SPECIAL REPORT

Analysis of Plans to Reduce the Use of Petroleum Products

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November 30, 2009

The Honorable Ron Ramsey
Speaker of the Senate
The Honorable Kent Williams
Speaker of the House of Representatives
The Honorable Steve Southerland, Chair
Senate Environment, Conservation, and Tourism Committee
The Honorable Joe McCord, Chair
House Conservation and Environment Committee
The Honorable Bo Watson, Chair
Senate Committee on Government Operations
The Honorable Susan Lynn, Chair
House Committee on Government Operations
and
Members of the General Assembly
State Capitol
Nashville, Tennessee 37243

Ladies and Gentlemen:

Transmitted herewith is the analysis of the petroleum use reduction plans of the Department of General Services, Department of Transportation, the University of Tennessee System, and the Board of Regents institutions. This review was conducted pursuant to the requirements of Section 4-22-103, *Tennessee Code Annotated*.

Sincerely,

Arthur A. Hayes, Jr., CPA
Director

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INTRODUCTION

AUTHORITY

Section 4-22-101, *Tennessee Code Annotated*, requires all state agencies, universities, and community colleges that have state-owned motor vehicle fleets consisting of ten or more motor vehicles to develop and implement plans to increase the state's use of alternative fuels, synthetic lubricants, and fuel-efficient or low-emission vehicles. Agencies were to submit an analysis of plan implementation by September 1, 2008, and annually thereafter, to the Comptroller of the Treasury. Under Section 4-22-103, the Comptroller is to forward a report analyzing plan implementation to the Environment, Conservation, and Tourism Committee of the Senate; the Conservation and Environment Committee of the House of Representatives; and the Government Operations Committees of the Senate and House of Representatives by November 1, 2008, and annually thereafter.

OBJECTIVE

The objective of the review was to determine whether applicable agencies have complied with statutory requirements to develop and implement plans to reduce or displace the use of petroleum products by their motor vehicle fleet.

SCOPE AND METHODOLOGY

Reports were submitted to the Comptroller of the Treasury by the Department of General Services, Department of Transportation, Board of Regents colleges and universities, and the University of Tennessee System. These are the only state agencies that have state-owned vehicles. We reviewed the plans, examined them to determine if the measures outlined in the reports were consistent with the goal of the statute and if the agencies would meet the goal, and contacted the agencies to clarify any discrepancies.

STATUTORY REQUIREMENTS

State law requires that each entity's plan have a goal of reducing or displacing at least 20% of the current petroleum products consumed by each entity's motor vehicle fleet by January 1, 2010. All entities were to initiate plan implementation by January 1, 2008.

The law specified that reductions could be made in the following ways:

- through the use of biodiesel, ethanol, synthetic oils or lubricants, or other alternative fuels;
- through the use of hybrid electric vehicles or other fuel-efficient or low-emission vehicles; or
- through additional methods that reduce harmful emissions as may be approved by the Department of General Services.

CONCLUSION

Analysis of Plans to Reduce the Use of Petroleum Products

An analysis of the plans submitted by the agencies to reduce their petroleum usage by at least 20% revealed that only the Board of Regents has reported that its Central Office has met the 20% goal. The Department of Transportation reports that it cannot meet the goal because of difficulties in accessing biofuels, while the Department of General Services stated that due to the lack of infrastructure for obtaining alternative fuels, meeting the objective will be challenging. The University of Tennessee did not say conclusively whether the target would be met. Although the entities have made considerable efforts to comply with the statute, external factors are barriers to full implementation. The entities report they have been gradually replacing gasoline-powered vehicles in their fleets with fuel-efficient/low-emission or hybrid vehicles and using synthetic or synthetic-blend motor oils. They have also been implementing more efficient driving habits for employees.

Department of General Services

The Department of General Services submitted an analysis of its 2008 plan implementation on September 1, 2009. The strategies include the following:

- A Request for Proposal for a new fuel card contract using a universally accepted card such as Visa or MasterCard to expand the number of suppliers and increase the accessibility of E85 ethanol and B20 biodiesel fuel is still being pursued and should be in place within a few months. E85 and B20 fuels were added to bulk fuel contracts starting February 1, 2009. Motor Vehicle Management (MVM) continues to monitor the use of petroleum and biodiesel fuels. Each department/agency has been notified of its fuel consumption for the report period and target goals for 2010, and many departments/agencies have significantly decreased their fuel consumption.

- MVM continues to purchase fuel-efficient, flex-fuel, and hybrid vehicles where available, yet due to budget constraints, very few vehicles were replaced, affecting the target goal. During model year 2009, one hybrid SUV was purchased. MVM will continue to use synthetic-blend oils in light-duty gasoline vehicles. Oil changes are performed at 7,500 miles/six months for regular vehicles, and performed at 5,000 miles for police pursuit vehicles.

- All agencies are continuing to use synthetic-blend oils in light-duty gasoline vehicles.

<u>Department of Transportation</u>

The Department of Transportation (TDOT) submitted its plan implementation report on September 1, 2009. The department had begun to take steps toward its petroleum-reduction plan on January 1, 2008, after the passage of Public Chapter 489 in June 2007. However, according to the department's report, meeting the 20% reduction goal by January 2010 will be difficult, though it will make every effort to be on track within calendar year 2010. Fuel consumption will be affected by variations in weather and the additional responsibilities of the American Recovery and Reinvestment Act projects. The actions in the current plan include the following:

- Converted and installed infrastructure for B20 biodiesel storage in all four regional facilities (Jackson, Nashville, Knoxville and Chattanooga) and in district garages in Johnson City, Cookeville, and Arlington. In March 2009, gasoline storage was converted to E85 at the Region 4 Jackson facility, which now offers both E85 and B20 for state vehicles. Plans are underway for conversion of gasoline storage to E85 at two other regional headquarters. However, obtaining access to E85 ethanol and B20 biodiesel continues to be a challenge, especially in West Tennessee and Chattanooga. Grant funding is available from the department to encourage retail refueling stations to start selling E85 and B20.

- TDOT gasoline refueling sites in West Tennessee are now dispensing E10 (10% ethanol and 90% unleaded gasoline) and expect most or all TDOT district storage sites tanks to begin storing E10 by the end of 2009. The transition has taken longer than expected and contributed to TDOT's failure to meet the 20% petroleum-reduction goal.

- TDOT and the Department of General Services began a joint initiative to use synthetic-blend motor oils and lubricants for gasoline-powered vehicles. TDOT implemented a purchasing policy requiring that motor oils and lubricants in gasoline vehicles contain at least 10% synthetic content.

- Seventy percent of TDOT's light-duty fleet consists of flexible fuel vehicles (FFVs) which are capable of using an 85% ethanol blend, as well as 11 hybrid-electric vehicles in the light-duty fleet and eight light-duty replacement vehicles. TDOT also reduced the number of commuting vehicles in its fleet from 282 to 236—a 16% reduction and an annual savings of $243,732.

Tennessee Board of Regents System

The Board of Regents submitted its plan for its qualifying universities and colleges on September 28, 2009. The plan applies to the colleges within the Tennessee Board of Regents system (TBR) that have fleets of ten or more motor vehicles and the Central Office. The TBR Central Office indicates in its plan that fuel use was reduced. As for the individual colleges, all are currently making efforts to comply with the law, though several noted that due to budget constraints and the scarcity of the availability of biofuels in some locations, they will fall short of the 2010 deadline in a number of areas. Fifteen institutions and the Central Office have instituted the following changes:

- required the use of ethanol fuel in all fleet vehicles,
- replaced vehicles with flex-fuel certified vehicles,
- increased oil change increments from 3,000 to 5,000,
- replaced fleet vehicles with vehicles that get better gas mileage, and
- replaced petroleum-based oil for synthetic or synthetic-blend oils for oil changes.

The University of Tennessee System

The University of Tennessee submitted its plan on October 1, 2009. It started procuring flex-fuel vehicles in the early 1990s pursuant to the Clean Air Act and Energy Policy Act, acquiring over 200 E85 Ford Taurus and Dodge Stratus sedans. The Taurus and Stratus models were discontinued two years ago; however, the Transportation Services Department (TSD) has continued to purchase flex-fuel vehicles, including over 125 E85 sedans, minivans, and available SUVs. In addition, the TSD has

- Acquired four hybrid compact SUVs and eight electric vehicles. The 193 flex-fuel and hybrid vehicles make up 18.3% of the motor pool inventory.
- Due to budget constraints, the plan to purchase 90 additional E85 sedans, minivans, passenger vans, and light-duty trucks in 2009 was modified to a net increase of 17 E85 vehicles. There is a plan to add 94 E85 units in the 2010 year to increase the number of flex-fuel vehicles to 27.5% of its inventory. The actual rate of procurement will depend on the availability of E85 vehicles from the various manufacturers and on budget conditions.
- Hybrid vehicles were cost-prohibitive to the university due to the budget during the 2009 model year. However, the university plans to continue its effort to acquire

hybrid vehicles will continue should it be able to purchase the vehicles at a competitive price.

- The university has plans to install an E85 tank this fiscal year, in combination with the usage of E10 in its gasoline vehicles, which should enable the university to significantly reduce petroleum in 2010. The reduction of petroleum use has been minimal due to the lack of availability of E85 fuel, with the only stations located in Nashville and Clarksville, which are not located in areas where UT employees primarily travel.