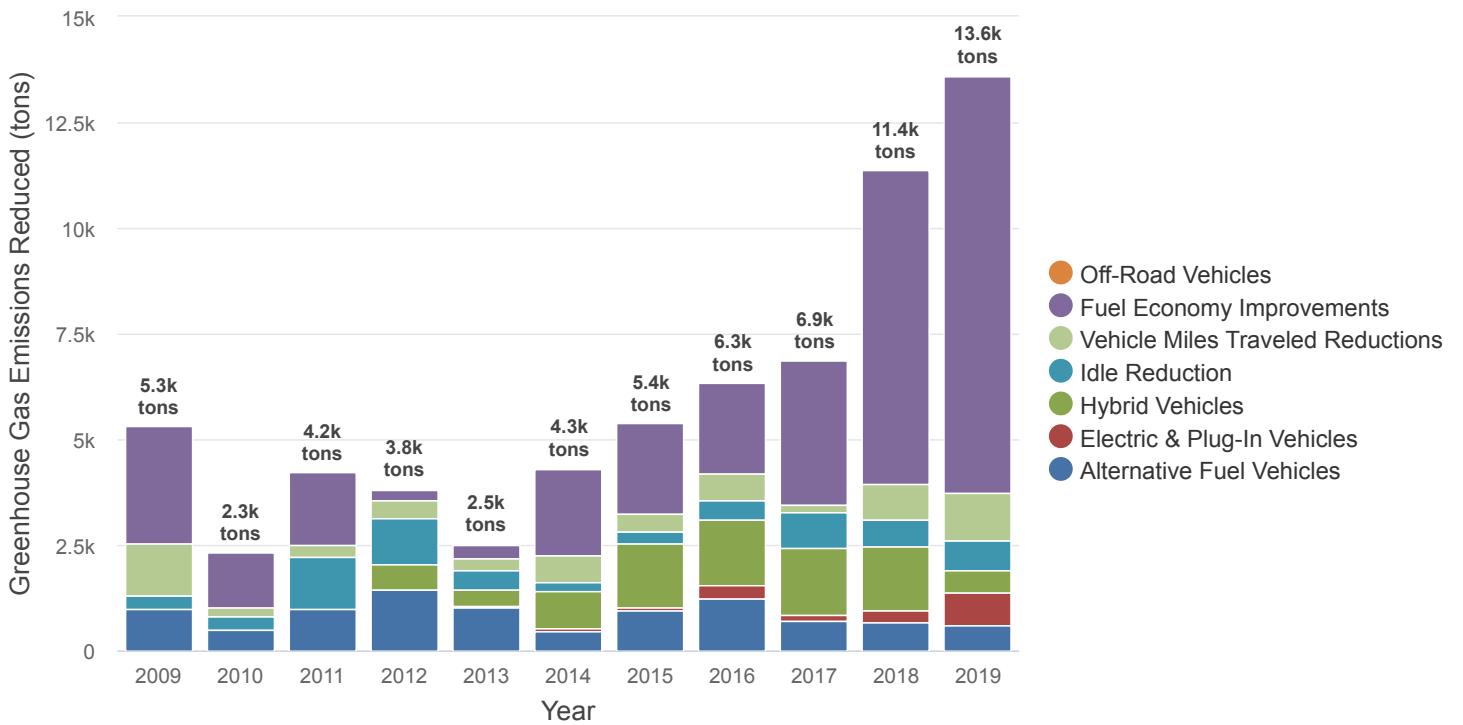
13,618 tons



Historical Gallons of Gasoline Equivalent Reduced

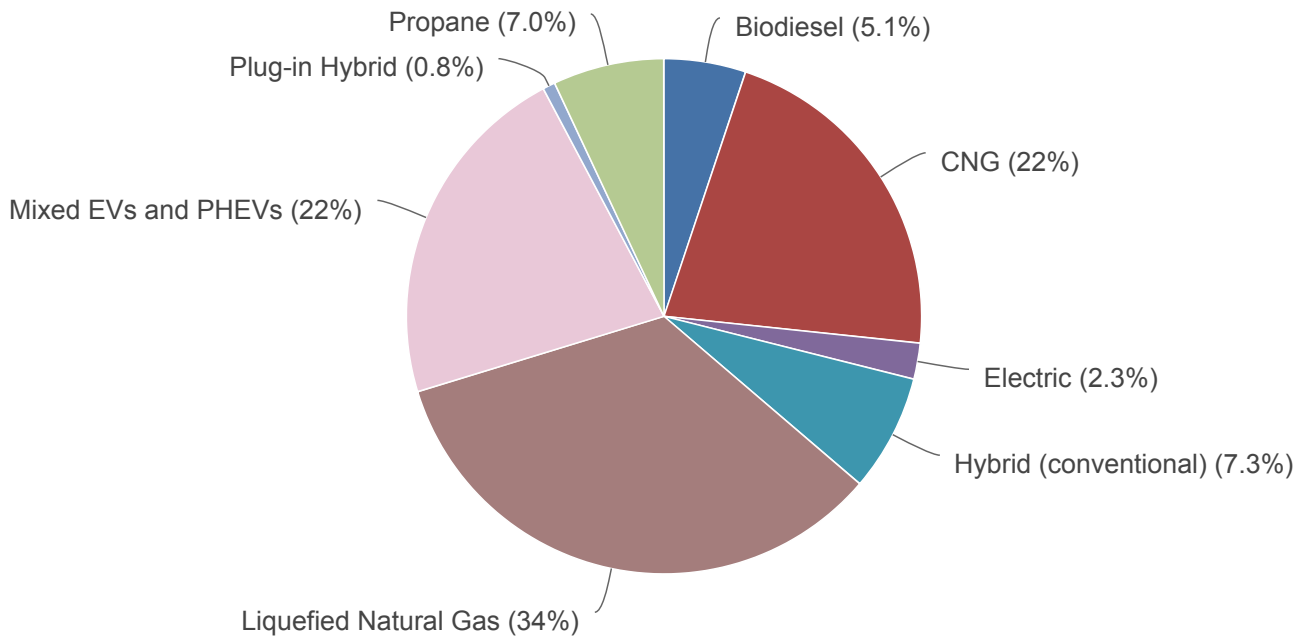


Historical Greenhouse Gas Emissions Reduced



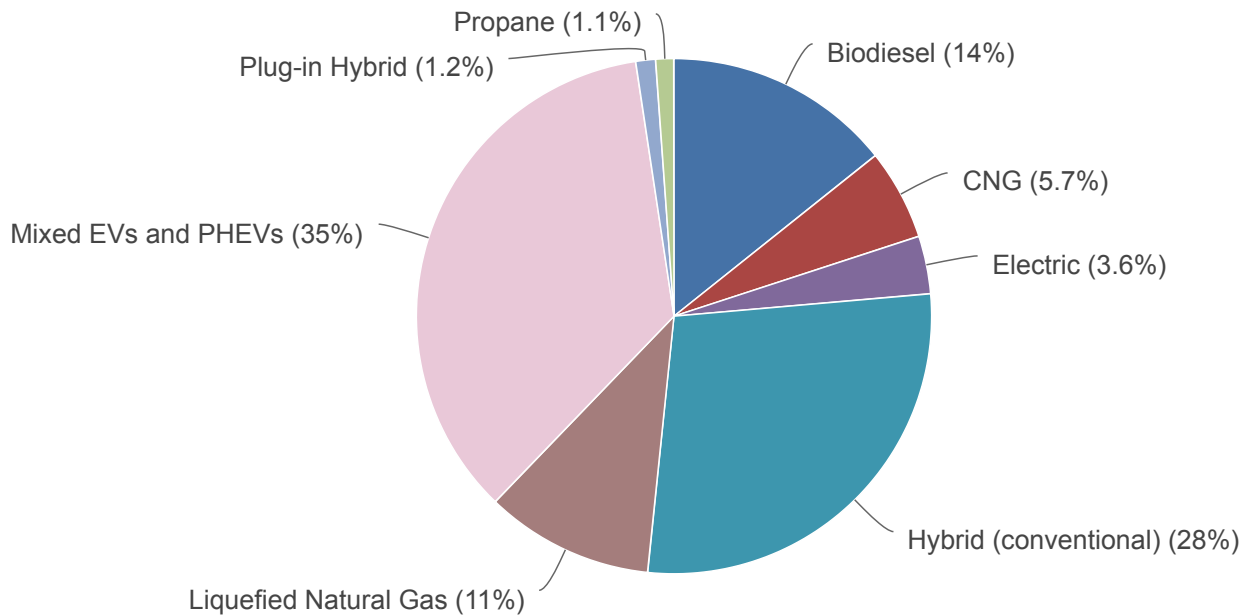
2019 Gallons of Gasoline Equivalent Reduced by Fuel Type for Alternative Fuel Projects

596,121 gallons



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

1,922 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](http://CleanCitiesUniversity.com).

Reductions by Technology*	NOx	VOC**	PM10	PM2.5
CNG - Compressed Natural Gas	4,065 lb	3 lb	0 lb	0 lb
Electric (all-electric)	57 lb	88 lb	3 lb	2 lb
Hybrid (conventional)	61 lb	146 lb	0 lb	0 lb
LNG - Liquefied Natural Gas	13,276 lb	0 lb	0 lb	0 lb
Mixed EVs and PHEVs	340 lb	582 lb	13 lb	12 lb
Plug-in Hybrid	62 lb	95 lb	3 lb	3 lb
Propane	2,253 lb	-157 lb	16 lb	4 lb
VMT Reduction (Diesel)	228 lb	5 lb	7 lb	2 lb
VMT Reduction (Gasoline)	389 lb	622 lb	156 lb	34 lb
Total:	20,731 lb	1,384 lb	197 lb	56 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

Vermont Clean Cities - VT

<http://www.uvm.edu/vtccc>

Designated: 06/25/2001

Boundaries: Entire state of Vermont

COORDINATORS

	Address	Telephone	Fax
Peggy O'Neill-Vivanco	UVM Transportation Research Center 25 Colchester Ave, Mansfield House Burlington, VT 05405	802-656-9123	
Number of coordinators			1
Coordinator(s) hours per week on Clean Cities			22 hours
Other staff hours per week on Clean Cities			20 hours
How long have you been the coordinator?			3 years

OPERATING INFORMATION

Coalition organizational structure Hosted in a university

Stakeholders

Number of stakeholders	67
Number of private stakeholders	35
Does the State Energy Office provide any financial support to the coalition or stakeholders?	No
How would you rate the quality of the data on your survey?	Excellent
How do you obtain most of your data for the survey?	Coalition records, Estimates, Online questionnaire to stakeholders (SurveyMonkey, Google Forms, etc), Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders
Has your coalition registered with www.grants.gov?	Yes

2019 Outside Funding

Stakeholder dues collected	\$0
How much funding is obtained from other sources to cover coalition operating expenses?	\$1,150
Non-DOE or ARRA grant and matching funds spent in 2019	\$0
Total non-DOE or ARRA funding in 2019	\$1,150

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Black Bear Biodiesel	Light-Duty	Biodiesel (100%)	835	12,000 gal	15,350 gal	140.5 tons
<p>Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No Sold 450,000 gallons of biodiesel out of state.</p>						
Bourne's Energy	Heavy-Duty	Biodiesel (5%)	100	16,837 gal	897 gal	7.9 tons
<p>Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Heavy-Duty	Biodiesel (99%)	100	1,700 gal	1,794 gal	15.7 tons
<p>Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Heavy-Duty	Biodiesel (10%)	100	5,460 gal	582 gal	5.1 tons
<p>Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Light-Duty	Propane	1	100% of time	1,540 gal	2.2 tons
<p>Miles traveled per vehicle: 22,333 mi Average vehicle fuel economy: 15 MPGge Market: Corporate Fleet Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Light-Duty	Propane	2	100% of time	983 gal	1.4 tons
<p>Miles traveled per vehicle: 11,300 mi Average vehicle fuel economy: 23 MPGge Market: Corporate Fleet Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Light-Duty	Propane	4	100% of time	2,753 gal	3.9 tons
<p>Miles traveled per vehicle: 16,500 mi Average vehicle fuel economy: 24 MPGge Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Bourne's Energy	Light-Duty	Propane	1	145 gal	110 gal	0.2 tons
<p>Market: General/Unknown Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No</p>						
Burlington DPW	Heavy-Duty	Biodiesel (5%)	41	39,295 gal	2,094 gal	18.3 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Market: Government - Local Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No <i>They pay for the 5% Biodiesel blend that is not available at the regular pump.</i>						
Burlington DPW	Heavy-Duty	Biodiesel (5%)	1	3,935 gal	210 gal	1.8 tons
Market: Government - Local Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No <i>They pay for the 5% Biodiesel blend that is not available at the regular pump.</i>						
Burlington DPW	Heavy-Duty	CNG	3	12,082 GGE	10,874 gal	9.2 tons
Market: Government - Local Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No						
Casella Waste Systems	Heavy-Duty	CNG	11	94,443 GGE	84,999 gal	71.6 tons
Market: General/Unknown Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No						
Green Mountain Power	Heavy-Duty	Biodiesel (5%)	82	100% of time	5,958 gal	52.2 tons
Miles traveled per vehicle: 12,958 mi Average vehicle fuel economy: 7 MPG Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Total fuel use was 174, 437 for (55 Pickup/SUV/Van; 82 Truck No Trailer; 2 Semi-Trailer Truck; 10 Construction Equipment).</i>						
Green Mountain Power	Heavy-Duty	Biodiesel (5%)	2	100% of time	892 gal	7.8 tons
Miles traveled per vehicle: 63,428 mi Average vehicle fuel economy: 6 MPG Market: Utility Vehicle type: Truck: Semi-trailer Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Total fuel use was 174, 437 for (55 Pickup/SUV/Van; 82 Truck No Trailer; 2 Semi-Trailer Truck; 10 Construction Equipment).</i>						
Green Mountain Power	Light-Duty	Biodiesel (5%)	55	100% of time	1,418 gal	13.0 tons
Miles traveled per vehicle: 11,991 mi Average vehicle fuel economy: 19 MPG Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Total fuel use was 174, 437 for (55 Pickup/SUV/Van; 82 Truck No Trailer; 2 Semi-Trailer Truck; 10 Construction Equipment).</i>						
OMYA	Heavy-Duty	LNG	16	451,000 gal	202,747 gal	203.4 tons
Market: General/Unknown Vehicle type: Truck: Semi-trailer Percentage from coalition: 75% National Clean Fleets Partnership: No <i>Reduced 1 vehicle.</i>						

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Schwan's - Medium-duty Propane Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes <i>Includes 2 Light HD Class 3 vehicles.</i>	Heavy-Duty	Propane	13	52,361 gal	35,674 gal	14.0 tons
University of Vermont Market: Corporate Fleet Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No	Heavy-Duty	CNG	9	32,776 GGE	29,498 gal	24.8 tons
Vermont Gas Systems Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No	Light-Duty	CNG	6	4,000 GGE	2,850 gal	3.7 tons
Vermont Gas Systems Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No	Light-Duty	CNG	2	300 GGE	214 gal	0.3 tons
Vermont Ride Network Miles traveled per vehicle: 30,000 mi Average vehicle fuel economy: 20 MPG Market: Taxis Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No <i>Changed name from GreenCab to Vermont Ride Network</i>	Light-Duty	Biodiesel (10%)	5	50% of time	415 gal	3.8 tons
Total:			1,389		401,852 gal	601 tons

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Bourne's Energy Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 11,000 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	HEV	1	230 gal	2.8 tons
Bourne's Energy Average vehicle fuel economy: 43 MPG Miles traveled per vehicle per year: 31,000 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -	Light-Duty	PHEV	1	615 gal	3.2 tons
Burlington DPW	Light-Duty	Electric	1	65 gal	0.3 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average electric fuel economy: 31 kWh/100mi Miles traveled per vehicle per year: 1,500 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Burlington DPW	Light-Duty	HEV	5	609 gal	7.5 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 5,835 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Burlington Electric Department	Light-Duty	Electric	2	323 gal	1.7 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 5,000 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Burlington Electric Department	Light-Duty	HEV	1	141 gal	1.7 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 9,000 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Burlington Electric Department	Heavy-Duty	HEV	2	213 gal	2.6 tons
<p>Average vehicle fuel economy: 10 MPG Miles traveled per vehicle per year: 3,000 mi Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Car Share VT	Light-Duty	Electric	1	129 gal	0.7 tons
<p>Average electric fuel economy: 28 kWh/100mi Miles traveled per vehicle per year: 3,003 mi Market: Commuters Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
<p><i>The 112 mpge is from CarShare VT data on their usage and charging. They included EPA's estimate of MPGe despite Burlington's renewable sourcing because not all of it was charged in Burlington and there were surely emissions involved in the transmission of energy and beyond. suggested: 28 kWh/100 miles.</i></p>					
Car Share VT	Light-Duty	HEV	6	1,682 gal	20.7 tons
<p>Average vehicle fuel economy: 46 MPG Miles traveled per vehicle per year: 13,124 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Casella Waste Systems	Heavy-Duty	HEV	1	631 gal	7.8 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average vehicle fuel economy: 6 MPG Miles traveled per vehicle per year: 10,266 mi Market: General/Unknown Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
CCRPC	Light-Duty	Electric	1	390 gal	2.0 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 9,056 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Church Street Marketplace	Light-Duty	Electric	1	11 gal	0.1 tons
<p>Average electric fuel economy: 11 kWh/100mi Miles traveled per vehicle per year: 234 mi Market: General/Unknown Vehicle type: Low-Speed/Neighborhood Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
City of South Burlington	Light-Duty	PHEV	1	128 gal	0.7 tons
<p>Average vehicle fuel economy: 39 MPG Miles traveled per vehicle per year: 8,000 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
EVgo stations	Light-Duty	EV-PHEV	1,500	23,875 gal	124.1 tons
<p>Electricity used: 167,191 kWh Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - DC= 81,439; L2= 85,752</p>					
GMT	Light-Duty	HEV	1	120 gal	1.5 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 5,673 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
GMT	Light-Duty	HEV	1	141 gal	1.7 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 6,680 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
GMT	Light-Duty	HEV	1	48 gal	0.6 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 2,278 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Green Cab	Light-Duty	Electric	1	838 gal	4.4 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 15,000 mi Market: Taxis Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - <i>GreenCab rebranded to VT Ride Network</i></p>					
Green Mountain Power	Heavy-Duty	HEV	1	176 gal	2.2 tons
<p>Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 8,000 mi Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Green Mountain Power	Light-Duty	Electric	8	1,948 gal	10.1 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 7,500 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Green Mountain Power	Light-Duty	HEV	17	4,089 gal	50.4 tons
<p>Average vehicle fuel economy: 29 MPG Miles traveled per vehicle per year: 13,500 mi Market: Utility Vehicle type: Pickup/SUV/Van Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Green Mountain Power	Light-Duty	HEV	4	566 gal	7.0 tons
<p>Average vehicle fuel economy: 46 MPG Miles traveled per vehicle per year: 9,000 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
State of Vermont	Light-Duty	Electric	2	713 gal	3.7 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 11,400 mi Market: Government - State Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
State of Vermont	Light-Duty	PHEV	25	3,733 gal	19.4 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average vehicle fuel economy: 39 MPG Miles traveled per vehicle per year: 11,400 mi Market: Government - State Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
SunCommon	Light-Duty	Electric	8	4,483 gal	23.3 tons
<p>Average electric fuel economy: 48 kWh/100mi Miles traveled per vehicle per year: 13,000 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
SunCommon	Light-Duty	HEV	16	5,345 gal	65.8 tons
<p>Average vehicle fuel economy: 48 MPG Miles traveled per vehicle per year: 15,000 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
The University of Vermont	Light-Duty	Electric	2	172 gal	0.9 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 2,000 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
The University of Vermont	Light-Duty	Electric	1	59 gal	0.3 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 1,373 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
University of Vermont	Heavy-Duty	HEV	1	1,384 gal	17.1 tons
<p>Average vehicle fuel economy: 6 MPG Miles traveled per vehicle per year: 8,025 mi Market: Corporate Fleet Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
UVM Police	Light-Duty	HEV	1	114 gal	1.4 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 5,453 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
UVM Police	Light-Duty	HEV	1	236 gal	2.9 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 11,306 mi Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
UVM TRC	Light-Duty	HEV	1	52 gal	0.6 tons
<p>Average vehicle fuel economy: 45 MPG Miles traveled per vehicle per year: 2,432 mi Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
Vermont Gas Systems	Light-Duty	PHEV	2	89 gal	0.5 tons
<p>Average vehicle fuel economy: 43 MPG Miles traveled per vehicle per year: 3,000 mi Market: Utility Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p>					
VT ChargePoint Stations	Light-Duty	EV- PHEV	1,852	107,100 gal	556.7 tons
<p>Electricity used: 1,000,000 kWh Market: General/Unknown Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p> <p><i>Per Calley: 1,000,000; 0.3 kWh/mile; 12,000 miles/year; 3600 kWh/year/vehicle; 15% Percent of time using Chargepoint system; 1,852 vehicles</i></p>					
VT Ride Network	Light-Duty	Electric	1	2,793 gal	14.5 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 50,000 mi Market: Taxis Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p> <p><i>GreenCab rebranded to VT Ride Network</i></p>					
VT Ride Network	Light-Duty	Electric	1	1,397 gal	7.3 tons
<p>Average electric fuel economy: 30 kWh/100mi Miles traveled per vehicle per year: 25,000 mi Market: Taxis Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: -</p> <p><i>GreenCab rebranded to VT Ride Network</i></p>					
VT Ride Network	Light-Duty	HEV	5	3,123 gal	38.5 tons

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Average vehicle fuel economy: 22 MPG Miles traveled per vehicle per year: 60,000 mi Market: Taxis Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - <i>GreenCab rebranded to VT Ride Network</i>					
VT Ride Network	Light-Duty	HEV	12	24,822 gal	305.8 tons
Average vehicle fuel economy: 38 MPG Miles traveled per vehicle per year: 70,000 mi Market: Taxis Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No Workplace Charging Challenge: - <i>GreenCab rebranded to VT Ride Network</i>					
Total:			3,489	192,585 gal	1,312 tons

Off-Road Vehicles

Fleet Name	Application	Method	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Burlington DPW	Farm equipment	Alternative fuel or vehicles	Biodiesel (5%)	25	148 gal	1.3 tons
Fuel used: 2,775 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Burlington DPW	Construction equipment	Alternative fuel or vehicles	Biodiesel (5%)	8	214 gal	1.9 tons
Fuel used: 4,014 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Burlington DPW	Recreational equipment	Alternative fuel or vehicles	Biodiesel (5%)	3	29 gal	0.3 tons
Fuel used: 550 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Burlington DPW	Landscaping and lawn equipment	Alternative fuel or vehicles	Electric	4	58 gal	0.2 tons
Fuel used: 680 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No <i>This form doesn't work with my data. I collected total run time of the mower (453 hours) and multiplied that by 1.5 gallons (estimated use of gasoline/hour of mowing) to get 679.5.</i>						
Burlington DPW	Forklifts	Alternative fuel or vehicles	Propane	1	68 gal	0.0 tons
Fuel used: 100 gal Percentage from coalition: 100% National Clean Fleets Partnership: No						
Burlington Electric Department	Landscaping and lawn equipment	Alternative fuel or vehicles	Electric	1	2 gal	0.0 tons

Fleet Name	Application	Method	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Fuel used: 38 kWh Percentage from coalition: 75% National Clean Fleets Partnership: No <i>This form doesn't work with my data. I collected total run time of the mower (25 hours) and multiplied that by 1.5 gallons (estimated use of gasoline/hour of mowing) to get 37.5.</i>						
Green Mountain Power	Construction equipment	Alternative fuel or vehicles	Biodiesel (5%)	10	600 gal	5.3 tons
Fuel used: 15,000 gal Percentage from coalition: 75% National Clean Fleets Partnership: No						
Green Mountain Power	Forklifts	Alternative fuel or vehicles	Propane	14	511 gal	0.2 tons
Fuel used: 1,000 gal Percentage from coalition: 75% National Clean Fleets Partnership: No						
The Green Side	Landscaping and lawn equipment	Alternative fuel or vehicles	Electric	7	47 gal	0.2 tons
Fuel used: 551 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No <i>2 Stand-on riding mowers; 1 push lawn mower; 2 leaf blowers; 1 Weed wacker</i>						
VT Ride Network	Landscaping and lawn equipment	Alternative fuel or vehicles	Electric	1	3 gal	0.0 tons
Fuel used: 39 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No <i>The amount of fuel is based on 26 hours of run time x 1.5 gallons/hour= 39.</i>						
VT Ride Network	Landscaping and lawn equipment	Alternative fuel or vehicles	Electric	1	4 gal	0.0 tons
Fuel used: 48 kWh Percentage from coalition: 100% National Clean Fleets Partnership: No <i>The amount of fuel is based on 32 hours of run time x 1.5 gallons/hour= 48.</i>						
Total:				75	1,684 gal	9 tons

FUEL ECONOMY

Fuel Economy Improvements

Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
Bourne's Energy	12 MPG	16 MPG	2	18,000 mi	750 gal	9.2 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: General/Unknown Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No						
Bourne's Energy	8 MPG	12 MPG	2	20,000 mi	1,844 gal	22.9 tons

Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
Method: Vehicle - More efficient Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Burlington DPW	18 MPG	36 MPG	5	4,945 mi	687 gal	8.5 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Government - Local Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
Cabot Creamery	6 MPG	7 MPG	24	100,000 mi	63,227 gal	784.0 tons
Method: Tires - Auto air inflation systems Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: Semi-trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Cabot Creamery	6 MPG	7 MPG	24	100,000 mi	103,462 gal	1,282.9 tons
Method: Driver training Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: Semi-trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Cabot Creamery	6 MPG	7 MPG	24	100,000 mi	103,462 gal	1,282.9 tons
Method: Tires - Low-rolling resistance Vehicle class: Heavy-Duty Market: Corporate Fleet Vehicle type: Truck: Semi-trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Cabot Creamery	6 MPG	7 MPG	4	100,000 mi	17,244 gal	213.8 tons
Method: Vehicle - More efficient Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: Semi-trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Casella Waste Systems	3 MPG	7 MPG	78	30,000 mi	493,169 gal	6,115.4 tons
Method: Vehicle - More efficient Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: Refuse Percentage from coalition: 100% National Clean Fleets Partnership: No						
Keurig Green Mountain	6 MPG	7 MPG	3	10,000 mi	395 gal	4.9 tons
Method: Tires - Auto air inflation systems Vehicle class: Heavy-Duty Market: General/Unknown Vehicle type: Truck: Semi-trailer Percentage from coalition: 50% National Clean Fleets Partnership: No <i>Keurig moved most of its distribution out of Vermont. Only have 3 trucks. Dropped contribution to 50%.</i>						
State of Vermont	28 MPG	35 MPG	150	2,300 mi	1,848 gal	22.8 tons

Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
Method: Telematics Vehicle class: Light-Duty Market: Government - State Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No <i>In 2018 installed telematics to identify minutes of idling by vehicle to inform agencies and departments and encourage idling reductions.</i>						
University of Vermont	20 MPG	52 MPG	1	15,050 mi	463 gal	5.7 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Corporate Fleet Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
Vermont Gas Systems	12 MPG	18 MPG	50	10,000 mi	10,417 gal	128.3 tons
Method: Telematics Vehicle class: Light-Duty Market: Utility Vehicle type: Unknown/Other Percentage from coalition: 75% National Clean Fleets Partnership: No						
Total:			367	510,295 mi	796,968 gal	9,881 tons

Vehicle Miles Traveled Reductions

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Cabot Creamery	Route Optimization	Heavy-Duty	4,085 gal	50.7 tons
Fuel type of vehicles driven less: Diesel Fuel economy of vehicles driven less: 7 MPG Number of vehicles driven less: 24 VMT project per vehicle being driven less: 1,000 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Car Share VT	Car sharing (e.g., Zipcar)	Light-Duty	60,490 gal	745.1 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 23 MPG Number of vehicles driven less: 255 VMT project per vehicle being driven less: 5,456 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Go! Vermont	Carpooling	Light-Duty	10,741 gal	132.3 tons
Fuel saved: 10,741 gallons Percentage from coalition: 100% National Clean Fleets Partnership: No				
Go! Vermont	Vanpooling	Light-Duty	10,767 gal	132.6 tons
Fuel saved: 10,767 gallons Percentage from coalition: 100% National Clean Fleets Partnership: No				
VT Ride Network	Other	Light-Duty	2,708 gal	33.4 tons
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 36 MPG Number of vehicles driven less: 25 VMT project per vehicle being driven less: 3,900 mi Percentage from coalition: 100% National Clean Fleets Partnership: No <i>Utilize software mapping to avoid empty trips.</i>				
VT Ride Network	Route Optimization	Light-Duty	2,708 gal	33.4 tons

Project Name	Method	Vehicle Class	GGE Reduced	GHG Reduced
Fuel type of vehicles driven less: Gasoline Fuel economy of vehicles driven less: 36 MPG Number of vehicles driven less: 25 VMT project per vehicle being driven less: 3,900 mi Percentage from coalition: 100% National Clean Fleets Partnership: No				
Total:			91,501 gal	1,127 tons

IDLE REDUCTION

Idle Reduction

Project Name	Number of Vehicles	Idling Reduced per Vehicle	Fuel Saved per Vehicle	GGE Reduced	GHG Reduced
Bourne's Energy	53	30 mins/day 305 days/year	1 gal/hr	8,083 gal	100.2 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Bourne's Energy	7	60 mins/day 305 days/year	1 gal/hr	2,135 gal	26.5 tons
Type of project: Automatic engine shutoff Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No					
Burlington Electric Department	1	210 mins/day 262 days/year	1 gal/hr	578 gal	7.2 tons
Type of project: Auxiliary power unit (APU) Type of vehicle: Heavy-Duty - Other Percentage from coalition: 75% National Clean Fleets Partnership: No					
Cabot Creamery	24	22 mins/day 250 days/year	0 gal/hr	974 gal	12.1 tons
Type of project: Automatic engine shutoff Type of vehicle: Heavy-Duty - Truck: Long-Haul Percentage from coalition: 100% National Clean Fleets Partnership: No					
Cabot Creamery	24	22 mins/day 250 days/year	0 gal/hr	880 gal	10.9 tons
Type of project: Onboard batteries Type of vehicle: Heavy-Duty - Truck: Delivery Percentage from coalition: 100% National Clean Fleets Partnership: No					
Cabot Creamery	24	22 mins/day 250 days/year	0 gal/hr	974 gal	12.1 tons
Type of project: Auxiliary power unit (APU) Type of vehicle: Heavy-Duty - Truck: Long-Haul Percentage from coalition: 100% National Clean Fleets Partnership: No					
Cabot Creamery	24	22 mins/day 250 days/year	0 gal/hr	880 gal	10.9 tons
Type of project: Policies Type of vehicle: Heavy-Duty - Truck: Long-Haul Percentage from coalition: 100% National Clean Fleets Partnership: No					

Project Name	Number of Vehicles	Idling Reduced per Vehicle	Fuel Saved per Vehicle	GGE Reduced	GHG Reduced
GMT	40	37 mins/day 300 days/year	1 gal/hr	7,400 gal	91.8 tons
<p>Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 100% National Clean Fleets Partnership: No</p> <p><i>All fleet buses are on idle reducing policies, the exception being when the weather is below 10 degrees.</i></p>					
Green Mountain Power	82	60 mins/day 250 days/year	1 gal/hr	15,375 gal	190.7 tons
<p>Type of project: Policies Type of vehicle: Heavy-Duty - Other Percentage from coalition: 75% National Clean Fleets Partnership: No</p>					
Green Mountain Power	82	60 mins/day 250 days/year	1 gal/hr	15,375 gal	190.7 tons
<p>Type of project: Automatic engine shutoff Type of vehicle: Heavy-Duty - Other Percentage from coalition: 75% National Clean Fleets Partnership: No</p>					
Keurig Green Mountain	3	5 mins/day 365 days/year	1 gal/hr	46 gal	0.6 tons
<p>Type of project: Policies Type of vehicle: Heavy-Duty - Truck: Long-Haul Percentage from coalition: 50% National Clean Fleets Partnership: No</p> <p><i>Moved most of shipping out of Vermont. Only have 3 truck in VT. Dropped contribution to 50%.</i></p>					
MVRTD	10	15 mins/day 180 days/year	1 gal/hr	373 gal	4.6 tons
<p>Type of project: Onboard batteries Type of vehicle: Heavy-Duty - Bus: School Percentage from coalition: 75% National Clean Fleets Partnership: No</p>					
MVRTD	15	7 mins/day 350 days/year	1 gal/hr	459 gal	5.7 tons
<p>Type of project: Policies Type of vehicle: Heavy-Duty - Bus: School Percentage from coalition: 75% National Clean Fleets Partnership: No</p>					
University of Vermont	10	5 mins/day 180 days/year	1 gal/hr	75 gal	0.9 tons
<p>Type of project: Policies Type of vehicle: Heavy-Duty - Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: No</p>					
VT Ride Network	25	30 mins/day 365 days/year	0 gal/hr	1,779 gal	22.1 tons
<p>Type of project: Policies Type of vehicle: Light-Duty Percentage from coalition: 100% National Clean Fleets Partnership: No</p>					
Total:	424			55,385 gal	687 tons

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	0	0
CNG - Compressed Natural Gas	0	0
E85 - 85% Ethanol	0	0
Electric Charging Outlets: Level 1 & Level 2	71	372
Electric Charging Outlets: DC Fast Chargers	-	-
Hydrogen	0	0
LNG - Liquefied Natural Gas	0	0
Propane	0	0
Total:	71	372

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
12th Annual Vermont Energy and Climate Action Conference - Presentation	12/07/2019	Conference Participation	50%	45
<p>Technology: Electric vehicles, Hybrid electric vehicles, Idle reduction, Vehicle miles traveled reduction Audience: Airport, General Public, Government, Private Fleets, Transit, Utility, Waste, Other</p> <p><i>Presented on "Fleet Electrification: Options for communities in Vermont" My session had about 45 participants; over 250 in conference.</i></p>				
VT Clean Cities Advisory Board Meeting	12/04/2019	Meeting - Stakeholder	100%	15
<p>Technology: Biodiesel, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Vehicle miles traveled reduction Audience: Government, Private Fleets, Transit, Utility, Other</p>				
Idle Right Troubleshooting for Stakeholders	11/14/2019	One-on-One Fleet Outreach	100%	15
<p>Technology: Idle reduction Audience: Government, Private Fleets, Other</p> <p><i>Organized site visits to 3 separate stakeholders from Havis representative to trouble shoot IdleRight connection issues.</i></p>				
XL Ford F-250 PHEV Demo for Stakeholders	10/30/2019	Meeting - Stakeholder	100%	25
<p>Technology: Hybrid electric vehicles Audience: Government, Private Fleets, Utility, Other</p> <p><i>Pop-up demonstration of PHEV Ford F-250 from XL Fleets for stakeholders.</i></p>				
Renewable Energy Vermont (REV) Conference	10/10/2019	Conference Participation	25%	250
<p>Technology: Electric vehicles, Hybrid electric vehicles, Hydrogen, Natural gas vehicles, Vehicle miles traveled reduction Audience: Airport, Delivery, General Public, Government, Private Fleets, Transit, Utility, Waste</p> <p><i>Participated in TCI sessions.</i></p>				
Vermont Transportation Efficiency Network	10/09/2019	Meeting - Other	50%	40
<p>Technology: Electric vehicles, Hybrid electric vehicles, Vehicle miles traveled reduction Audience: Government, Private Fleets, Transit, Utility, Other</p> <p><i>Working group on media and outreach plan for state-wide carpool and vanpool program through VTrans.</i></p>				
VT Clean Cities Stakeholder Meeting	10/03/2019	Meeting - Stakeholder	100%	25
<p>Technology: Biodiesel, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane, Vehicle miles traveled reduction Audience: Airport, Government, Private Fleets, Transit, Utility, Waste</p> <p><i>Annual stakeholder meeting.</i></p>				

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Northern New England Rural Transportation Workshop	10/02/2019	Meeting - Other	50%	250
Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Propane Audience: General Public, Government, Private Fleets, Transit, Utility, Waste <i>Participated in working groups on heavy-duty vehicles and fuels for TCI.</i>				
Bi-State Electric Vehicle Connector	09/27/2019	Meeting - Stakeholder	100%	100
Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public, Government, Private Fleets, Transit, Utility, Waste, Other <i>Co-hosted the Bi-State Electric Vehicle Event with Granite State.</i>				
Energy Action Network Summit - Pitch	09/26/2019	Conference Participation	50%	50
Technology: Idle reduction Audience: General Public, Government, Private Fleets, Transit <i>Presented Idle Reduction Pitch at lunch. Based on pitch proposal, and data from Burlington DPW and UVM idleright pilot.</i>				
Electric lawn mower demonstration	09/26/2019	Workshop Held By Coalition	100%	20
Technology: Electric vehicles Audience: Private Fleets <i>Organized electric lawn mower demonstration for UVM Physical Plant Department.</i>				
Transportation Research Center External Advisors Meeting	09/03/2019	Meeting - Other	50%	25
Technology: Biodiesel, Electric vehicles, Fuel economy improvements, Hybrid electric vehicles, Idle reduction, Natural gas vehicles, Vehicle miles traveled reduction Audience: Airport, Government, Private Fleets, Transit <i>Presentation to TRC External Stakeholder on work of coalition. Overlap of some stakeholders.</i>				
TCI Meeting for Fuel Users in VT	08/02/2019	Meeting - Other	75%	20
Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles Audience: Government, Private Fleets <i>Presentation to fleets and Agency of Natural Resources, VTTrans on biofuels, EVSE and transit for TCI.</i>				
Plan BTV Stakeholder Coalition	07/11/2019	Meeting - Other	75%	40
Technology: Biodiesel, Electric vehicles, Hybrid electric vehicles, Vehicle miles traveled reduction Audience: General Public, Government, Private Fleets, Transit				
Burlington Walk-Bike Council	05/28/2019	Meeting - Other	100%	25
Technology: Vehicle miles traveled reduction Audience: General Public <i>Presentation</i>				
Biodiesel Presentation to Agency of Natural Resources re: TCI	04/25/2019	Meeting - Other	100%	5
Technology: Biodiesel Audience: Government				
Global Foundries Take Our Children to Work Day & Earth Day	04/24/2019	Literature Distribution	100%	250
Technology: Electric vehicles, Hybrid electric vehicles Audience: General Public <i>Promotion Event</i>				
"Transportation Dilemmas"	02/04/2019, 02/07/2019	Workshop Held By Coalition	100%	25
Technology: Electric vehicles, Fuel economy improvements, Vehicle miles traveled reduction Audience: General Public, Other <i>High School student group</i>				

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Total:				1,225