

Department of Legislative Services
Maryland General Assembly
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FISCAL AND POLICY NOTE

House Bill 870 (Delegate Hubbard)
 Health and Government Operations

Procurement - Diesel-Powered Nonroad Vehicles - Fuel and Technology Requirements

This bill requires State agencies and their contractors to use ultra low sulfur diesel (ULSD) fuel in all diesel-powered nonroad vehicles (*e.g.*, backhoes, cranes, and bulldozers) used in public works projects beginning April 1, 2008. A separate requirement that State agencies and their contractors use the best available technology (BAT), as determined by the Secretary of the Environment, for reducing pollution emissions from nonroad vehicles used in public works projects is phased in beginning October 1, 2008. The bill allows the Secretary of the Environment to make certain exceptions to both requirements.

Fiscal Summary

State Effect: Transportation Trust Fund (TTF) expenditures increase by \$584,000 beginning in FY 2008 due to the \$0.08 cost differential between regular diesel fuel and ULSD. General and special fund expenditures on public works contracts could increase further, though the actual increase is difficult to quantify at this time. These costs will be mitigated after FY 2010 when new federal rules take effect. General fund expenditures by the Maryland Department of the Environment (MDE) increase by \$142,500 in FY 2008. Out-year expenditures decrease as staffing needs are reduced. General fund revenues from fines and penalties could increase but cannot be reliably estimated.

(in dollars)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	142,500	68,300	71,800	75,500	79,400
SF Expenditure	584,000	589,800	595,700	0	0
Net Effect	(\$726,500)	(\$658,100)	(\$667,500)	(\$75,500)	(\$79,400)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate effect

Local Effect: None.

Small Business Effect: Minimal. Any effects on small businesses bidding on State contracts would likely be passed on to the State in the form of higher bids on public works contracts.

Analysis

Bill Summary: Beginning April 1, 2008, all diesel-powered nonroad vehicles owned, leased, or operated by or on behalf of State agencies have to use ULSD fuel. All solicitations for public works projects issued on or after that date, and the resulting contracts, must require contractors to abide by the same requirement. Emergency and expedited procurements are exempted from this requirement.

ULSD fuel is defined as diesel fuel that has a sulfur content of no more than 15 parts per million (ppm).

In cases where sufficient ULSD fuel is not available, the Secretary of the Environment must authorize the use of diesel fuel for nonroad vehicles that has a sulfur content of no more than 30 ppm. The Department of Legislative Services (DLS) notes that diesel fuel with a sulfur content of 30ppm is not commercially available. These exceptions must be renewed every six months in writing, and may not extend beyond October 1, 2010. If sufficient diesel fuel with a sulfur content of no more than 30 ppm is not available, and the agency or contractor makes a good faith effort to use available quantities of ultra low or low sulfur fuel in their nonroad vehicles, they may be exempt from either requirement.

The bill requires that, beginning October 1, 2008, all diesel-powered nonroad vehicles owned, leased, or operated by or on behalf of State agencies must use the BAT for reducing the emission of pollutants. This requirement is phased in for all contractors working on public works projects for the State. Beginning on October 1, 2008, public works contracts valued at \$2 million or more are required to use the BAT for reducing the emission of pollutants. Beginning on April 1, 2009, all public works contracts are subject to this requirement.

The Secretary of the Environment is responsible for determining the BAT for reducing emissions for each type of diesel-powered nonroad vehicle, subject to guidelines included in the bill.

The bill includes several exceptions to the requirement that public works contractors utilize the BAT to reduce emissions from nonroad vehicles. The Secretary of the Environment may exempt a State agency or contractor from this requirement if the BAT for reducing emissions is not available, or if that technology is unsafe. Nonroad vehicles that were upgraded with the BAT within the last three years do not need to perform any additional upgrades. Also, nonroad vehicles used for less than 20 days on a given public works project are exempt.

The bill requires the Secretary of the Environment to report annually by January 1 to the General Assembly on agency compliance with this bill, beginning in 2009.

The bill also subjects contractors who violate the bill's requirements, or who make false claims with respect to their compliance, to civil fines specified in the legislation.

Current Law: State agencies or their contractors are not required to use either ULSD fuel or BAT to reduce pollutant emissions on their nonroad vehicles. However, in 2004, the U.S. Environmental Protection Agency (EPA) issued final regulations mandating a 500 ppm cap on the sulfur content in fuel used for nonroad vehicles by 2008, and a 15 ppm cap on the sulfur content for nonroad vehicles by 2010.

Background: High sulfur diesel fuel engines, such as those used in nonroad equipment, emit sulfur dioxide, which can aggravate cardiovascular disease and contribute to acid rain. Diesel engines using ULSD fuel emit much lower levels of sulfur dioxide. Until 2004, EPA had never regulated the sulfur content of diesel fuel used in nonroad vehicles. The diesel fuel used in these vehicles until 2007 had a typical sulfur content of about 3,000 ppm. The caps mandated by EPA will result in significant reductions in sulfur dioxide emissions from nonroad vehicles. EPA also estimates that engines using ULSD fuel will last longer and incur fewer maintenance costs, so it estimates the net price differential to end-users to be 4 or 6 cents per gallon in the northeast United States by 2012. However, some older nonroad diesel engines cannot run on ULSD fuel, so they have to either be replaced or retrofitted.

In its final rulemaking, EPA noted that the supply of ULSD fuel for nonroad vehicles at the time was extremely limited, confined only to a small "niche market." The demand and supply of ULSD fuel have both increased substantially because EPA also mandated that *onroad* vehicles use only ULSD as of October 2006 (prior to the change, diesel fuel for onroad vehicles had 500 ppm sulfur content). However, diesel fuel refiners and suppliers have struggled to meet the demand for ULSD for onroad vehicles because ULSD requires separate storage and distribution facilities to avoid contamination. They express concern that increased demand for nonroad ULSD could reduce the supply of onroad ULSD.

State Fiscal Effect: There are three components to the fiscal effects of this bill on the State:

- the higher cost of ULSD fuel compared with diesel fuel currently used by most nonroad vehicles;
- the cost of equipping nonroad vehicles with the BAT for reducing engine emissions; and
- the administrative costs to implement the bill's provisions.

Fuel Costs: This bill will increase the cost of all public works construction projects in the State. By the bill's effective date, all nonroad vehicles will be required to use low sulfur diesel fuel (500 ppm instead of 3,000 ppm) under the EPA's final regulations. Therefore, the increased cost will stem from any price difference between low sulfur diesel and ULSD. Assuming ULSD is available in sufficient supply to meet the bill's requirements, price data from the U.S. Department of Energy's Energy Information Administration shows that ULSD costs about \$0.08 more per gallon than low sulfur diesel. As noted earlier, however, if Maryland suppliers were unable to meet the increased demand for ULSD prompted by this bill, the price premium could increase significantly, which would also affect onroad diesel prices in the State.

The State owns or operates few nonroad vehicles. The Maryland Port Administration (MPA) is likely the largest State consumer of nonroad diesel fuel, using 300,000 gallons annually to operate its cranes. However, increased ULSD fuel costs for public works contracts would likely be passed on to the State by contractors. The estimated number of nonroad diesel vehicles used by all divisions of the Maryland Department of Transportation (MDOT) and its contractors exceeds 2,000. With these vehicles purchasing about 7 million gallons of fuel annually, the total cost that could be passed on to TTF could average about \$560,000 using an estimated price premium of 8 cents per gallon, plus an additional \$24,000 for the MPA cranes. Additional general funds costs could be incurred by construction projects overseen by the Department of General Services, which has not been able to provide an estimate of diesel fuel demands by contractors. Of course, if ULSD fuel is not available, the costs would be lower because contractors and State agencies could obtain waivers under the terms of the bill

Beginning in fiscal 2011, the bill will have no net fiscal impact because, under federal regulations, all vehicles will be required to use ULSD.

Retrofitting with Best Available Technology: The bill's requirement that the State and its contractors use BAT to reduce pollutant emissions from nonroad vehicles will result in additional costs on the State. For example, MPA estimates spending at least \$300,000 to

retrofit its cranes. For other nonroad vehicles used by contractors, BAT ranges from improved diesel particulate filters costing several hundred dollars per vehicle to more comprehensive engine retrofits costing between \$2,000 and \$10,000 per vehicle. Assuming that contractors pass on the costs of adopting BAT for all of their nonroad vehicles to the State, the total cost could fall anywhere between \$400,000 and \$20 million, depending on which retrofits are required for each nonroad vehicle.

Administrative Costs: Finally, the bill adds extensive administrative responsibilities to MDE that require additional staff in the first year. Under the terms of the bill, MDE is responsible for developing and updating a list of BAT available for all types of nonroad engines; granting waivers to contractors when ULSD fuel is not available or when the use of BAT is not appropriate; and submitting annual reports on the use of ULSD and BAT by State agencies and their contractors. The initial development of a BAT list could be quite cumbersome. Other jurisdictions, most notably the California Air Resources Board, have begun to assemble BAT lists, but those lists are incomplete and tend to focus on improvements available for onroad vehicles rather than nonroad vehicles. Therefore, MDE would have to conduct a great deal of technical research before developing the required lists. The annual report requires extensive collaboration with other State agencies responsible for public works procurement.

General fund expenditures could increase by an estimated \$142,524 in fiscal 2008, which accounts for the bill's October 1, 2007 effective date. This estimate reflects the cost of hiring one regular supervisor and two contractual public health engineers to develop the BAT lists, administer the waiver process, and carry out the bill's reporting functions. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses.

Salaries and Fringe Benefits	\$124,218
Operating Expenses	9,126
One-time Costs	<u>9,180</u>
Total FY 2008 Administrative Expenditures	\$142,524

Future year expenditures reflect: (1) full salaries with 4.5% annual increases and 3% employee turnover for the one regular employee; and (2) 1% annual increases in ongoing operating expenses.

DLS notes that after the initial development of the BAT lists, responsibility for updating them every six months should be less cumbersome. Similarly, as ULSD and BAT become more available and as EPA requirements take full effect, the need to process waivers will ease substantially. Both of these factors suggest that MDE's staffing needs

are not permanent and thus could be performed, in part, by contractual employees. Out year costs reflect the elimination of the two contractual positions.

Additional Comments: MDOT advises that it is unclear whether MARC locomotives would be subject to the requirements of this bill. For the purposes of this analysis, DLS did not include them in the estimate.

Additional Information

Prior Introduction: HB 38 of 2006 was scheduled to be heard by the House Health and Government Operations Committee, but both hearings were cancelled.

Cross File: None.

Information Source(s): Department of General Services, Board of Public Works, Maryland Department of the Environment, University System of Maryland, Maryland Department of Transportation, Department of Budget and Management, U.S. Department of Energy, *Federal Register*, Vol. 69, No. 124, California Air Resources Board, Maryland Petroleum Council, Department of Legislative Services

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