



Texas Department
of Motor Vehicles
HELPING TEXANS GO. HELPING TEXAS GROW.



2017

Alternatively Fueled Vehicle Report

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Executive Summary

The State of Texas has seen an increase in the total number of alternatively fueled vehicles from FY 2016 to FY 2017, with 233,985 alternatively fueled vehicles registered in FY 2017. This is an increase of 21,565 over FY 2016, representing a growth of 10.15%. During the same period, the number of registered vehicles in Texas increased by 115,352 (0.48%), with the total number of registered vehicles coming to 24,147,589. Of the total number of registered vehicles, 20,823,119, or 86% of these vehicles, are reliant upon fossil fuels. The State of Texas vehicle fleet is still primarily comprised of conventionally fueled vehicles.

The fuel type with the largest percentage increase year over year was in the electric category, with 11,724 electric vehicles registered in 2017, an increase of 3,327 vehicles (39.62%) from FY 2016. While this group of vehicles shows a marked increase, alternatively fueled vehicles still comprise less than 1% of vehicles registered statewide.

The number of registered vehicles that are conventionally fueled increased by 3.71% from FY 2016 to FY 2017. Gasoline vehicles accounted for 615,067 of the increase. When combined with flexible fueled vehicles, the total increase is 703,276 vehicles. The number of diesel vehicles increased by 41,829.

While there are categories of alternatively fueled vehicles that appear to be growing, the department is unable to project with any certainty if this growth rate will remain the same or change.

[The Texas Department of Motor Vehicles](#)

The Texas Department of Motor Vehicles (TxDMV) is a dynamic state agency with the mission “to serve, protect and advance the citizens and industries in the state with quality motor vehicle related services.”

In addition to licensing dealers, awarding grants to local law enforcement to combat automobile burglary and theft, issuing motor carrier operating authority and permitting oversize and overweight loads, TxDMV is responsible for the issuance of vehicle titles and registrations in the State of Texas.

[Legislative Directive to Produce this Report](#)

House Bill 735, passed in 2015 during the 84th Session of the Texas Legislature, required TxDMV to establish a program to collect information on the number of alternatively fueled vehicles in the state. Moreover, the Department is to submit an annual report including this information to the Texas State Legislature each year. Statute defines alternatively fueled vehicles as a motor vehicle that is capable of using a fuel other than gasoline or diesel fuel.

[Texas Vehicle Registrations](#)

Each year and in conjunction with the county tax assessor collectors, TxDMV oversees the issuance of more than 24 million vehicle registration stickers and more than eight million vehicle titles. As Texas’ population continues to grow, so do the number of registered vehicles. The number of registered vehicles grew by .5% in FY 2017, with passenger cars and light trucks under 6,000 pounds comprising the largest single vehicle classification.

[Decoding the Vehicle Identification Number](#)

By using the Vehicle Identification Number (VIN), a unique alphanumeric identifier that has been required on all domestically manufactured vehicles since 1965, TxDMV can determine the fuel type used by a particular vehicle. While the form and function of VINs has evolved over time, the United States National Highway Traffic Safety Administration standardized VIN formatting in 1981 by requiring all over-the-road vehicles to contain a 17-character VIN. The requirement for a standardized VIN with unique manufacturer identifiers applies to all passenger cars, multi-purpose passenger vehicles, trucks, buses, incomplete vehicles, and motorcycles.

To provide the information contained within this report, TxDMV decoded the VIN for every vehicle currently registered in the State of Texas.

Data Limitations

VINs associated with vehicles manufactured before 1965 do not include a fuel type indicator and any after-market modifications that may have been made to a vehicle cannot be identified by the VIN decoding process. Additionally, the Department unable to decode a small number of vehicle records due to certain limitations within the automated VIN decoding process itself. However, the most important vehicles to note within this subgroup are those with Texas motor vehicle records that do not use any type of fuel, such as trailers.

In total, just over 3 million (12.77%) current vehicle registrations exist where the fuel type cannot be determined using the VIN decoding method due to the limitations cited above.

Fuel Types

Since the first self-propelled vehicle was constructed, engineers have experimented with various types of fuel from coal used to heat the boilers of steam engines to hydrogen fuel cells. The following brief descriptions of various fuel types are offered for context.

Gasoline

Gasoline, a transparent, petroleum-derived liquid that is used primarily as a fuel in internal combustion engines, is the most common type of vehicle fuel and is used by over 17 million (71.39%) Texas vehicles. This is 615,067 more vehicles than FY 2016, a 3.70% increase.

Flexible (Flex)

Flexible fuel vehicles are designed to operate using either gasoline or gasoline-ethanol blends containing up to 85% ethanol.

Approximately 2.2 million (9.18%) vehicles in Texas can use flexible fuel. The number of flexible fuel vehicles increased by 88,209, a 4.15% increase over last year.

When the number of flexible fuel vehicles is combined with other gasoline-powered vehicles, the sum total represents almost 19.5 million (80.57%) of vehicles currently registered in Texas. The total increase for both of these vehicle classes was 703,276, a 3.75% increase over last year.



Diesel

Diesel includes products commonly referred to as kerosene, light cycle oil, #1 diesel fuel, #2 diesel fuel, aviation jet fuel, renewable diesel, biodiesel, distillate fuel, cutter stock, heating oil, or simply diesel fuel.

There are approximately 1.37 million (5.67%) diesel fueled vehicles registered in Texas. Diesel fueled vehicle increased by 41,829, a 3.15% increase over FY 2016.

Hybrid: Gasoline and Electric

Depending on the design of the vehicle, gasoline and electric hybrids are capable of using either energy form, or both in combination, to propel the vehicle. The multiple design approaches to hybrid vehicles has resulted in gasoline and electricity usage rates, which are variable.

There are 217,084 (.90%) gasoline and electric hybrid vehicles registered in Texas. This is an increase of 17,988, an increase of 9.03% year over FY 2016.

Electric

Electric vehicles are powered wholly by electricity and use battery packs to store and release energy.

There are 11,724 (.05%) electric vehicles registered in Texas. This group of vehicles had the largest percentage increase in vehicles year over year. Electric vehicles increased by 3,327 vehicles, a 39.62% increase over the previous year.

Convertible

Convertible vehicles have engines that are easily converted from gasoline to propane.

This vehicle type represents 5,756 (.02%) vehicles currently registered across the state. This category of vehicles represents the only known fuel type category that saw a decrease in the number of registered vehicles. The number of these vehicles that are registered declined by 793, a decline of 12.11% over FY 2016.

Natural Gas

Natural gas primarily consists of methane and can be used by vehicles designed to process this fuel type.

There are 3,901 (.02%) compressed natural gas fueled vehicles currently registered in Texas. This category increased by only 12 vehicles, the smallest increase, representing a .31% increase year last year.

Propane

Propane is an alkane gas. When stored under pressure, propane becomes a colorless and odorless liquid. When released, liquid propane reverts into a combustible gas that can be used to propel specifically designed vehicles.

There are 1,276 (.01%) propane fueled vehicles registered in Texas. Like natural gas fueled vehicles, propane fueled vehicle increased by a small amount, only 238 vehicles. However, this represents a 22.39% increase in this fuel type over FY 2016.



Ethanol

Ethanol is an alcohol fuel that can be produced from many plant sources that are high in starch. It is primarily used by being blended with gasoline in low concentrations as an octane enhancer. However, ethanol can also be used in greater concentrations to power vehicles designed to accommodate its use.

TxDMV has no records indicating that any vehicle currently registered in Texas uses pure ethanol as the primary fuel type.

Methanol

Methanol, also known as wood alcohol, has chemical and physical properties similar to ethanol.

TxDMV has no records indicating that any vehicle currently registered in Texas uses methanol as the primary fuel type.



Hybrid: Diesel and Electric

These hybrid vehicles are similar to gasoline and electric hybrids but utilize diesel fuel as opposed to gasoline.

TxDMV has no records indicating there are any vehicles currently registered in Texas using this type of propulsion.

Hydrogen Fuel Cell

Hydrogen fuel cell vehicles harness a chemical reaction to create electricity, which is used to drive an electric motor.

TxDMV has no records indicating there are any vehicles currently registered in Texas using this fuel type.



Appendix A – Data on Registered Vehicles in Texas by Fuel Type – 2017

FUEL TYPE	NUMBER OF REGISTERED VEHICLES	PERCENT OF TOTAL
Gasoline	17,237,827	71.39%
Flexible	2,215,878	9.18%
Diesel	1,369,414	5.67%
Hybrid: Electric and Gas	217,084	.90%
Electric	11,724	.05%
Convertible	5,756	.02%
Natural Gas	3,901	.02%
Propane	1,276	.01%
Fuel Type Not Disclosed*	715	.00%
Ethanol	-	-
Methanol	-	-
Hybrid: Electric and Diesel	-	-
Hydrogen Fuel Cell	-	-
Fuel Type Unknown**	3,084,014	12.77%
Total Number of Registered Vehicles	24,147,589	100%

* The VIN decoding process returned the fuel type in question as “undisclosed.”

** Unknown fuel types are the result of an error in the VIN decoding process, the VIN not designating a fuel type, or, most likely, the vehicle in question not being self-propelled such as a trailer.

Appendix B – Data on Registered Vehicles in Texas by Fuel Type – 2016

FUEL TYPE	NUMBER OF REGISTERED VEHICLES	PERCENT OF TOTAL
Gasoline	16,622,760	69.17%
Flexible	2,127,669	8.85%
Diesel	1,327,585	5.52%
Hybrid: Electric and Gas	199,096	.83%
Electric	8,397	.04%
Convertible	6,549	.03%
Natural Gas	3,889	.02%
Propane	1,038	.00%
Fuel Type Not Disclosed*	555	.00%
Ethanol	-	-
Methanol	-	-
Hybrid: Electric and Diesel	-	-
Hydrogen Fuel Cell	-	-
Fuel Type Unknown**	3,734,699	15.54%
Total Number of Registered Vehicles	24,032,237	100%

* The VIN decoding process returned the fuel type in question as “undisclosed.”

** Unknown fuel types are the result of an error in the VIN decoding process, the VIN not designating a fuel type, or, most likely, the vehicle in question not being self-propelled such as a trailer.

Appendix C – Year over Year Comparison

FUEL TYPE	2017 Vehicles Registered	2016 Vehicles Registered	Vehicle Count Comparison	% Change
Gasoline	17,237,827	16,622,760	615,067	3.70%
Flexible	2,215,878	2,127,669	88,209	4.15%
Diesel	1,369,414	1,327,585	41,829	3.15%
Hybrid: Electric and Gas	217,084	199,096	17,988	9.03%
Electric	11,724	8,397	3,327	39.62%
Convertible	5,756	6,549	(793)	-12.11%
Natural Gas	3,901	3,889	12	0.31%
Propane	1,276	1,038	238	22.93%
Fuel Type Not Disclosed*	715	555	160	28.83%
Ethanol	0	0	-	0.00%
Methanol	0	0	-	0.00%
Hybrid: Electric and Diesel	0	0	-	0.00%
Hydrogen Fuel Cell	0	0	-	0.00%
Fuel Type Unknown**	3,084,014	3,734,699	(650,685)	-17.42%
Total Registered Vehicles	24,147,589	24,032,237	115,352	0.48%

* The VIN decoding process returned the fuel type in question as “undisclosed.”

** Unknown fuel types are the result of an error in the VIN decoding process, the VIN not designating a fuel type, or, most likely, the vehicle in question not being self-propelled such as a trailer.

Appendix D – State Tax Rates on Motor Vehicle Fuels

Per the Comptroller of Public Accounts, gasoline, diesel, and gasoline blends, such as E85 or flexible fuel, are taxed by the state at a rate of \$.20 per gallon.

Compressed Natural Gas and Liquefied Natural Gas are taxed by the state at \$.15 per gallon.

Motor vehicle propulsion by means other than the fuels noted above is not presently taxed by the State of Texas.*

*A state tax on propane was repealed in 2015.

AN ACT

relating to the collection of information regarding the number of alternatively fueled vehicles registered in this state.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Subchapter A, Chapter 502, Transportation Code, is amended by adding Section 502.004 to read as follows:

Sec. 502.004. INFORMATION ON ALTERNATIVELY FUELED VEHICLES. (a)
In this section, "alternatively fueled vehicle" means a motor vehicle that is capable of using a fuel other than gasoline or diesel fuel.

(b) The department by rule shall establish a program to collect information about the number of alternatively fueled vehicles registered in this state.

(c) The department shall submit an annual report to the legislature that includes the information collected under this section. The report must, at a minimum, show the number of vehicles registered in this state that use:

- (1) electric plug-in drives;
- (2) hybrid electric drives;
- (3) compressed natural gas drives; and
- (4) liquefied natural gas drives.

SECTION 2. This Act takes effect September 1, 2016.