mn DEPARTMENT OF ADMINISTRATION

Minnesota State Light Vehicle Fleet Sustainability Benchmarks FY 2016

Minnesota Statutes 16C.137, subdivision 2 Report
2/07/2019

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Purpose

This report on the sustainability benchmarks for state fleet vehicles is required by M.S. 16C.137 Subd. 2. To promote energy conservation, State agencies are to examine their vehicle fleets, fuel needs and best practices for using Information Technology (M.S. 16C.137 Subd. 1). Specifically, when considering the transportation needs of personnel carrying out professional duties, State agencies are to:

- when feasible, ensure that state fleet vehicles:
    - use cleaner fuels
    - have fuel efficiency ratings that exceed 30 miles per gallon for city usage or 35 miles per gallon for highway usage
    - are powered solely by electricity;
- increase use of renewable transportation fuels, including ethanol, biodiesel, and hydrogen from agricultural products; and
- increase use of Web-based Internet applications and other electronic information technologies to enhance the access to and delivery of government information and services to the public, and reduce the reliance on the department's fleet for the delivery of such information and services.

Fleet Size

The State of Minnesota light vehicle fleet[1] is divided into four managed fleets[2]. In addition, there are agency owned/managed vehicles. This report is based on the light vehicle count as of the end of FY2016.

Department	Light Vehicle Fleet Count
Administration Leased	1,580
Natural Resources (DNR)	1,377
Public Safety (DPS)	1,107
Transportation (MnDOT)	1,831
Agency owned/managed	662
Total Vehicle Count	**6,557**

Fleet Inventory Composition

Each fleet includes several vehicle types that are chosen to best meet core agency business operations. State contracts are in place to offer the most fuel efficient and cost-effective vehicles for safely completing tasks. Getting fuel efficient vehicles on contract can be a challenge. Minnesota does not
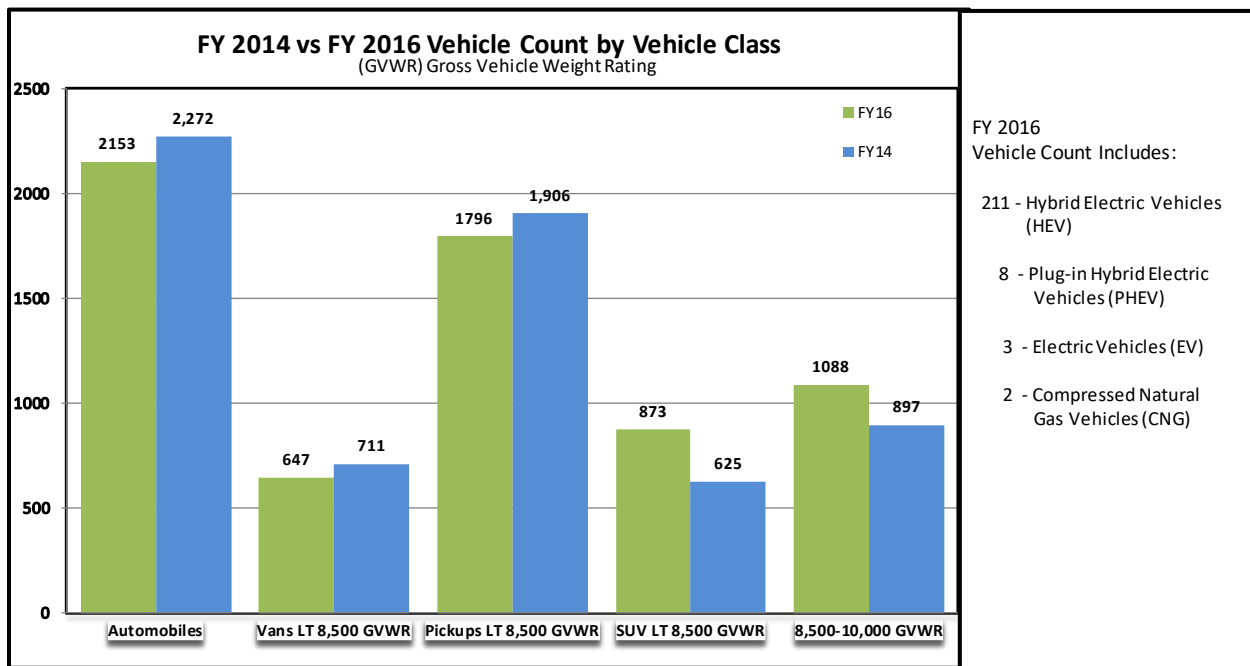
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[1] Light vehicle fleet equals all on-road licensed motor vehicles with a Gross Vehicle Weight Rating (GVWR) ≤ 10,000 lbs.
[2] Agency owned/managed vehicles - state-owned fleet vehicles purchased and managed by individual agencies. Fuel and usage information on these vehicles is limited; therefore they are not included in the fuel usage benchmarks.

have a strong market yet for electric vehicles and the State must rely on auto dealers responding to RFP's to get the desired vehicles on contract.

As of late, Admin Fleet has been working with the Office of State Procurement and the Office of Enterprise Sustainability to actively engage with manufacturers and dealers to increase the number of fuel efficient vehicles on state contracts. In addition, the E-15 fuel was added to the Fixed Fuel State Contract. The following "Green Choice" vehicles have now been added to the State Contract:

- Nissan Leaf (fully electric vehicle)
- Hybrid vehicles such as Highlander LE Hybrid and Highlander KLE Hybrid, Fusion Energi SE, RAV4 XLE Hybrid AWD
- Chevy Bolt (fully electric vehicle with a longer battery range than the Leaf) (anticipated June 2017)

FY 2014 vs FY 2016 Vehicle Count by Vehicle Class
(GVWR) Gross Vehicle Weight Rating

FY 2016
Vehicle Count Includes:

211 - Hybrid Electric Vehicles (HEV)

8 - Plug-in Hybrid Electric Vehicles (PHEV)

3 - Electric Vehicles (EV)

2 - Compressed Natural Gas Vehicles (CNG)

It is worth noting the Admin, DNR and MnDOT Fleet programs were among the first twenty-five fleets nationwide officially recognized as a sustainable fleet by the National Association of Fleet Administrators (NAFA) Fleet Accreditation Program. This program recognizes fleets for successfully demonstrating a credible sustainability plan is in place and real, meaningful progress is being made toward reducing the total emissions and the negative environmental impact made by extraneous carbon fuel usage. The program is now the worldwide standard for recognizing concrete improvements in air quality by reducing emissions, increasing fuel efficiency, and reducing fuel use.
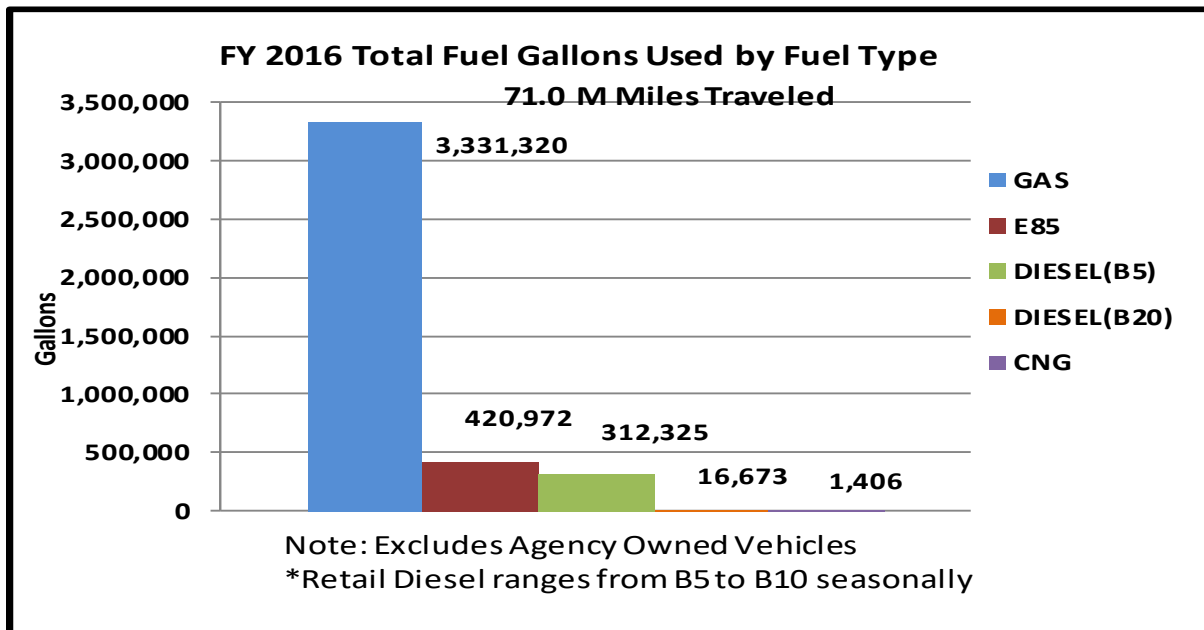
Petroleum and Cleaner Fuel Usage Benchmarks

One of the State Fleets' focus areas is to reduce the environmental impact of state travel by increasing the fuel efficiency of the fleet. This should reduce overall energy use, and in particular petroleum use through energy conservation and alternative cleaner fuels. E85 and biodiesel blends have been the

primary fuel choice for petroleum reduction. However, the state fleet is increasingly committed to expanding the number of plug in hybrids and electric vehicles in our fleet.

In order to help agencies make good decisions, the Admin combined agency fleet now provides all agencies with a Green Choice Vehicle Selector List prior to their ordering new vehicles. This Green Choice Vehicle Selector List shows all vehicles on State Contract ranked by fuel efficiency and emissions scores to help agencies choose the most fuel efficient vehicle to meet their business needs. Agencies are being encouraged to select a vehicle with a Greenhouse Gas EPA emissions score of 7 or better. Presently 12 vehicles available on State Contract meet those requirements.

Additionally, with the last year, telematics devices have been installed in most Admin combined fleet vehicles to monitor the vehicles and gather better data to optimize fleet performance and fuel efficiency. This data measures vehicle performance, gas mileage, speed and idling. Fleets can use this data to manage the care and upkeep of the fleet, as well as driver behavior. This should result in better environmental outcomes, as well as improvements to safety, wear-and-tear on vehicles, etc.
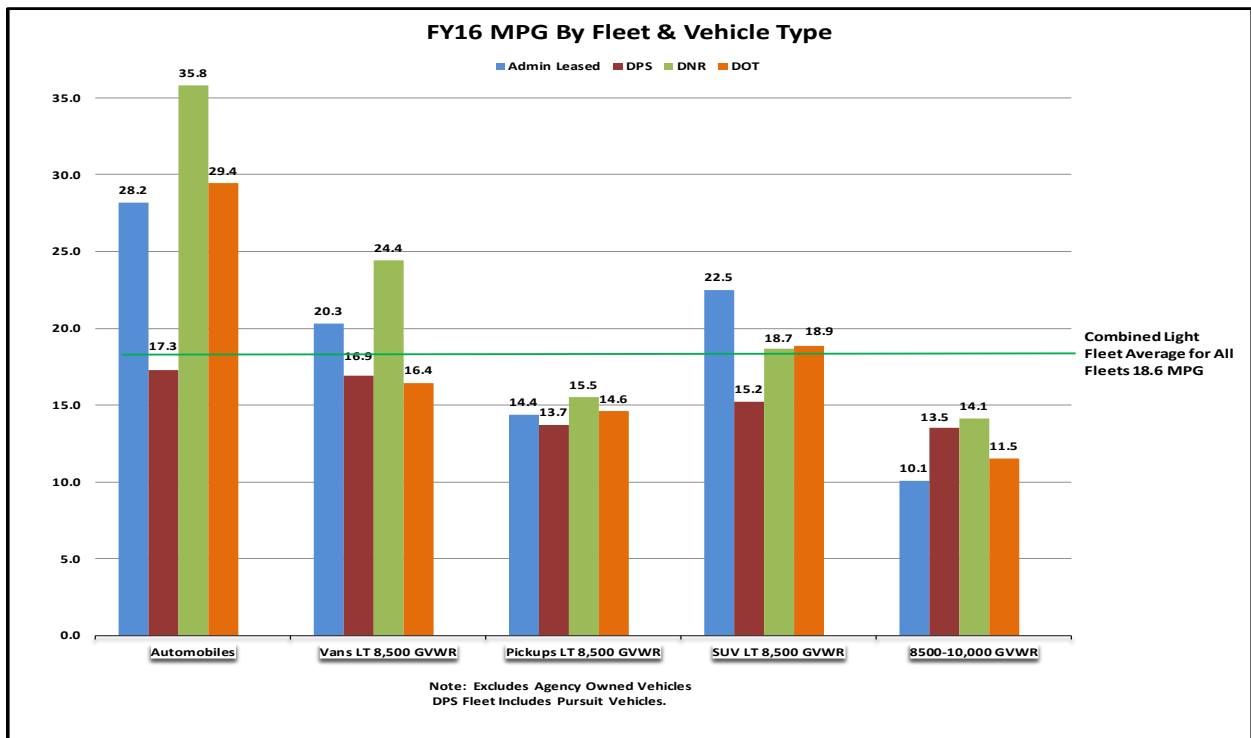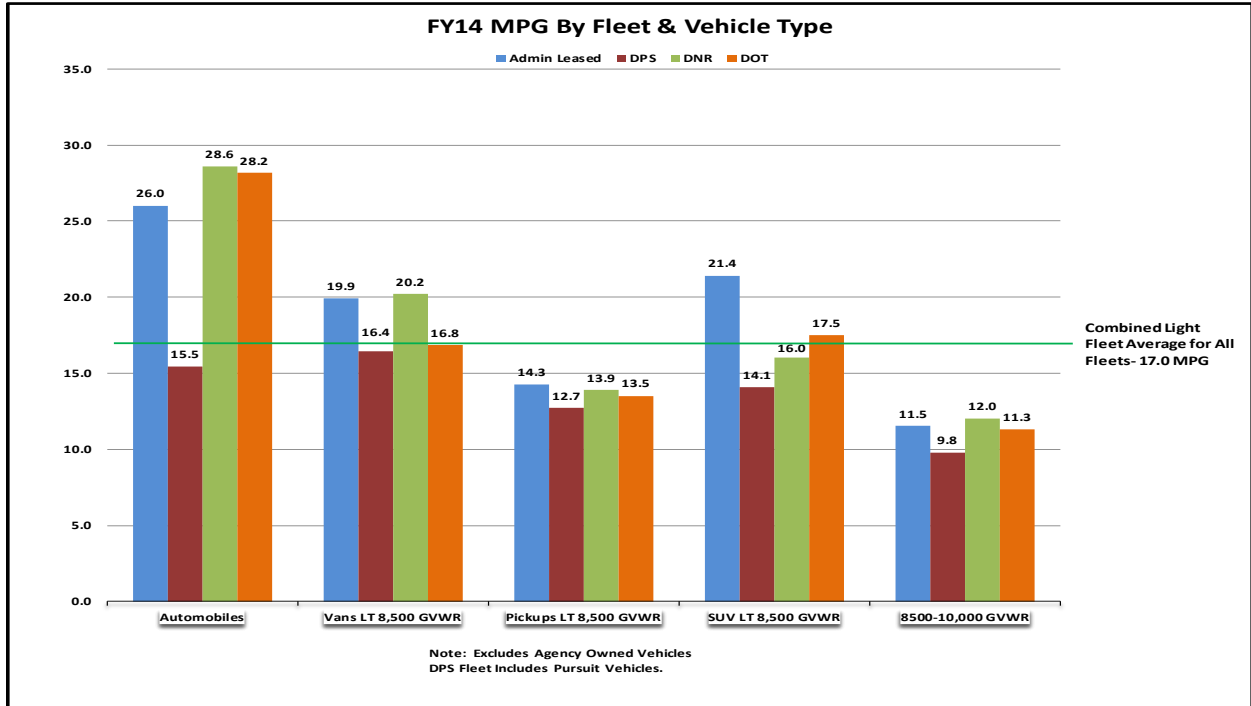
FY 2016 Total Fuel Gallons Used by Fuel Type
71.0 M Miles Traveled

	Gallons
GAS	3,331,320
E85	420,972
DIESEL(B5)	312,325
DIESEL(B20)	16,673
CNG	1,406

Note: Excludes Agency Owned Vehicles
*Retail Diesel ranges from B5 to B10 seasonally

Fleet Fuel Efficiency Benchmark

A benchmark for fleet fuel efficiency was implemented to measure and report a vehicle's miles per gallon (MPG). This is the baseline by which we monitor future results with the intention of an annual improvement in fuel efficiencies by increasing a vehicle's MPG. This can be a challenge because agency business needs vary from year to year, sometimes necessitating increased travel. One opportunity to improve the fuel efficiency benchmark is to schedule the replacements of agency vehicles with newer, more fuel-efficient vehicles.

The miles-per-gallon (MPG) measurement is calculated by taking the total annual miles driven for a vehicle (reported through the Fleet Services M5 database) divided by the annual gallons of fuel used for the same vehicle (reported through Fleet Services Voyageur fuel program) to determine the average miles per gallon (MPG).

In 2016, the MPG for light vehicles increased to 18.6 from 17.0 in FY 2014. One of the factors for this improvement over the benchmark is relative to education provided by Fleet Services to agencies about the more fuel efficient choices available and subsequently, agencies moving towards utilizing "Green Choices" vehicles.

FY14 MPG By Fleet & Vehicle Type

Legend: Admin Leased, DPS, DNR, DOT

Vehicle Type	Admin Leased	DPS	DNR	DOT
Automobiles	26.0	15.5	28.6	28.2
Vans LT 8,500 GVWR	19.9	16.4	20.2	16.8
Pickups LT 8,500 GVWR	14.3	12.7	13.9	13.5
SUV LT 8,500 GVWR	21.4	14.1	16.0	17.5
8500-10,000 GVWR	11.5	9.8	12.0	11.3

Combined Light Fleet Average for All Fleets- 17.0 MPG

Note: Excludes Agency Owned Vehicles
DPS Fleet Includes Pursuit Vehicles.

FY16 MPG By Fleet & Vehicle Type

Legend: Admin Leased, DPS, DNR, DOT

Vehicle Type	Admin Leased	DPS	DNR	DOT
Automobiles	28.2	17.3	35.8	29.4
Vans LT 8,500 GVWR	20.3	16.9	24.4	16.4
Pickups LT 8,500 GVWR	14.4	13.7	15.5	14.6
SUV LT 8,500 GVWR	22.5	15.2	18.7	18.9
8500-10,000 GVWR	10.1	13.5	14.1	11.5

Combined Light Fleet Average for All Fleets 18.6 MPG

Note: Excludes Agency Owned Vehicles
DPS Fleet Includes Pursuit Vehicles.

Current Methods used to Reduce Travel

In addition to moving to more fuel efficient vehicles, State fleets also advocate for ways to reduce the need to travel in vehicles at all by utilizing existing technologies to meet electronically or by expanding Ride Sharing options where appropriate.

- Examples of increasing use of interactive video, Skype, Lync, etc. for:
    - Mental health court hearings
    - Special review board hearings
    - Educational seminars
    - Job interviews; consultants
    - Administrative meetings
- Examples of Ride Sharing and reduction strategies include:
    - Organized meeting/travel days for vehicle ride sharing
    - Calendar applications to schedule us of vehicle and identify carpooling opportunities
    - Use of Enterprise vehicle rental contract for minimal required travel trips

Recommended Next Steps and Goals

In the fall of 2015, the Office of Governor Mark Dayton asked the Department of Administration, the Minnesota Pollution Control Agency, and the Department of Commerce to lead an enterprise approach to managing sustainability outcomes in state government operations.

Part of this effort utilized a Results Based Accountability (RBA) process to assess existing goals and actions, set ambitious enterprise-wide sustainability goals for each of the key focus areas (fleet, energy, waste, water, procurement, and greenhouse gasses) and to create new metrics and levers for tracking progress towards meeting these goals. In the area of Fleet, the overall goal is a 30% reduction of State Fleet consumption of fossil fuels by 2027 relative to a 2016 baseline.

A series of supporting goals will ensure agencies are making progress towards improving overall outcomes

Additionally, State fleet operations will continue to align with broader state sustainability policy goals and explore alternate fuel vehicles (AFV) and electric vehicle (EV) fueling infrastructure development. To that end, the Admin combined agency fleet is moving forward with:

- Installing 40 electric vehicle charging stations on the Capitol Complex.
- Offering state agencies up to $7,000 in Fuel-Efficient Vehicle incentives with each lease of a new Electric Volt, Electric BOLT, RAV 4 Hybrid, or Pacifica Hybrid.
- Offering additional incentives up to $3,500 for installation of charging stations at agency locations.

Moving forward, the Admin combined agency fleet will develop a vehicle replacement program and sustainability roadmap for state agencies to meet statutory requirements and goals and executive orders in the area of sustainability. This will include:

- Prioritizing replacement vehicles by purchasing:

- o Fuel efficient vehicles for the intended vehicle purpose.
    - Electric Vehicles (EVs) and Plug In Hybrids Electric Vehicles (PHEVs) for optimum fuel economy where practicable.
    - Flex-fuel vehicles to displace petroleum with E85.
    - Diesel pickups for greater fuel efficiency and petroleum displacement with biodiesel.
    - Compressed Natural Gas vehicles (CNG) where infrastructure will support them.
  - o Light passenger vehicles (<8,500 GVRW) with a Greenhouse Gas EPA emissions score of 7 or greater.
  - o Fuel efficient sedans to replace SUVs.
- Increasing the number of electrical vehicle charging stations available at state agency facilities.
  - o Each agency will establish a minimum of one Level 2 charging station at agency location.
  - o A Level 2 charging station takes generally takes 4-6 hours to completely charge a fully depleted battery. Compare this to a Level 1 charging station where it takes approximately 8-12 hours to fully charge a depleted battery.
- Increasing the E85 fuel utilization rate in E85 capable vehicles.
  - o Obtain a utilization rate of 50% or higher by 2019 in E85 capable vehicles.
- Ensuring all agency owned vehicles and individual fuel data is entered in the M5 database.
- Accelerating replacements of older sedans getting 22-30 mpg with new Green Choice Vehicles capable of 44-50 mpg, where economically feasible.