



Department of  
General Services



# Annual Report on Energy-Efficient Purchasing

Fiscal Year 2016 - 2017

Department of General Services | Motor Vehicle Management | December 2017



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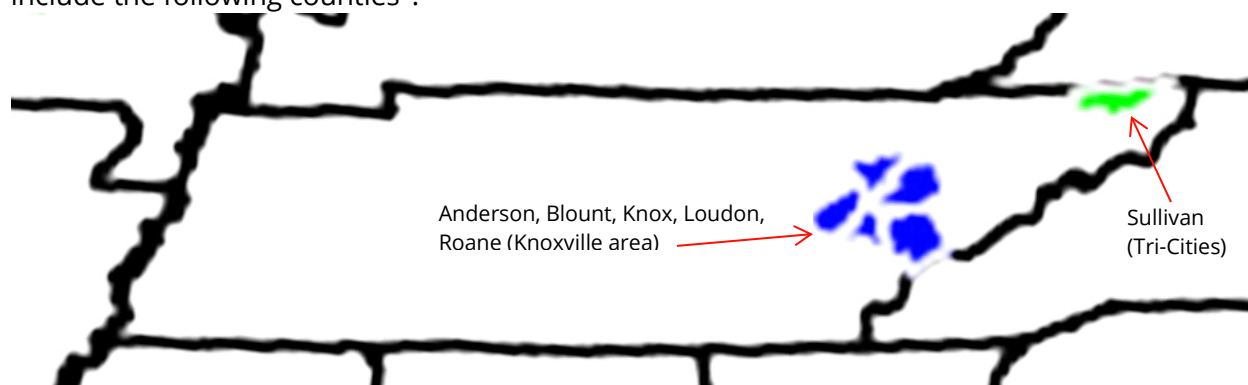
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# PROCUREMENT REQUIREMENTS

Procurement of energy-efficient motor vehicles is mandated by Tennessee Code Annotated § 4-3-1109, which requires the following:

- Each year, every effort should be made to achieve a target goal that one hundred percent (100%) of newly purchased passenger motor vehicles be energy-efficient or alternative fuel motor vehicles.
- The department shall ensure that at least twenty-five percent (25%) of newly purchased passenger motor vehicles procured for use in areas designated by the United States Environmental Protection Agency (EPA) as nonattainment areas shall be hybrid-electric vehicles or vehicles powered by natural gas; provided that such vehicles and fueling infrastructure are available at the time of procurement and such vehicles are purchased at competitive prices. In the event that such vehicles or fueling infrastructure is not available at the time of procurement, the department may instead meet this mandate by procuring compact fuel-efficient vehicles.
- In areas not designated by the EPA as nonattainment areas, the department shall ensure that at least twenty-five percent (25%) of newly purchased passenger motor vehicles are hybrid-electric vehicles, vehicles powered by natural gas, or compact fuel-efficient vehicles; provided, that such vehicles are purchased at competitive prices.

As of September 2016, the areas designated by the EPA as nonattainment areas in the state include the following counties<sup>1</sup>:



T.C.A. § 4-3-1109 defines a passenger motor vehicle as a motor vehicle designed for carrying six (6) or fewer adult passengers and used for the transportation of persons; provided, that vans, including cargo vans, trucks, sport utility vehicles, and police pursuit vehicles shall not be considered passenger motor vehicles.

<sup>1</sup> Source: <https://www3.epa.gov/airquality/greenbook/map/mapnpoll.pdf>

T.C.A. § 4-3-1109 further defines an energy-efficient motor vehicle as a passenger motor vehicle that is:

- An alternative fuel vehicle as defined by the Energy Policy Act of 1992 (Public Law 102-486);
- A flexible fuel vehicle (FFV) utilizing ethanol, biodiesel, or any other commercially available alternative fuel approved by the United States Department of Energy;
- A hybrid-electric vehicle (HEV);
- A compact fuel-efficient vehicle, defined as a vehicle powered by unleaded gasoline that has a United States EPA estimated highway gasoline mileage rating of at least twenty-five miles per gallon (25 mpg) or greater for the model year purchased;
- An electric vehicle (EV);
- A vehicle powered by natural gas; or
- A vehicle powered by ultra low sulfur diesel fuel that meets Bin 5, Tier II emission standards mandated by the EPA and that has an EPA estimated highway mileage rating of at least thirty miles per gallon (30 mpg) or greater for the model year purchased.

## REPORTING REQUIREMENTS

In accordance with T.C.A. § 4-3-1109, this report provides information on the procurement of energy-efficient motor vehicles for fiscal year 2017. The code requires information to be compiled and maintained on the nature of passenger motor vehicles that are owned by the state, including the number of passenger vehicles purchased during the fiscal year categorized by energy efficiency and the number of passenger motor vehicles owned as of June 30 of each year categorized by energy efficiency.

Additionally, in accordance with T.C.A. § 4-3-1109, the report shall include:

- Problems or concerns the state may have experienced in meeting the target goal set relative to obtaining such energy-efficient motor vehicles;
- Any savings or increased expenditures to the state in the purchase of, as well as the operation and maintenance cost of, such motor vehicles;
- Plans for integrating energy-efficient motor vehicles into the state passenger motor vehicle fleet;
- The volume of gasoline or diesel displaced by the usage of energy-efficient or alternative fuel vehicles; and
- The emissions reduction achieved by the usage of energy-efficient or alternative fuel vehicles.

# MOTOR VEHICLE MANAGEMENT ANALYSIS

## State of Tennessee Fleet

As of June 30, 2017, the state owned 485 energy-efficient passenger motor vehicles. The 485 state-owned energy-efficient passenger motor vehicles include:

Energy Efficient Category	Number of Vehicles
Flex Fuel (FFV)	358
Hybrid	58
Electric	5
≥ 25 MPG Highway	64
<b>Total</b>	<b>485</b>

## FY 2017 Acquisitions

During fiscal year 2017, the state purchased 42 passenger vehicles, all of which were energy-efficient. The following table lists the vehicle purchases for fiscal year 2017.

Vehicle Description	Category	Number Purchased
Chevrolet Impala	FFV	2
Dodge Charger	MPG ≥ 25	31
Ford C-Max	Hybrid	2
Jeep Cherokee	MPG ≥ 25	1
Nissan Altima	MPG ≥ 25	1
Nissan Murano	MPG ≥ 25	2
Nissan Rogue	MPG ≥ 25	3
<b>TOTAL</b>		<b>42</b>

## Additional Information

- In recent years the United States Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) have established fuel economy standards for light-duty passenger vehicles that require manufacturers to meet stringent fuel economy standards. As a result, Motor Vehicle Management will continue to meet the goal of 100% procurement of energy-efficient passenger motor vehicles. As a result of these requirements, there are not comparable models to use to estimate emissions reductions achieved by using energy-efficient vehicles over non energy-efficient vehicles.
- Utilization of ethanol flex fuel (E85) significantly reduces fuel economy compared to utilization of regular gasoline. Based on U.S. Department of Energy calculations, 2017 Chevrolet Impala vehicles receive 28 MPG highway using regular gasoline verses only 20 MPG highway using E85 fuel. This results in a 29% reduction in fuel economy (highway) using E85 verses regular gasoline.