

Department of Legislative Services  
Maryland General Assembly  
2006 Session

FISCAL AND POLICY NOTE

House Bill 1241 (Delegate Cardin)  
Environmental Matters

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Environment - Sewage Sludge - Use as Alternative Energy Source

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This bill provides that each county's 10-year solid waste plan must include an alternative energy plan that requires at least 15% of the sewage sludge treated within its boundaries to be converted to an alternative energy source. By June 1 of each year, a county must submit a report to the Maryland Department of the Environment (MDE) that includes statistics on the percentage of sewage sludge converted to an alternative fuel and details of the purposes for which the converted sludge was used. At the end of each fiscal year, MDE must prepare and submit a report to the General Assembly that provides a synopsis of the status of sewage sludge conversion statewide.

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Fiscal Summary

**State Effect:** The bill's changes could be handled with existing budgeted resources. It is possible that the implementation of the alternative energy plans could have an impact on MDE's air and sewage sludge utilization permit fee revenues, but any such impact cannot be estimated at this time and would likely not occur for some time.

**Local Effect:** Local expenditures could increase significantly to develop and implement the required alternative energy plans. **This bill imposes a mandate on a unit of local government.**

**Small Business Effect:** Meaningful.

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Analysis

**Current Law:** Each county is required to have a plan or a plan with adjoining counties that is approved by MDE and covers at least a 10-year period. The county plan is a

comprehensive plan for adequately providing throughout the county (including all towns, municipal corporations, and sanitary districts in the county) the following facilities and services: water supply systems, sewerage systems, solid waste disposal systems, solid waste acceptance facilities, and systematic collection and disposal of solid waste.

MDE's Waste Management Administration regulates the transportation and utilization of sewage sludge. MDE's Air and Radiation Management Administration regulates discharges to the atmosphere from kilns and other furnaces that would likely be candidates for using sewage sludge as a supplemental fuel.

Chapters 487 and 488 of 2004 established a Renewable Energy Portfolio Standard (RPS) in Maryland. The law requires each electricity supplier to include in its portfolio of electricity for retail sales a specified percentage of energy derived from renewable sources. Sewage sludge is not explicitly included as an eligible energy source under the RPS.

**Background:** According to MDE, each year more than 700,000 wet tons of sewage sludge are generated in Maryland. An estimated 50% of it is applied to agricultural land; 18% is composted or palletized and made into a commercial soil supplement; 21% is used for land reclamation such as restoring surface mines; and 11% is disposed of in landfills or incinerated.

According to MDE, sewage sludge is already used as a supplemental fuel in cement kilns in other states, and one Maryland company in Carroll County has already conducted a test burn at its facility. MDE advises that, during the test burn, the use of dried biosolids in the cement process showed significant increases in nitrogen oxide emissions; however, there were decreases in other air pollutants. MDE has granted the company permission to conduct a second trial to determine if dried biosolids can be used without impacting air emissions.

MDE advises that the use of sewage sludge as a supplemental fuel in some furnaces can be beneficial, and that the industry is investigating its possible use. MDE advises that, while sewage sludge may be useful as a fuel supplement, it probably does not provide sufficient thermal energy to totally supplant more traditional fuels in most applications.

According to the U.S. Energy Information Administration, in 2002, net generation from biomass sources (including sludge waste) totaled 2,672,017,000 kilowatt-hours nationwide. Of that amount, only 29,000 kilowatt-hours were generated in Maryland.

**Local Expenditures:** Local expenditures could increase to develop and implement the alternative energy plan required under the bill. According to MDE, the development of the plan would need to include items that might be difficult for a local government to

determine due to a lack of existing data. While some local governments may be able to develop a plan using existing resources, others might need to hire a consultant.

Once developed, the implementation of the plan could impose significant costs on local governments. As sewage sludge generators, local governments would likely have to bear the cost of converting the sludge to a form where it would be useable as fuel. According to MDE, heat drying, palletizing, and similar processes are technically complex and fairly expensive. In addition, MDE advises that there are only three cement kilns in Maryland (in Carroll, Frederick, and Washington counties). Accordingly, finding suitable facilities to use sewage sludge as an alternative energy source may be problematic. MDE advises that it would likely be difficult to meet the 15% requirement established by the bill.

On the other hand, any costs currently incurred by local governments for the disposal of sewage sludge that, under the bill, would be converted to fuel, would presumably be avoided.

**Small Business Effect:** Some wastewater treatment plants are privately-owned. Owners could incur additional costs to convert sludge to a form where it would be useable as fuel, as discussed above. On the other hand, those entities would avoid costs currently incurred for disposing of any sewage sludge converted to fuel.

The bill could have a positive impact on owners of cement kilns or other businesses that may be involved with using sewage sludge as a supplemental fuel. Small businesses that apply sewage sludge to land could be negatively impacted to the extent the bill results in a decrease in sludge available for land application, although any such impact is speculative. According to MDE, at least three commercial sewage sludge application companies are currently doing business in the State, and, as of January 31, 2006, there were 760 active sewage sludge utilization permits.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** None.

**Information Source(s):** Maryland Department of the Environment, Maryland Department of Agriculture, Maryland Energy Administration, Cecil County, Harford County, St. Mary's County, Maryland Municipal League, Washington Suburban Sanitary Commission, U.S. Energy Information Administration, Department of Legislative Services

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