

Appendices

City of Moore 2010 Inventory of Existing Vehicles

GREET Fleet Footprint Calculator Model Results for City of Moore:

2010 Baseline Energy Use

2012 Updated Energy Use

2015 Projected Energy Use

Tips for Improving Fuel Economy by Clean Cities, Department of Energy

City of Moore 2010 Inventory of Existing Vehicles

Baseline- 2010	Vehicle Count	Eligible for			
		Replacement yrs)	(5 Eligible AFV	Gas	Diesel
Class 1	97	20	10	95	2
Class 2	28	20	0	27	1
Class 3	14	9	0	14	0
Class 4	1	1	0	1	0
Class 5	3	1	0	0	3
Class 6	2	1	0	0	2
Class 7	15	11	9	0	15
Class 8	15	6	6	1	14
TOTAL	175	69	25	138	37

GHG Emissions 2010-2011	Short Tons of GHG
Classes 1-2 (includes autos, SUV's, F150-F250)	3057.9
Classes 3-6 (includes med/heavy trucks, dump trucks & fire)	441.7
Delivery Step Van	16.8
Street Sweeper	39.5
Waste Haulers	1408.1
TOTAL	4964

Petroleum Usage 2010-2011	Avg Gallons Used Annually (2010-2011)	* \$3.89/Avg Cost Per Gallon
Classes 1-2 (includes autos, SUV's, F150-F250)	235,662.0	\$916,725.18
Classes 3-6 (includes med/heavy trucks, dump trucks & fire)	33,768.0	\$131,357.52
Delivery Step Van	1,293.6	\$5,032.10
Street Sweeper	3,019.8	\$11,747.02
Waste Haulers	107,646.0	\$418,742.94
TOTAL	381,389.4	\$1,483,604.77

* Avg cost per gallon of fuel from March 2011, EPA

Current Vehicle	Replacement Vehicle
Jeep Cherokee (Class 1)	HEV Sedan- Escape 4WD (Class 1)
15 mpg- 30,000 miles/yr	33 mpg - 30,000 miles/yr
Avg Annual Fuel Cost: \$7,319 (\$3.89/gallon)	Avg Annual Fuel Cost: \$3536 (\$3.89/gal)
1881.6 gallons per year	909 gallons per year
24.4 Short tons of GHG (CO2 Emissions)	94.5 Short Tons of GHG (CO2 Emissions)
savings \$3,783	
2002 Sanitation Truck (Class 7)	CNG Waste Hauler (Class 7)
2.5 mpg- 23,400 miles/year	2.5 mpg- 23,400 miles/year
Avg Annual Fuel Cost: \$34,897.19 (\$3.89/gallon)	Avg Annual Fuel Cost: \$14,976 (\$1.28/GGE)
8,971 gallons per year	11,700gallons per year
117.3 Short tons of GHG (CO2 emissions)	115.7 Short tons of GHG (CO2 emissions)
savings \$19,921	
1984 Chevy C-60 Dump Truck (Class 8)	CNG Medium Duty Truck (M2 or similar)
11 mpg (diesel)- 11,400 miles/year	9 mpg- 11,400 miles/year
Avg Annual Fuel Cost: \$4924.74 (\$3.89/gallon)	Avg Annual Fuel Cost:\$4031 (\$1.28/GGE)
1036 gallons per year	1036 gallons per year
13 Short tons of GHG (CO2 emissions)	12.5 Short tons of GHG (CO2 emissions)
savings \$2411	
Jeep Cherokee (Class 1)	CNG Light Duty Truck (F150 or similar)
15 mpg- 30,000 miles/yr	11 mpg- 30,000 miles/yr
Avg Annual Fuel Cost: \$7,319 (\$3.89/gallon)	Avg Annual Fuel Cost: \$3,490 (\$1.28/GGE)
1881.6 gallons per year	2727 gallons per year
24.4 Short tons of GHG (CO2 Emissions)	118.7 Short Tons of GHG (CO2 Emissions)
savings \$3829	

*CNG sold as GGE's- Gasoline Gallon Equivalents

FORD	F-150	2000	INSPECTIONS		Class 1	HEV-Sedan	Gas
FORD	F-150	2000	PARKS/REC		Class 1		Gas
FORD	F-150	2003	INSPECTIONS		Class 1		Gas
FORD	F-150	2005	CODE ENFORC		Class 1		Gas
FORD	F-150	2005	CODE ENFORC		Class 1		Gas
FORD	F-150	2006	POLICE		Class 1		Gas
FORD	F-150	2006	WATER		Class 1		Gas
FORD	F-150	2006	WATER		Class 1		Gas
FORD	F-150	2006	CODE ENFORC		Class 1		Gas
FORD	F-150	2008	CODE ENFORC		Class 1		Gas
FORD	F-150	2009	STREETS/DRAIN		Class 1		Gas
FORD	F-150	1999	WATER		Class 1	HEV-Escape	Gas
FORD	F-150	1999	FLEET MAINT		Class 1	HEV-Escape	Gas
FORD	FUSION	2006	POLICE		Class 1		Gas
FORD	FUSION	2008	POLICE		Class 1		Gas
FORD	FUSION	2008	POLICE		Class 1		Gas
	MAGNUM	2006	POLICE		Class 1		Gas
FORD	MUSTANG	2007	POLICE		Class 1		Gas
FORD	RANGER	2009	WATER		Class 1		Gas
FORD	RANGER	2009	WATER		Class 1		Gas
FORD	TAURUS	2003	POLICE		Class 1		Gas
FORD	TAURUS	2003	POLICE		Class 1		Gas
FORD	TAURUS	2004	POLICE		Class 1		Gas
FORD	TAURUS	2004	POLICE		Class 1		Gas
FORD	TAURUS	2004	POLICE		Class 1		Gas
FORD	TAURUS	2004	POLICE		Class 1		Gas
FORD	TAURUS	2006	POLICE		Class 1		Gas
FORD	TAURUS	2006	POLICE		Class 1		Gas
FORD	TAURUS	2006	POLICE		Class 1		Gas
GMC		1984	SEWER	SMALL SEWER FLUSHER	Class 1		Diesel
GMC		1984	SEWER	SMALL SEWER FLUSHER	Class 1		Diesel
GMC	C-2500	1993	BEAUTIFICATION		Class 2		Gas
VAN	ECONOLINE	2001	POLICE		Class 2		Gas
FORD	F-250	2002	WATER		Class 2		Gas
FORD	F-250	2002	SEWER		Class 2		Gas
FORD	F-250	2002	BEAUTIFICATION		Class 2		Gas
FORD	F-250	2002	PARKS/REC		Class 2		Gas
FORD	F-250	2002	PARKS/REC		Class 2		Gas
FORD	F-250	2002	STREETS/DRAIN		Class 2		Gas
FORD	F-250	2002	STREETS/DRAIN		Class 2		Gas
FORD	F-250	2002	STREETS/DRAIN		Class 2		Gas
FORD	F-250	2004	WATER		Class 2		Gas
FORD	F-250	2004	WATER		Class 2		Gas
FORD	F-250	2004	PARKS/REC		Class 2		Gas
FORD	F-250	2004	PARKS/REC		Class 2		Gas
FORD	F-250	2004	STREETS/DRAIN		Class 2		Gas
FORD	F-250	2004	STREETS/DRAIN		Class 2		Gas
FORD	F-250	2004	ANIMAL CONTROL		Class 2		Gas
FORD	F-250	2005	EMERGENCY MGT	4X4	Class 2		Gas
FORD	F-250	2008	WATER		Class 2		Gas
FORD	F-250	2008	WATER		Class 2		Gas
FORD	F-250	2008	FLEET MAINT	4X4	Class 2		Gas
FORD	F-250	2008	ANIMAL CONTROL		Class 2		Gas
FORD	F-250	2008	STREETS/DRAIN	4X4	Class 2		Gas
FORD	F-250	2009	SANITATION		Class 2		Gas
FORD	F-250	2009	ANIMAL CONTROL		Class 2		Gas
FORD	F-250	1995	ANIMAL CONTROL		Class 2		Gas
CHEVY	STEPVAN 20	1984	POLICE		Class 2		Gas
FORD		1995	FIRE		Class 2		Diesel
DOGDE	D-3500	1996	FIRE	BRUSH PUMPER	Class 3		Gas
FORD	F-350	2005	FIRE		Class 3		Gas
FORD	F-350	2005	FIRE		Class 3		Gas
FORD	F-350	2005	BEAUTIFICATION		Class 3		Gas
FORD	F-350	2005	SANITATION		Class 3		Gas
FORD	F-350	2006	MAINTENANCE		Class 3		Gas
FORD	F-350	2006	ANIMAL CONTROL		Class 3		Gas
FORD	F-350	2008	FIRE	4X4	Class 3		Gas

FORD	F-350	2008	FIRE	4X4	Class 3		Gas
FORD	F-350	2008	FIRE	4X4	Class 3		Gas
FORD	F-350	2006	MAINTENANCE		Class 3		Gas
FORD	F-350	2009	WATER		Class 3		Gas
CHEVY	K-30	1978	BEAUTIFICATION	BRUSH PUMPER	Class 3		Gas
CHEVY	K-30	1980	BEAUTIFICATION	4x4	Class 3		Gas
FORD	E-450	1995	STREETS/DRAIN	15 PASSENGER	Class 4		Gas
FORD	F-550	2008	SEWER		Class 5		Diesel
FORD	F-550	2008	STREETS/DRAIN		Class 5		Diesel
FORD	F-550	2008	FLEET MAINT		Class 5		Diesel
FORD	F-650	2008	STREETS/DRAIN		Class 6		Diesel
FORD	F-650	2004	WATER		Class 6		Diesel
	18 RL VIPER	2009	SANITATION	REAR LOAD SANITATION	Class 7		Diesel
	ACTERA	2008	SANITATION		Class 7		Diesel
	EVO-728-C275	2002	SANITATION	Replaced by CNG	Class 7	CNG	Diesel
	EVO-728-C275	2003	SANITATION	SIDE LOAD REFUSE	Class 7	CNG	Diesel
	EVO-728-C275	2004	SANITATION	REFUSE	Class 7	CNG	Diesel
	EVO-728-C275	2004	SANITATION	REFUSE	Class 7	CNG	Diesel
	EVO-728-C275	2004	SANITATION	REFUSE	Class 7	CNG	Diesel
	EVO-728-C275	2004	SANITATION	REFUSE	Class 7	CNG	Diesel
FORD	F-700	1991	STREETS/DRAIN		Class 7		Diesel
FORD	F-750	2005	PARKS/REC		Class 7		Diesel
	L7501	2006	SEWER	VACTOR	Class 7		Diesel
	LET	2006	SANITATION	REFUSE TRUCKS	Class 7	CNG	Diesel
	LET	2006	SANITATION	REFUSE TRUCKS	Class 7	CNG	Diesel
	LET	2008	SANITATION	REFUSE TRUCKS	Class 7		Diesel
		1999	SEWER	FLUSHER TRUCK	Class 7	CNG	Diesel
	ACTERA M8500	2003	SANITATION	TERMINATOR	Class 8	CNG	Diesel
	AERIAL MV-75	2001	FIRE	FIRE TRUCK	Class 8		Gas
CHEVY	C-60	1984	STREETS/DRAIN	DUMP TRUCK	Class 8	CNG	Diesel
FORD	F-800	1997	SANITATION		Class 8	CNG	Diesel
FORD	F-8000	1984	STREETS/DRAIN	SAND TRUCK	Class 8	CNG	Diesel
FORD	F-8000	1985	STREETS/DRAIN	SAND TRUCK	Class 8	CNG	Diesel
	LT85	2006	STREETS/DRAIN	SAND TRUCK	Class 8	CNG	Diesel
	SPARTAN	1995	FIRE	FIRE TRUCK	Class 8		Diesel
	TYPHOON	2004	FIRE	FIRE TRUCK	Class 8		Diesel
	TYPHOON	2008	FIRE	FIRE TRUCK	Class 8		Diesel
	TYPHOON	2009	FIRE	FIRE TRUCK	Class 8		Diesel
	TYPHOON	2009	FIRE	FIRE TRUCK	Class 8		Diesel
		1984	FIRE	FIRE TRUCK	Class 8		Diesel
		1989	FIRE		Class 8		Diesel
		2006	FIRE	FIRE TRUCK	Class 8		Diesel
	320	2011	SANITATION	NEW CNG SANITATION			CNG
	1st Priority						
	2nd Priority						
	3rd Priority						
	4th Priority						
	5th Priority						
	New CNG Trucks						
		2011	SANITATION	NEW TERMINATOR			CNG

Pickups 7 years
Dump Trucks 10 years

GREET Fleet Footprint Calculator Model Results for City of Moore:

2010 Baseline Energy Use

2012 Updated Energy Use

2015 Projected Energy Use

CITY OF MOORE, Oklahoma On-Road Fleet Petroleum Use and GHG Footprint 2010-2011

1. Method to Calculate On-Road Fleet's Petroleum Energy Use and GHG Footprint

- 1 - Fleet size, vehicle miles traveled, and fuel economy
- 2 - Fuel use (skip to question 5)

2. The Number of Each Type of Vehicle in On-Road Fleet

	Gasoline	Diesel	Diesel HEV	Biodiesel (B20)	Biodiesel (B100)	Ethanol (E85)	Compressed Natural Gas (CNG)	Liquefied Natural Gas (LNG)	Liquefied Petroleum Gas/Propane (LPG)	Electricity	Gaseous Hydrogen (G.H2)	Liquid Hydrogen (L.H2)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	12	0	0	0	0	0	0	0	0	0	0
Street Sweeper	0	1	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	1	0	0	0	0	0	0	0	0	0	0	0
Transport/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	34	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	122	3	0	0	0	0	0	0	0	0	0	0

3. The Average Annual Vehicle Miles Traveled by Each Vehicle Type

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Transit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Shuttle/Paratransit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Waste Hauler	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400
Street Sweeper	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600
Delivery Step Van	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500
Transport/Freight Truck	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Medium/Heavy Duty Pickup Truck	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400
Maintenance Utility Vehicle	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Other	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000

4. The Average Fuel Economy for Each Vehicle Type in the On-Road Fleet (miles per gasoline gallon equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	6.0	7.0	8.5	7.0	7.0	6.0	6.0	6.0	6.0	20.5	12.0	12.0
Transit Bus	2.5	3.0	3.8	3.0	3.0	2.5	2.5	2.5	2.5	8.5	5.0	5.0
Shuttle/Paratransit Bus	7.0	8.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	24.0	14.0	14.0
Waste Hauler	2.0	2.5	3.0	2.5	2.5	2.0	2.0	2.0	2.0	7.0	4.0	4.0
Street Sweeper	3.0	4.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	10.0	6.0	6.0
Delivery Step Van	12.0	15.0	18.5	15.0	15.0	12.0	12.0	12.0	12.0	41.0	24.0	24.0
Transport/Freight Truck	5.0	6.0	7.5	6.0	6.0	5.0	5.0	5.0	5.0	17.0	10.0	10.0
Medium/Heavy Duty Pickup Truck	9.0	11.0	13.5	11.0	11.0	9.0	9.0	9.0	9.0	31.0	18.0	18.0
Maintenance Utility Vehicle	20.0	25.0	31.0	25.0	25.0	20.0	20.0	20.0	20.0	68.0	40.0	40.0
Other (Class 1 + Class 2 Vehicles)	15.0	14.0	3.8	3.0	3.0	2.5	2.5	2.5	2.5	8.5	5.0	5.0

5. The Annual Total Fuel Use by On-Road Fleet Vehicles (gallons, cubic feet, or kilowatt-hours)

	Gasoline (gallons)	Diesel (gallons)	Diesel HEV (gallons)	B20 (gallons)	B100 (gallons)	E85 (gallons)	CNG (cubic feet)	LNG (gallons)	LPG (gallons)	Electricity (kilowatt-hours)	G.H2 (cubic feet)	L.H2 (gallons)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	0	0	0	0	0	0	0	0	0	0	0
Street Sweeper	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	0	0	0	0	0	0	0	0	0	0	0	0
Transport/Drayage/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0
Gasoline Gallon Equivalent Total	0	0	0	0	0	0	0	0	0	0	0	0

6. Fuel Production Assumptions

Ethanol Feedstock Source	1	1 - Corn 2 - Switchgrass
CNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LPG Feedstock Source	NG 60% Petroleum 40%	
Source of Electricity for On-Road Electric Vehicles and H2 Electrolysis	14	1 to 13 - EIA Regions 1 through 13 Mix (see map) 14 - Average U.S. Mix 15 - User Defined (go to 'Specs' sheet)
G.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)
L.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)



1. ECAR
2. ERCOT
3. MAAC
4. MAIN
5. MAPP
6. NPCC-NY
7. NPCC-NE
8. FRCC
9. SERC
10. SPP
11. WECC-NW
12. WECC-RMP/ANM
13. WECC-CA

7. Results of On-Road Fleet's Petroleum Usage (barrels)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	2563.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2563.0
Street Sweeper	0.0	71.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9
Delivery Step Van	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	804.1
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (Class 1 + Class 2 Vehicles)	5464.3	146.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5611.0
Fuel Total	5,495.1	3,585.6	0.0	0.0	0.0								

On-Road Fleet Total 9,080.7 barrels of oil 381,389 gallons of petroleum

8. Results of On-Road Fleet's Greenhouse Gas Emissions (short tons CO2-equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	1,408.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1408.1
Street Sweeper	0.0	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5
Delivery Step Van	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	441.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	441.7
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (Class 1 + Class 2 Vehicles)	2977.3	80.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3057.9
Fuel Total	2,994.1	1,969.9	0.0	0.0	0.0								

On-Road Fleet Total 4,964.0 short tons of GHG emissions

On-Road Fleet Petroleum Use and GHG Footprint- SNAPSHOT 2012 W/ 2 CNG WASTE TRUCKS

1. Method to Calculate On-Road Fleet's Petroleum Energy Use and GHG Footprint

- 1 - Fleet size, vehicle miles traveled, and fuel economy
- 2 - Fuel use (skip to question 5)

2. The Number of Each Type of Vehicle in On-Road Fleet

	Gasoline	Diesel	Diesel HEV	Biodiesel (B20)	Biodiesel (B100)	Ethanol (E85)	Compressed Natural Gas (CNG)	Liquified Natural Gas (LNG)	Liquified Petroleum Gas/Propane (LPG)	Electricity	Gaseous Hydrogen (G.H2)	Liquid Hydrogen (L.H2)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	12	0	0	0	0	2	0	0	0	0	0
Street Sweeper	0	1	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	1	0	0	0	0	0	0	0	0	0	0	0
Transport/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	34	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	122	3	0	0	0	0	0	0	0	0	0	0

3. The Average Annual Vehicle Miles Traveled by Each Vehicle Type

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Transit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Shuttle/Paratransit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Waste Hauler	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400
Street Sweeper	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600
Delivery Step Van	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500
Transport/Freight Truck	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Medium/Heavy Duty Pickup Truck	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400
Maintenance Utility Vehicle	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Other (Class 1 + Class 2 Vehicles)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000

4. The Average Fuel Economy for Each Vehicle Type in the On-Road Fleet (miles per gasoline gallon equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	6.0	7.0	8.5	7.0	7.0	6.0	6.0	6.0	6.0	20.5	12.0	12.0
Transit Bus	2.5	3.0	3.8	3.0	3.0	2.5	2.5	2.5	2.5	8.5	5.0	5.0
Shuttle/Paratransit Bus	7.0	8.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	24.0	14.0	14.0
Waste Hauler	2.0	2.5	3.0	2.5	2.5	2.0	2.0	2.0	2.0	7.0	4.0	4.0
Street Sweeper	3.0	4.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	10.0	6.0	6.0
Delivery Step Van	12.0	15.0	18.5	15.0	15.0	12.0	12.0	12.0	12.0	41.0	24.0	24.0
Transport/Freight Truck	5.0	6.0	7.5	6.0	6.0	5.0	5.0	5.0	5.0	17.0	10.0	10.0
Medium/Heavy Duty Pickup Truck	9.0	11.0	13.5	11.0	11.0	9.0	9.0	9.0	9.0	31.0	18.0	18.0
Maintenance Utility Vehicle	20.0	25.0	31.0	25.0	25.0	20.0	20.0	20.0	20.0	68.0	40.0	40.0
Other (Class 1 + Class 2 Vehicles)	15.0	14.0	3.8	3.0	3.0	2.5	2.5	2.5	2.5	8.5	5.0	5.0

5. The Annual Total Fuel Use by On-Road Fleet Vehicles (gallons, cubic feet, or kilowatt-hours)

	Gasoline (gallons)	Diesel (gallons)	Diesel HEV (gallons)	B20 (gallons)	B100 (gallons)	E85 (gallons)	CNG (cubic feet)	LNG (gallons)	LPG (gallons)	Electricity (kilowatt-hours)	G.H2 (cubic feet)	L.H2 (gallons)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	0	0	0	0	0	0	0	0	0	0	0
Street Sweeper	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	0	0	0	0	0	0	0	0	0	0	0	0
Transport/Drayage/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0
Gasoline Gallon Equivalent Total	0	0	0	0	0	0	0	0	0	0	0	0

6. Fuel Production Assumptions

Ethanol Feedstock Source	1	1 - Corn 2 - Switchgrass
CNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LPG Feedstock Source	NG 60% Petroleum 40%	
Source of Electricity for On-Road Electric Vehicles and H2 Electrolysis	14	1 to 13 - EIA Regions 1 through 13 Mix (see map) 14 - Average U.S. Mix 15 - User Defined (go to 'Specs' sheet)
G.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)
L.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)



1. ECAR
2. ERCOT
3. MAAC
4. MAIN
5. MAPP
6. NPCC-NY
7. NPCC-NE
8. FRCC
9. SERC
10. SPP
11. WECC-NW
12. WECC-RMP/ANM
13. WECC-CA

7. Results of On-Road Fleet's Petroleum Usage (barrels)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	2563.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2565.9
Street Sweeper	0.0	71.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9
Delivery Step Van	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	804.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	804.1
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	5464.3	146.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5611.0
Fuel Total	5,495.1	3,585.6	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	

On-Road Fleet Total 9,083.6 barrels of oil 381,511 gallons of petroleum

8. Results of On-Road Fleet's Greenhouse Gas Emissions (short tons CO2-equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	1,408.1	0.0	0.0	0.0	0.0	231.5	0.0	0.0	0.0	0.0	0.0	1639.6
Street Sweeper	0.0	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5
Delivery Step Van	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	441.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	441.7
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	2977.3	80.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3057.9
Fuel Total	2,994.1	1,969.9	0.0	0.0	0.0	0.0	231.5	0.0	0.0	0.0	0.0	0.0	

On-Road Fleet Petroleum Use and GHG Footprint- PROJECTION 2015

1. Method to Calculate On-Road Fleet's Petroleum Energy Use and GHG Footprint

- 1 - Fleet size, vehicle miles traveled, and fuel economy
- 2 - Fuel use (skip to question 5)

2. The Number of Each Type of Vehicle in On-Road Fleet

	Gasoline	Diesel	Diesel HEV	Biodiesel (B20)	Biodiesel (B100)	Ethanol (E85)	Compressed Natural Gas (CNG)	Liquified Natural Gas (LNG)	Liquified Petroleum Gas/Propane (LPG)	Electricity	Gaseous Hydrogen (G.H2)	Liquid Hydrogen (L.H2)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	3	0	0	0	0	11	0	0	0	0	0
Street Sweeper	0	1	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	1	0	0	0	0	0	0	0	0	0	0	0
Transport/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	28	0	0	0	0	6	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	112	3	0	0	0	0	0	0	0	10	0	0

3. The Average Annual Vehicle Miles Traveled by Each Vehicle Type

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Transit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Shuttle/Paratransit Bus	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Waste Hauler	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400
Street Sweeper	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600
Delivery Step Van	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500	16,500
Transport/Freight Truck	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Medium/Heavy Duty Pickup Truck	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400
Maintenance Utility Vehicle	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Other (Class 1 + Class 2 Vehicles)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000

4. The Average Fuel Economy for Each Vehicle Type in the On-Road Fleet (miles per gasoline gallon equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2
School Bus	6.0	7.0	8.5	7.0	7.0	6.0	6.0	6.0	6.0	20.5	12.0	12.0
Transit Bus	2.5	3.0	3.8	3.0	3.0	2.5	2.5	2.5	2.5	8.5	5.0	5.0
Shuttle/Paratransit Bus	7.0	8.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	24.0	14.0	14.0
Waste Hauler	2.0	2.5	3.0	2.5	2.5	2.0	2.0	2.0	2.0	7.0	4.0	4.0
Street Sweeper	3.0	4.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	10.0	6.0	6.0
Delivery Step Van	12.0	15.0	18.5	15.0	15.0	12.0	12.0	12.0	12.0	41.0	24.0	24.0
Transport/Freight Truck	5.0	6.0	7.5	6.0	6.0	5.0	5.0	5.0	5.0	17.0	10.0	10.0
Medium/Heavy Duty Pickup Truck	9.0	11.0	13.5	11.0	11.0	9.0	9.0	9.0	9.0	31.0	18.0	18.0
Maintenance Utility Vehicle	20.0	25.0	31.0	25.0	25.0	20.0	20.0	20.0	20.0	68.0	40.0	40.0
Other (Class 1 + Class 2 Vehicles)	15.0	14.0	3.8	3.0	3.0	2.5	23.0	2.5	2.5	8.5	5.0	5.0

5. The Annual Total Fuel Use by On-Road Fleet Vehicles (gallons, cubic feet, or kilowatt-hours)

	Gasoline (gallons)	Diesel (gallons)	Diesel HEV (gallons)	B20 (gallons)	B100 (gallons)	E85 (gallons)	CNG (cubic feet)	LNG (gallons)	LPG (gallons)	Electricity (kilowatt-hours)	G.H2 (cubic feet)	L.H2 (gallons)
School Bus	0	0	0	0	0	0	0	0	0	0	0	0
Transit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Shuttle/Paratransit Bus	0	0	0	0	0	0	0	0	0	0	0	0
Waste Hauler	0	0	0	0	0	0	0	0	0	0	0	0
Street Sweeper	0	0	0	0	0	0	0	0	0	0	0	0
Delivery Step Van	0	0	0	0	0	0	0	0	0	0	0	0
Transport/Drayage/Freight Truck	0	0	0	0	0	0	0	0	0	0	0	0
Medium/Heavy Duty Pickup Truck	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance Utility Vehicle	0	0	0	0	0	0	0	0	0	0	0	0
Other (Class 1 + Class 2 Vehicles)	0	0	0	0	0	0	0	0	0	0	0	0
Gasoline Gallon Equivalent Total	0	0	0	0	0	0	0	0	0	0	0	0

6. Fuel Production Assumptions

Ethanol Feedstock Source	1	1 - Corn 2 - Switchgrass
CNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LNG Feedstock Source	1	1 - North American NG 2 - Non-North American NG 3 - Landfill Gas
LPG Feedstock Source	NG 60% Petroleum 40%	
Source of Electricity for On-Road Electric Vehicles and H2 Electrolysis	14	1 to 13 - EIA Regions 1 through 13 Mix (see map) 14 - Average U.S. Mix 15 - User Defined (go to 'Specs' sheet)
G.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)
L.H2 Production Process	1	1 - Refueling Station SMR (On-site) 2 - Central Plant SMR (Off-site) 3 - Refueling Station Electrolysis (On-site)



1. ECAR
2. ERCOT
3. MAAC
4. MAIN
5. MAPP
6. NPCC-NY
7. NPCC-NE
8. FRCC
9. SERC
10. SPP
11. WECC-NW
12. WECC-RMP/ANM
13. WECC-CA

7. Results of On-Road Fleet's Petroleum Usage (barrels)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	640.8	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	656.7
Street Sweeper	0.0	71.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9
Delivery Step Van	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	662.2	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	663.1
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	5016.4	146.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.6	0.0	0.0	5206.7
Fuel Total	5,047.2	1,521.5	0.0	0.0	0.0	0.0	16.9	0.0	0.0	43.6	0.0	0.0	

On-Road Fleet Total 6,629.1 barrels of oil 278,422 gallons of petroleum

8. Results of On-Road Fleet's Greenhouse Gas Emissions (short tons CO2-equivalent)

	Gasoline	Diesel	Diesel HEV	B20	B100	E85	CNG	LNG	LPG	Electricity	G.H2	L.H2	Vehicle Total
School Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shuttle/Paratransit Bus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Waste Hauler	0.0	352.0	0.0	0.0	0.0	0.0	1273.1	0.0	0.0	0.0	0.0	0.0	1625.1
Street Sweeper	0.0	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5
Delivery Step Van	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8
Transport/Freight Truck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Medium/Heavy Duty Pickup Truck	0.0	363.8	0.0	0.0	0.0	0.0	75.2	0.0	0.0	0.0	0.0	0.0	439.0
Maintenance Utility Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	2733.2	80.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	944.7	0.0	0.0	3758.6
Fuel Total	2,750.0	835.9	0.0	0.0	0.0	0.0	1,348.3	0.0	0.0	944.7	0.0	0.0	

On-Road Fleet Total 5,878.9 short tons of GHG emissions

Tips for Improving Fuel Economy by Clean Cities, Department of Energy



Tips for Improving Fuel Economy

Here are a few things you can do today to get better fuel mileage from your existing vehicle.

Drive Sensibly

Think "steady and smooth" as you drive and take the long view of the road so you can brake easy. Don't mash the gas when you start up and don't brake hard to stop. Up to a 33% improvement in highway fuel economy can be realized by changing aggressive driving habits—that translates into a savings potential of more than 180 gallons of fuel or \$550 per year!*

Drive the Speed Limit

On the highway, you can assume that with each 5 mph you drive over 60 mph your fuel economy drops by 5%. In town, driving at the speed limit will give you more green lights, improve your gas mileage, reduce idling time, and reduce the wear and tear on your brakes. Using the highway example, when you drive 75 mph vs. 55 mph it's like burning an extra gallon of fuel every 100 miles you drive. So, if you drive 10,000 highway miles, your savings could be as much as \$300 per year.*

Selectively Use Cruise Control

Edmonds.com states that you can improve your fuel economy by up to 14% by engaging cruise control when appropriate. Using cruise control smoothes out the accelerator input and encourages the driver not to react to every change in traffic. However, it is counterproductive to use cruise control in hilly terrain; it tries to maintain the set speed and will use a lot of extra fuel downshifting and accelerating faster than typical. Using cruise control on 10,000 of the miles you drive in a year could save you nearly \$200 and more than 60 gallons of fuel.*

Avoid Excessive Idling

When your vehicle's engine is idling it gets 0 mpg, contributes to air pollution, and causes engine wear. It is more efficient to turn the engine off while you wait and restart the car when your wait is over. The California Energy Commission (CEC) recommends that you shut off your car anytime you are waiting for more than 10 seconds. CEC asserts that an idling vehicle consumes as much as 1 gallon of fuel per hour. Based on the commission's statement that most people idle 5-10 minutes per day, the savings translate into more than \$150 per year.*

Follow the Recommended Maintenance

A vehicle that is well maintained operates with greater efficiency and ultimately improves overall vehicle performance and fuel economy. Fouled spark plugs, a dirty air filter, or a clogged fuel filter will have an adverse effect on your fuel economy. Check your vehicle's owner's manual for maintenance recommendations and schedule check-ups accordingly.

Keep Your Tires Properly Inflated

Under-inflated tires require more energy to roll and, consequently, more fuel is consumed. If you keep your tires inflated properly, you can improve your fuel economy by as much as 2.5%. The recommended tire pressure can be found in your owner's manual or on a sticker on the doorjamb of your car, not on the tire itself. Buy a tire-pressure gauge and check your tires monthly. For more info see www.eere.energy.gov/afdc/vehicles/fuel_economy_tires_light.html.

Remove Excess Weight

Weight requires energy to move, so carrying around excess weight will negatively affect your fuel economy. Remove unnecessary items including the roof rack when you're not using it. An extra 100 pounds of weight can reduce your fuel economy by up to 2%.

Use the Highest Gear Possible

To improve your fuel economy, drive in the highest gear possible when you are cruising at a steady speed.

Keep Your Car Clean

Keeping your car washed and waxed may reduce drag and improve aerodynamics. Engineer Tom Wagner, Jr. reported to Stretcher.com a 7% improvement in fuel economy during a 1,600-mile road trip as the result of keeping his truck clean. Highly aerodynamic cars may not yield any noticeable improvement, but the cleaner they are the better they look!

Think Before You Open Your Windows

Air conditioning uses fuel. Driving with your windows rolled down while traveling at a high speed increases drag on the vehicle and may cause more fuel consumption than using the air conditioner. If you need it, roll up the windows and turn on the air conditioning when you're driving on the highway. If you are driving at a slow speed, turn off the air conditioner and roll your windows down.

Combine Your Errands into One Efficient Trip

Several short trips, all starting with a cold start, can use twice as much fuel as one trip with several stops and may cause you to travel more miles. Plan your trips efficiently.

Consider Replacing Worn Out Tires with Low Rolling Resistance Tires

Low rolling resistance tires are designed to improve fuel economy by reducing the amount of fuel it takes to push the tire down the road. The tire's inflation pressure, weight, tread design, and materials contribute to how easy the tire rolls down the highway. A 2003 California Energy Commission (CEC) study has estimated a fuel savings of 1.5% to 4.5% from using low rolling resistance tires. If a car's mileage improves from 20 mpg to 21 mpg, simply by using lower rolling resistance tires, its fuel savings are nearly \$100 per year.

* Assumptions for calculations: \$3.00 per gallon for fuel, 20 miles per gallon before change, and 15,000 miles per year.