

COMMITTEE ON LEGISLATIVE RESEARCH
OVERSIGHT DIVISION

FISCAL NOTE

L.R. No.: 4403-01
Bill No.: SB 488
Subject: Administration, Office of; Construction and Building Codes; Energy;
Environmental Protection; Public Buildings
Type: Corrected
Date: January 13, 2012
* To correct fiscal note date.

Bill Summary: This proposal requires newly constructed state buildings to meet certain green building standards.

FISCAL SUMMARY

ESTIMATED NET EFFECT ON GENERAL REVENUE FUND			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
General Revenue	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)
Total Estimated Net Effect on General Revenue Fund	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)

ESTIMATED NET EFFECT ON OTHER STATE FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Conservation Commission Fund	\$0 or (Unknown)	\$0 or (Unknown)	\$0 or (Unknown)
Road Fund	\$0 or (Unknown)	\$0 or (Unknown)	\$0 or (Unknown)
Total Estimated Net Effect on <u>Other</u> State Funds	\$0 or (Unknown)	\$0 or (Unknown)	\$0 or (Unknown)

Numbers within parentheses: () indicate costs or losses. This fiscal note contains 11 pages.

ESTIMATED NET EFFECT ON FEDERAL FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Total Estimated Net Effect on <u>All</u> Federal Funds	\$0	\$0	\$0

ESTIMATED NET EFFECT ON FULL TIME EQUIVALENT (FTE)			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Total Estimated Net Effect on FTE	0	0	0

☐ Estimated Total Net Effect on All funds expected to exceed \$100,000 savings or (cost).

☐ Estimated Net Effect on General Revenue Fund expected to exceed \$100,000 (cost).

ESTIMATED NET EFFECT ON LOCAL FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Local Government	\$0	\$0	\$0

FISCAL ANALYSIS

ASSUMPTION

Officials at the **Office of Administration's Facilities Management, Design and Construction (FMDC)** assume this bill would have an unknown fiscal effect on FMDC with major financial impacts in design, construction, operations, and the costs associated with certifying the initial project. There would be future ongoing costs associated with maintaining the certification, and the costs associated with outsourcing or staffing needed to meet the commissioning requirements to include the measurement and verification requirements.

To get an estimated cost factor FMDC reviewed the construction of the Lewis and Clark State Office Building, which was USGBC (United States Green Building Council) certified at the platinum level. The Lewis and Clark Building is a 120,000 square foot facility, constructed at a cost of \$18,573,497 or \$155 per sq. ft. Normal costs for a building of this size at that time would have been approximately \$125 per sq. ft. or roughly a 24% increase. Other costs of \$2,129,024 included design contract costs, \$252,203 commissioning agent costs, and a special \$60,000 fee for LEED certification.

Given that the legislation is seeking "silver" level and that "platinum" level was achieved, FMDC estimates a 15% increased in initial construction cost (platinum seems to be at 29%). It appears that the legislation requires all significant projects (new construction and renovation) to be addressed with these requirements.

A payback or life-cycle analysis should determine if the investment in the higher quality construction is justified. The impacts are determined by the scope of work of construction and renovations requirements.

Additional FTEs will be needed to review the various aspects of the silver-level certification, monitoring costs of all buildings and to comply with the requirements of a five, ten and fifteen year third party commissioning. Some of these FTEs may need to be LEED accredited when performing designs affected by this bill this will need to be addressed in the qualification of the additional FTEs. The position(s) title should include Professional Engineer (civil, electrical, mechanical, structural engineering or engineering management).

FTE needs have not been determined, depending on the scope of work of the initial study to the actual project workload to the certification to the monitoring and evaluation up to fifteen years after the project.

ASSUMPTION (Continued)

Officials at the FMDC estimate an unknown impact greater than \$1,000,000 from this proposed legislation. FMDC assumes the greatest financial impact would occur in the initial construction costs to comply with the rules for “Green” no matter which organization FMDC would be required to be in compliance with.

Oversight is presenting costs as \$0 or Unknown exceeding \$1 million for FMDC.

Officials at the **Department of Mental Health** assume this proposal requires newly constructed state buildings to meet certain green standards. The fiscal impact is unknown. The Department of Mental Health defers its response to the Office of Administration/Division of Facilities Management, Design & Construction, who is responsible for managing state owned and leased property utilized by the Department of Mental Health.

Officials at the **Department of Natural Resources (DNR)** assumes this proposal would establish requirements for environmentally sustainable construction for state-funded buildings. In its main provisions, the bill would:

- (1) require all major state-funded facility projects to be designed, constructed, and at least certified as receiving two globes using the Green Globes Rating System;
- (2) define “major facility project” as a state-funded new construction project with more than 5,000 square footage, a renovation project involving more than 50% of the square footage or occupancy displacement, or a commercial interior fit-out project with more than 7,000 square feet of leasable area;
- (3) exempt a correctional facility constructed for the departments of Corrections and Mental Health and certain buildings that do not have air conditioning;
- (4) allow the Office of Administration to petition the General Assembly to require all major facility projects to be certified to a high-performance building rating system standard in addition to or in lieu of the systems in these provisions;
- (5) require inspections by a third-party commissioning agent for all facilities which were certified at the two globes standard or higher and the agent to report its findings to the Office of Administration and the department occupying the facility;
- (6) require the Office of Administration to develop and implement a process to monitor and evaluate the energy and environmental benefits of each project; and

ASSUMPTION (Continued)

(7) require the Office of Administration to submit a report regarding major facility projects to the House of Representatives and the Senate committees on Energy and Environment."

DNR states, the department would not anticipate a direct fiscal impact from this proposal.

Officials at the **Lincoln University (LU)** assume this legislation will have a significant impact on major construction projects at the University. It will require the University to meet a minimum of a silver LEED rating for new construction or substantial renovation projects, or two Globes using the Green Globes Rating System. Mandating "Green" requirements will increase the cost of construction (until it becomes the normal). Costs associated with paperwork to certify buildings under LEED design fees and construction will have an unknown increase with the intent of decreasing costs through the use efficient products and construction work being done in an environmentally friendly way. The legislation also mentions developing and implementing a process to monitor and evaluate energy and environmental benefits associated with each major project one year after occupancy and continue for fifteen years thereafter. This evaluation will create additional ongoing costs throughout the evaluation period.

LU states it is difficult to determine the annual cost this legislation will have with an unknown fiscal impact on the university. LEED projects can increase construction costs 10-20% or higher, until the practice becomes the normal for all construction projects.

Officials at **Missouri Western State University** state it is difficult to determine the actual cost to the university. There would be additional costs associated with meeting the requirements both in building costs and administrative time. In most construction and renovation, the cost of the project has a specific amount that is available, the scope of the project is determined by that amount. In all projects in recent years we have tried to maximize the use of those finite dollars to accomplish the project needs. Although we look for as much green savings as possible, many times the cost has outweighed the dollars available for the project. Our recent projects have met the LEED silver level.

Officials at the **Missouri State University (MSU)** state the cost for this proposed legislation is strictly dependent upon the amount of construction initiated during the time frame. Costs will increase as a result of this proposed action. Savings would be achieved once a project is designed to conserve energy usage, the savings continues throughout the lifetime of the building assuming the function does not change. The actual amount of savings can only be calculated for a specific building type and use and are only calculations reflecting what may have been saved. Without knowledge of a building type, the savings remains a percentage of expected energy use compared to an early baseline measurement.

KB:LR:OD

ASSUMPTION (Continued)

MSU states, this proposal requires certification by one agency and would not be certified by any of a number of certification agencies. It should be noted that certification cannot be assured during the design or construction of a project. Only after the facility is complete will the certifying agency either accept or deny the project and provide the certification.

MSU states, this proposal impacts any new construction over 5,000 SF, or renovation of a facility that involves 50% or more of the existing square footage. Any new construction undertaken by the university is typically in excess of 5,000 SF. For a renovation project to be impacted it would have to be a significant renovation of a facility and often we do not renovate 50% of a building at one time due to existing fiscal constraints.

MSU states, this proposed legislation requires a third party commissioner to be hired during the design process. This could add 1% to the construction costs. This legislation also requires a third party to revisit the facility 5, 10, and 15 years after the completion of the project. This review could add an unknown cost to the operation of the facility each time the review is required adding a significant cost to the overall life-cycle cost to the building.

Officials at the **University of Central Missouri (UCM)** assume a 5% utility savings per fiscal year could be realized on any renovation project meeting certain energy efficiency performance criteria. A 10% utility savings would likely be possible for a new building meeting "Globes" energy efficiency performance criteria.

UCM states, the costs incurred to obtain points through GBI's green globes rating system for new construction and renovation projects are broken down into soft and hard costs. The soft costs include the additional design of "Green Globe Elements," commissioning, documentation and energy modeling. The total soft costs could increase and range from 2% to 5% of total construction cost. Hard costs include the "greening elements" incorporated into the construction that improve the building & system efficiencies and/or reduce environmental impacts. The hard costs added to the overall construction costs required to obtain "Green Globe Elements" could range from 5% to 15%. The total increase to the overall project cost to obtain "Green Globe Elements", including both soft and hard costs, could range from 7.0% to 20%. Additionally, the requirement to add third party commissioning in the fifth, tenth, and fifteenth year following certification could cost 3% of total construction cost for each commissioning year, or an estimated total cost of \$90,000.

ASSUMPTION (Continued)

UCM provided the following cost examples related to this proposal,

Example #1:

On a project with a \$1,000,000 construction budget, adding "Green Globe Elements" can potentially increase the cost as follows:

Soft Costs: \$20,000 to \$50,000 (2% to 5%) Includes additional design fees for Globe Elements, commissioning, documentation, and energy modeling.

Hard Costs: \$50,000 to \$200,000 (5% to 20%) Includes additional construction hard costs to include all green globe elements.

Total Construction Costs Increase: \$70,000 to \$250,000 (7% to 25%) Includes both soft and hard costs identified above.

Subsequent Costs: \$90,000 for 3 required inspections/commissioning (each \$30,000 -3% of total construction cost)

Example #2:

Projected cost increases for green certification on a university project:

Analysis of proposed bid modifications to increase the number of green elements to achieve LEED certification (similar to Green Globe elements) on a recent \$1.5 million project showed an increase in design costs of \$30,732 (2% of project cost), and an increase in construction costs of \$265,150 (17% of project cost), totaling an increase in overall project cost of \$295,882 (19% of project cost.)

Officials at the **University of Missouri** assume the University has a sustainable design policy that promotes compliance with LEEDS features based on lifecycle analysis but without the additional cost to pursue LEEDS certification. The cost for LEEDS Silver certification is reported to add from 2-5% to the total project cost. Mandating LEEDS Silver certification will cost the University projects at least \$2,000,000 annually, resulting in losing critical program space and features.

ASSUMPTION (Continued)

Officials from the **Office of the Secretary of State (SOS)** state many bills considered by the General Assembly include provisions allowing or requiring agencies to submit rules and regulations to implement the act. The SOS is provided with core funding to handle a certain amount of normal activity resulting from each year's legislative session. The fiscal impact for this fiscal note to the SOS for Administrative Rules is less than \$2,500. The SOS recognizes that this is a small amount and does not expect that additional funding would be required to meet these costs. However, the SOS also recognizes that many such bills may be passed by the General Assembly in a given year and that collectively the costs may be in excess of what the office can sustain with the core budget. Therefore, the SOS reserves the right to request funding for the cost of supporting administrative rules requirements should the need arise based on a review of the finally approved bills signed by the governor.

Oversight assumes the SOS could absorb the costs of printing and distributing regulations related to this proposal. If multiple bills pass which require the printing and distribution of regulations at substantial costs, the SOS could request funding through the appropriation process.

Officials at the **Department of Conservation, Linn State Technical College, Missouri Southern State University** assume an unknown fiscal impact on the department.

Officials at the **Department of Transportation, Department of Corrections, Joint Committee on Administrative Rules, Northwest Missouri State University** assumes there is no fiscal impact from this proposed legislation.

For fiscal note purposes only, **Oversight** is including additional construction costs resulting from LEED Silver certification requirements for colleges and universities in the General Revenue Fund.

Oversight is ranging the costs from \$0 or Unknown exceeding \$2 million for general revenue, depending on funding approval by the Legislature and \$0 or Unknown for the Conservation Commission and Road Funds depending on funding approval by the Legislature.

<u>FISCAL IMPACT - State Government</u>	FY 2013 (10 Mo.)	FY 2014	FY 2015
GENERAL REVENUE			
<u>Costs - COA-FMDC</u>			
Increase in personnel and construction costs	\$0 or (Unknown exceeding \$1,000,000)	\$0 or (Unknown exceeding \$1,000,000)	\$0 or (Unknown exceeding \$1,000,000)
<u>Costs - College and Universities</u>			
Increase in construction and certification costs	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)	\$0 or (Unknown exceeding \$2,000,000)
ESTIMATED NET EFFECT ON GENERAL REVENUE	<u>\$0 or (Unknown exceeding \$2,000,000)</u>	<u>\$0 or (Unknown exceeding \$2,000,000)</u>	<u>\$0 or (Unknown exceeding \$2,000,000)</u>
CONSERVATION COMMISSION FUND			
<u>Cost - Increase in construction costs</u>	\$0 or (Unknown)	\$0 or (Unknown)	\$0 or (Unknown)
ESTIMATED NET EFFECT ON CONSERVATION COMMISSION FUND	<u>\$0 or (Unknown)</u>	<u>\$0 or (Unknown)</u>	<u>\$0 or (Unknown)</u>
ROAD FUND			
<u>Cost - Increase in construction costs</u>	\$0 or (Unknown)	\$0 or (Unknown)	\$0 or (Unknown)
ESTIMATED NET EFFECT ON ROAD FUND	<u>\$0 or (Unknown)</u>	<u>\$0 or (Unknown)</u>	<u>\$0 or (Unknown)</u>

FISCAL IMPACT - Local Government

FY 2013
(10 Mo.)

FY 2014

FY 2015

\$0

\$0

\$0

FISCAL IMPACT - Small Business

No direct fiscal impact to small businesses would be expected as a result of this proposal.

FISCAL DESCRIPTION

State-funded buildings over 5,000 square feet constructed after August 28, 2012 must be certified, at minimum, as meeting the Two Globes level under the Green Globes building rating system. The act prescribes certain points that must be earned in achieving the Two Globes certification. The Office of Administration may waive the points requirements for economic feasibility reasons.

State-funded building renovation and commercial interior fit-out projects must be analyzed under one of several options, including a life cycle cost analysis comparing the costs and benefits of renovating to the Two Globes standard, normal industry standards, or a building standard in between.

The Office of Administration may petition the General Assembly to require all state-funded building construction and renovation projects to meet a different or additional high-performance building standard, provided that such building standard is at least as stringent as the Green Globes standard.

The act requires periodic inspections of buildings built to the Two Globes standard. The inspector must report its findings to the Office of Administration and the state agency that occupies the building. For 15 years, the Office of Administration must monitor and evaluate the energy and environmental benefits associated with each building subject to the act's requirements.

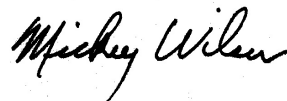
The Office of Administration must submit a report to the energy committees in the House of Representatives and the Senate regarding activities and information that result from the act's provisions.

FISCAL DESCRIPTION (Continued)

This legislation is not federally mandated, would not duplicate any other program and would not require additional capital improvements or rental space.

SOURCES OF INFORMATION

Office of Administration -
 Division of Facilities Management Design and Construction
Department of Transportation
Department of Mental Health
Department of Natural Resources
Department of Corrections
Department of Conservation
Office of Secretary of State
Joint Committee on Administrative Rules
University of Missouri
University of Central Missouri
Missouri State University
Linn State Technical College
Missouri Southern State University
Northwest Missouri State University
Missouri Western State University
Lincoln University



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