

Legislative Post Audit Performance Audit Report Highlights

Vehicle Travel: Determining Whether
The State Is Becoming More Cost Efficient
With Its Vehicle Fleet

Report Highlights

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Audit Concern

Legislators have expressed an interest in knowing whether the State actually has taken steps to reduce vehicle travel costs. Specifically, they want to know whether the State has been able to reduce the number of miles driven and gasoline costs, whether vehicles are being replaced with more fuel-efficient models, and whether the State could save money by purchasing used, rather than new, vehicles.

Other Relevant Facts & Findings for Question 1

In 2008, 17 State agencies had a total of 62 employees who rented vehicles for more than 100 total days, and 9 of these employees rented vehicles over 300 days.

Total vehicle costs including purchases were \$44.6 million in 2008 which is an inflation-adjusted increase of 11% since 2006.

Estimated Cost Savings
as a Result of This Audit:
\$0-\$112,000 per year
(For 251 vehicles we reviewed)

AUDIT QUESTION 1: How have the number of miles driven for official State business and the amount spent for gasoline changed since 2003?

AUDIT ANSWER and KEY FINDINGS:

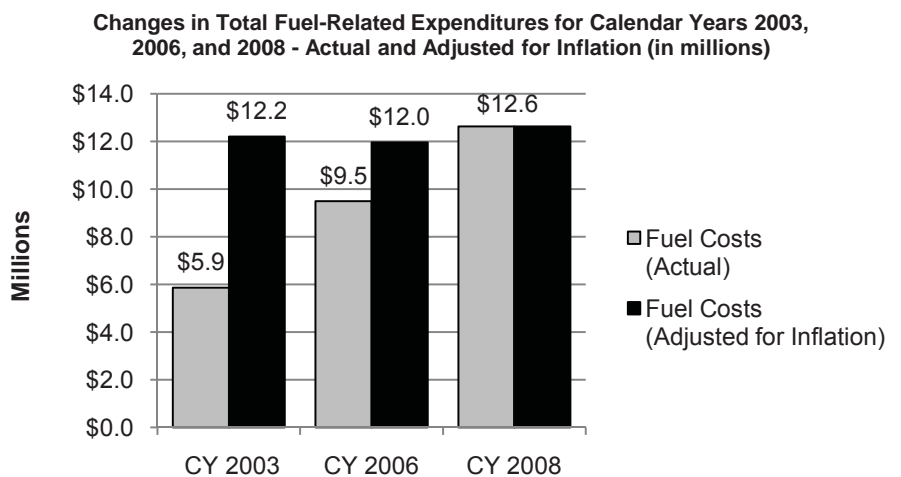
- Overall, the number of miles driven by State employees has increased by 2% since 2003, from 76 million to 78 million.

Private-vehicle mileage increased by 11%, agency-owned vehicle mileage decreased by about 4%, and rental mileage increased by more than 100%.

- As the figure shows below, adjusted for inflation, fuel expenditures have increased by about 4% over that same time period.

Gasohol (ethanol) expenditures increased by more than 220% since 2003, while gasoline expenditures decreased by 24% and motor oil expenditures dropped by 20%.

Fuel-Related Expenditures for Calendar Years 2003, 2006, and 2008



Source: LPA analysis of STARS data and LPA audit 07PA20

We Recommended

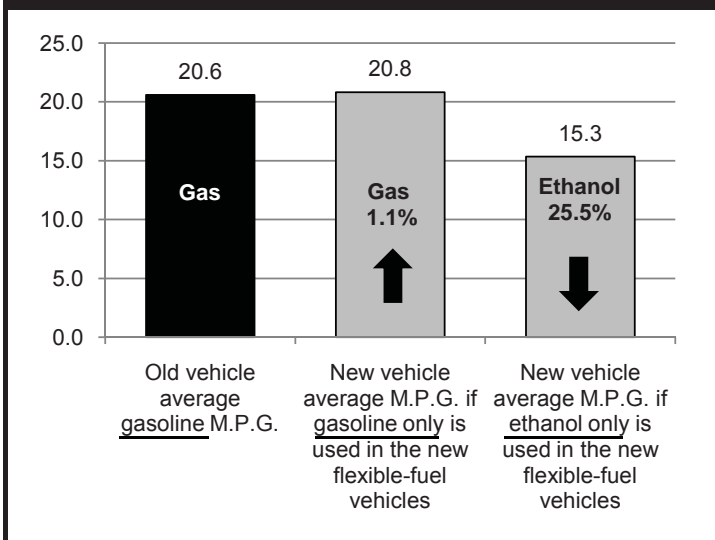
- To ensure the State fleet data are useful in assessing how the State's vehicles are being used, the Department of Administration should create a web-based application that would allow agency staff to update vehicle information, collect additional information such as M.P.G. ratings, and consolidate vehicle information into a relational database.
- The Department should work with agencies with long-term rental users to determine if purchasing a vehicle may be more cost efficient.

AUDIT QUESTION 2: *Has the State taken steps to replace worn-out vehicles with more fuel-efficient models?*

AUDIT ANSWER and KEY FINDINGS:

- The Department of Administration has worked to improve the average gasoline M.P.G. ratings of the vehicles it contracts for.
- However, as more flexible-fuel vehicles are purchased, that likely reduces the overall fuel efficiency of the State fleet because ethanol is less fuel efficient than gasoline.
- For the 140 non-flexible-fuel vehicles we reviewed that were replaced by flexible-fuel vehicles in 2008, we estimate that:
 - ▶ If the agencies only used gasoline for the new vehicles, average M.P.G. ratings *increased by 1.1%*
 - ▶ If agencies use only ethanol fuel for the new vehicles, average M.P.G. ratings *decreased by 25.5%*

Average M.P.G. Comparison of Commonly Purchased or Acquired Flexible-Fuel Vehicles And the Gasoline Only Vehicles They Replaced



Source: LPA analysis of Department of Administration data of 140 vehicles replaced and purchased and M.P.G. ratings retrieved from <http://www.fueleconomy.gov> and the Department of Administration.

- We know ethanol usage has increased in recent years, so the likely effect is a decrease in overall fuel efficiency.

Other Relevant Facts & Findings for Question 1 (continued)

The Department has poor fleet-management information. Increasing the quantity and quality of vehicle data could improve the State's ability to assess whether the fleet is being used efficiently.

Other Relevant Facts & Findings for Question 2

The Governor directed the Department of Administration to improve the average fuel efficiency of State vehicles purchased by 10% over the 2007 average.

Between 2007 and 2009, for passenger vehicles on the State contract the average change in gasoline M.P.G. ratings was an increase of 8.3%. During that same time, average ethanol M.P.G. ratings remained constant.

New vehicles may not be more fuel efficient than the older vehicles they replace. Factors that affect fuel efficiency are the type of fuel used (gasoline versus ethanol) and vehicle size.

The Department of Administration must balance a number of policy goals: a clean environment, less-costly vehicle purchases, vehicle suitability, and increased vehicle fuel efficiency. Not all of these competing goals can be achieved at the same time.

We Recommended

- To determine the impact of flexible-fuel vehicles, the Department of Administration should record whether newly purchased vehicles are flexible-fuel vehicles in its master mileage data, have agency staff report which currently owned vehicles are flexible-fuel vehicles, estimate the effect of ethanol M.P.G. ratings when calculating fuel efficiency, and develop an analysis that estimates the changes in fuel efficiency of vehicles actually purchased each year and the vehicles they replace.

AUDIT QUESTION 3: *Could the State save significant amounts of money by purchasing program cars or slightly used vehicles rather than new ones?*

AUDIT ANSWER and KEY FINDINGS:

- In fiscal year 2008, 6.4% of the State's vehicle purchases were used vehicles.
- Based on our review of some commonly purchased vehicles in fiscal year 2008, and on a life-cycle cost analysis we performed, we estimate the State could save up to \$112,000 a year (9%) by purchasing only used instead of new vehicles, but only if agencies buy the same make and model of vehicle, and only if they are able to buy those used vehicles at 20% below market value. These cost savings can't be projected to all vehicle purchases in fiscal year 2008.

If the State couldn't achieve this level of discount, bought different used vehicles, or bought used vehicles that needed significant maintenance, some or all of these savings could evaporate.

Other Relevant Facts & Findings for Question 3

The primary factor in achieving cost savings is the difference in purchase price for used versus new vehicles. The larger the difference, the more advantageous buying used vehicles becomes.

Maintenance and repair costs are higher on average for used vehicles than new vehicles.

The federal government doesn't purchase used fleet vehicles on a large scale.

**Estimated Yearly Cost Savings Achieved
By Purchasing 251 Used Vehicles At a 20% Discount Off Market Prices Instead of New (a)**

Vehicle Cost Categories	New 2009 Models		Used 2007 - 20% Discount		Annual Cost Savings (Rounded)		
	7-Year Costs	Yearly Average	5-Year Costs	Yearly Average	Total Savings	# of Vehicles We Reviewed	Savings Per Vehicle Per Year
Purchase Price (Less Resale Value)	\$3,694,714	\$527,816	\$1,909,741	\$381,948	\$145,868	251 Vehicles	\$581
Fuel	\$3,589,652	\$512,807	\$2,551,919	\$510,384	\$2,424		\$10
Maintenance (b)	\$974,333	\$139,190	\$789,039	\$157,808	(\$18,617)		(\$74)
Repairs (c)	\$393,006	\$56,144	\$370,864	\$74,173	(\$18,029)		(\$72)
Yearly Total	\$8,651,705	\$1,235,958	\$5,621,563	\$1,124,313	\$111,645		\$445

(a) This comparison is between new 2009 models at State discount rates, and used 2007 models at 20% off market prices.

(b) Maintenance includes things like oil changes or replacing tires, brakes, or windshield wipers that the vehicle owner normally would have to pay out-of-pocket.

(c) Repairs costs include any repairs not covered by extended warranty, such as a broken windshield or engine problems.

Source: LPA analysis of Edmunds' TruCost estimates for commonly purchased vehicle makes and models in fiscal year 2008.

We Recommended

- The Department of Administration should consider requiring car dealers who already provide bids on new vehicles to also provide a bid on a fixed-discount rate for used vehicles.

Agency Response: *In general, Department officials agreed with the report and said they would review our recommendations, but didn't indicate whether they would implement them or not.*

**DO YOU HAVE AN IDEA FOR
IMPROVED GOVERNMENT EFFICIENCY OR COST SAVINGS?**

If you have an idea to share with us, send it to ideas@lpa.ks.gov, or write to us at the address shown. We will pass along the best ones to the Legislative Post Audit Committee.

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