

Department of Legislative Services  
Maryland General Assembly  
2003 Session

FISCAL AND POLICY NOTE

House Bill 172 (Delegates Morhaim and Cardin)  
Environmental Matters and Appropriations

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State Government - Buildings - Green Buildings

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This bill requires the design, construction, operations, maintenance, and deconstruction of all new State-owned and leased buildings to meet the requirements needed to achieve a Silver rating under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED). The rating requirement also applies to all new buildings constructed on land leased from the State. The bill requires units of State government to make reasonable efforts to maximize energy efficiency and resource conservation in existing State-owned, leased, or operated buildings.

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Fiscal Summary

**State Effect:** Significant increase in capital and Transportation Trust Fund (TTF) expenditures to incorporate the design and construction elements required by the bill for State-owned facilities. Special and general fund expenditures for nontransportation capital projects and for additional personnel would also increase accordingly. General fund and TTF expenditures could decline significantly in the out-years through reduced utility costs. Revenues would not be affected.

**Local Effect:** The bill does not apply to local government facilities or those that receive State funds. However, expenditures may increase for local jurisdictions that match State funds on joint projects.

**Small Business Effect:** Potentially meaningful. Small businesses that specialize in environmental design and construction would benefit to the extent that their services are used by the State or State contractors. However, if fewer State buildings are constructed, some contractors would be adversely affected.

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## Analysis

**Current Law:** In 2001, the Governor signed an executive order that established a goal for 6% of electricity used by State-owned facilities to be derived from “green energy,” and not more than 50% of the total green energy procurement from the combustion of municipal solid waste. Green energy is defined as energy generated from wind, solar photovoltaic, solar thermal, biomass, landfill gas, and the combustion of municipal solid waste. Other goals for the State included a 10% reduction in energy consumption per gross square foot of State facilities by 2005, a 15% reduction by 2010 (relative to the 2001 baseline), and expansion of the use of renewable energy within its facilities.

It also created the Maryland Green Buildings Council, which was charged with creating the High Efficiency Green Buildings Program.

**Background:** The High Efficiency Green Buildings Program requires certain State-owned buildings over 7,500 gross square feet that are renovated or newly built to achieve the Silver rating of the LEED’s rating system. The requirement also applies to leased buildings over 5,000 net square feet. Maryland is the first State in the country to require this standard. To receive a Silver rating, a building must be awarded 33 to 38 points based on energy efficient design in: (1) sustainable sites; (2) water efficiency; (3) energy and atmosphere; (3) materials and resources; and (5) indoor environmental quality. The building must receive a minimal amount of points in each area. The requirements adopted by the council only affect the executive branch; the legislative and judicial branches do not have to comply.

Two buildings – the St. Mary’s College Academic Building and the Hammerman Area Beach Services at Gunpowder Falls State Park – are planned as pilot projects. Also, the Maryland Department of the Environment and the Maryland Department of Transportation (MDOT) have moved into leased offices in green buildings in Baltimore. The MDOT building includes features such as an energy star roof with two plants per square foot, waterless urinals, light reflective pavers, and bamboo and cork flooring, and is expected to reduce energy usage by 48%.

According to the Green Buildings Council 2002 report, the energy costs for a state office building constructed for the Pennsylvania Department of Environmental Protection average 79 cents per square foot, compared to \$1.71 per square foot for other buildings.

The report also indicates that the Department of General Services (DGS) has had nine energy performance contracts that have saved \$64 million in total operational costs.

**State Expenditures:** The State capital budget for fiscal 2004 anticipates that approximately \$353.5 million of general obligation bonds will be issued for construction

or renovation of State-owned facilities, excluding transportation projects. General and special funds and revenue bonds contribute an additional \$40.5 million. The Department of Legislative Services (DLS) advises that the projects in the program are in various stages of planning, design, and construction. The bill applies to all new buildings but does not specify at what stage the Silver rating requirement would apply.

It further advises that the capital program is subject to the debt limit recommended by the Capital Debt Affordability Committee, which is \$740 million in fiscal 2004 and is expected to decrease to \$555 million in fiscal 2005. Estimates for new construction (including transportation facilities), leased space, and operating costs are discussed below. The bill's requirement for State agencies to make reasonable attempts to conserve energy is not expected to have a fiscal impact due to the pre-existing efficiency guidelines and requirements.

### *New Construction*

Estimates for the additional cost incurred for "green" design and construction vary between 3% and 8% of the original costs. DGS advises that \$9.8 million is recommended for several "green" projects in the fiscal 2004 capital budget, including two correctional facilities and three academic buildings. The total cost of all six projects is \$112.7 million, of which 3%, or \$3.3 million, is attributed to environmental design and construction costs – design costs account for almost half or \$1.45 million.

The total capital improvement program for fiscal 2004-2008 is \$1.3 billion – this excludes certain projects that would not be affected by the bill such as those in the final stage of construction but includes renovations for which the bill may not apply. If meeting the Silver LEED's rating added 5% to the total cost of all State buildings (excluding transportation), State expenditures could increase by approximately \$65 million from fiscal 2004 to 2008, assuming all projects remain in the capital program. The debt service on the bonds issued for these projects would also increase.

However, the Department of Budget and Management advises that it would reduce the number of planned projects rather than increase debt service. Other State agencies may do the same. DLS notes that the percentage of green costs for the buildings in the 2004 budget vary and that factors such as zoning requirements and availability of materials and contractors may also affect the cost.

### *Transportation*

The bill's requirements would mostly affect transit facilities constructed by MDOT. The Maryland Transit Administration (MTA) advises that three major projects – new MARC maintenance facilities, a new MARC station in Hyattsville, and a new maintenance facility at the Old Court Metro station – would cost an extra \$2.4 million to build. MTA assumes that the environmental elements needed for the Hyattsville station would add 10%; however, the actual costs may be lower.

The bill would also increase the cost of constructing the Motor Vehicle Administration's (MVA) facilities; however, only one new branch office (in Montgomery County) is in the capital program. Approximately \$500,000 is slated for miscellaneous facility costs annually in the program. The MVA does not believe that reductions in utility costs will necessarily offset building and design expenses and it expects construction costs for new buildings to run between 10% and 25%. The Maryland Aviation Administration and the State Highway Administration both advise that the bill has no immediate impact because neither agency has new buildings planned in the capital program. The Maryland Transportation Authority estimates the bill would result in a \$1.8 million increase in nonbudgeted expenditures.

### *Leased Space*

The additional costs incurred for environmental design and construction are slightly higher (10%) for leased space, according to the Maryland Green Buildings Council. According to DGS, the State leases 4,595,171 square feet of space at an average rate of \$14.25 per square foot, or \$63.3 million annually. Assuming that green building requirements add 10% to the cost of leased space, State expenditures would increase by \$6.3 million annually. DGS advises that its Office of Real Estate will need two acquisition specialists (estimated to cost \$90,000 annually) to carry out this portion of the bill.

### *Operating Costs*

State operating costs (general funds) would also lower significantly over time through reduced utility payments. DGS advises that new green buildings will lower energy costs by 40 cents to \$1 per square foot, or 20% to 50% for one building for the life of that building. However, the amount that will be saved cannot be determined at this time nor is it known how long it will take for the savings to offset the additional design and construction expenditures for green buildings. DGS observes that these savings will not apply to leased space.

**Local Effect:** To the extent that local governments match the costs of a State-owned facility, local expenditures may increase. MDOT advises that the Owings Mill Metro Station is a joint project for which Baltimore County contributes \$13.1 million.

**Additional Comments:** This bill will affect the private sector in both positive and adverse ways, particularly businesses that lease space to State agencies, as well as construction contractors and architects. DGS comments that many landlords are either unaware of the green building concept, despite promotion efforts, or they are unwilling to embrace it.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** SB 539 (Senator Brochin, *et al.*) – Budget and Taxation.

**Information Source(s):** Department of General Services, Board of Public Works, Maryland Department of the Environment, Morgan State University, Maryland Energy Administration, University System of Maryland, Department of Transportation, Department of Budget and Management, Department of Legislative Services

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