



OFFICE OF
INSPECTOR GENERAL
U.S. DEPARTMENT OF THE INTERIOR

RECOVERY

RECOVERY OVERSIGHT ADVISORY


LEED Certified New Construction Projects



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To: Chris Henderson
Senior Advisor to the Secretary for Economic Recovery and Stimulus

From: Robert A. Knox 
Assistant Inspector General for Recovery Oversight

Subject: Recovery Oversight Advisory – LEED Certified New Construction Projects
(ROO-ROA-MOA-1018-2010)

To safeguard taxpayer dollars, Congress provided us with funding to oversee and ensure accountability of the \$3 billion appropriated to the Department of the Interior (the Department) in the American Recovery and Reinvestment Act of 2009 (Recovery Act). We are focused on preventing fraud, waste, and mismanagement; reducing misuse of dollars through early detection; and ensuring transparency in our oversight efforts. In our effort to collaborate with the Department, this memorandum highlights our concerns regarding successful implementation of energy reduction requirements within the bureaus for new Recovery Act construction projects pursuing Leadership in Energy and Environmental Design (LEED®) certification. We are concerned that the bureaus' reliance on LEED® certification, in the absence of a Departmental mandate and without clear cost justification of the selected certification level, may inflate costs for new large-scale construction projects funded by the Recovery Act, while not necessarily ensuring the Department's ability to reach its long-term energy reduction goals.

This review had two objectives: (1) to determine the energy guidelines the bureaus are using for new construction projects; and (2) to determine the value of pursuing LEED® certification for meeting these guidelines.

We conducted interviews with personnel from the Office of Environmental Policy and Compliance; the Office of Acquisition and Property Management; and project management staff from six bureaus, including the U.S. National Park Service, the Bureau of Land Management, the U.S. Fish and Wildlife Service, the Bureau of Reclamation, the U.S. Geological Survey, and the Bureau of Indian Affairs (Office of Facilities Management and Construction). We also spoke to officials from Architecture 2030 and the U.S. Green Building Council (USGBC), which is the founding organization of the LEED® certification system.

Background

Buildings consume 50.1 percent of all energy used in the United States.¹ As the nation's second largest building owner and "premier resource management and conservation agency," the Department must implement proactive measures to substantially reduce its energy use in accordance with a number of statutory requirements, Executive Orders (E.O.), Office of

¹ http://www.architecture2030.org/downloads/2030FactSheet_published.pdf.

Management and Budget (OMB) guidelines, and Departmental directives. The following is a partial list of pertinent Federal requirements adopted during the past five years:

MANDATE	PERFORMANCE REQUIREMENT
Energy Policy Act of 2005	Revised annual energy reduction goals and updated Federal green building standards with emphasis on energy efficiency and sustainable design principles.
Memorandum of Understanding (MOU): Federal Leadership in High Performance and Sustainable Buildings, January 2006	Established a common set of sustainable Guiding Principles for integrated design, energy performance, water conservation, et al.
Energy Independence and Security Act of 2007	Updated energy use standards in Federal buildings and required a 30 percent energy intensity reduction by 2015.
E.O. 13423: Strengthening Federal Environmental, Energy, and Transportation Management, January 24, 2007	Required 30 percent energy intensity reduction and incorporation of the Guiding Principles in at least 15 percent of the existing Federal building inventory by 2015.
OMB M-09-15 (Sec. 2.9): Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009, April 3, 2009	Ensured that Recovery Act new construction projects are 30 percent more energy efficient than ASHRAE 90.1-2004 ² and must comply with the Guiding Principles.
E.O. 13514: Federal Leadership in Environmental, Energy, and Economic Performance, October 5, 2009	Established zero-net energy consumption threshold for Federal buildings which begin planning by 2020.

These requirements represent a significant challenge for the Department. Unlike the General Services Administration or the Department of Defense, the Department's building inventory is primarily comprised of small, remotely-situated, historic buildings in which significant, cost-effective reductions in energy use may be problematic.

The Department issued the Sustainable Buildings Implementation Plan (SBIP) to address E.O. 13423 requirements for sustainable buildings. SBIP and E.O. 13423 expand on the environmental "Guiding Principles" outlined in the MOU noted above. In addition to SBIP, the Department developed the Sustainable Building Assessment and Compliance Tool (Compliance Tool). Bureaus are required by Department of Interior Guidance Release ARRA-2009-01, Amendment 1, to use the Compliance Tool checklist for new construction and major renovation projects over \$2 million "to ensure the building project will meet all applicable Guiding Principle components." Bureaus also use the checklist after construction has been completed to verify compliance with the Guiding Principles and to prepare reports for the Federal Real Property Profile database.

² The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) develops consensus-based standards for indoor space conditioning. ASHRAE 90.1 2004 is a building energy code that provides minimum requirements for the energy-efficient design of most buildings.

SBIP requires that some new construction projects receive an American National Standards Institute-accredited, third-party certification. LEED® is widely recognized as the industry leader in sustainable building certifications. To achieve LEED® certification, a project must score design points in various categories such as water efficiency, energy and atmosphere, and indoor environmental quality.³ The total of points earned supports a particular LEED® certification level—Certified, Silver, Gold, or Platinum.

Findings

The Sustainable Buildings Assessment and Compliance Tool

We found that project level staff on only two of the seven projects reviewed had good familiarity with the Compliance Tool, including its purpose, and knew which staff was responsible for completing the Tool. In addition, confusion exists for some project staff as to how the Compliance Tool differs from the LEED® Scorecard, other bureau checklists, and the Energy Scorecard.

Departmental Energy Guidelines and LEED® Certification

We found differences between Department policy and bureau-mandated requirements for sustainable buildings. The Department issued the Guiding Principles, SBIP, and the Compliance Tool. It required that all construction and major renovation building projects with gross construction costs greater than \$2 million meet the Guiding Principles and be independently certified.⁴ The requirement for a third-party certification, however, is being interpreted by some bureaus as a self-imposed mandate to obtain LEED® certification, when neither OMB nor the Department specifically requires it. Most of the project managers we spoke with indicated that LEED® Silver certification at a minimum was mandated for their large-scale new construction projects. The National Park Service requires LEED® Silver certification for new construction projects in its Management Policies 2006.

Measuring Energy Performance with LEED®

There is a dispute in the sustainable building community regarding whether LEED® certified buildings use less energy than similar buildings that are not certified. Furthermore, LEED® Score Cards are completed based on the design phase of a building and not on its actual performance once constructed. As a USGBC official noted in a March 2009 Northeast Sustainable Energy Association (NESEA) forum, “LEED® is an assessment of potential for a building to perform. That’s all it is. We should do better to educate the public that the model isn’t good enough [for legislation], yet.”⁵ Moreover, a former NESEA board member said, “While I don’t question the potential value of LEED® as a tool that architects and developers voluntarily utilize to help improve the design and marketability of their buildings, LEED® is not appropriate as a Government mandate.”

³ LEED® New Construction & Major Renovation, Version 2.2.

⁴ The \$2 million dollar threshold is currently under review and will likely change to a square footage threshold of 5,000 s.f.

⁵ <http://www.greenrealestatelaw.com/2009/03/nesea-forum-gifford-owens-usgbc/>

The bureaus' reliance on LEED® certification and its predictions of potential rather than actual long-term performance may be counter-productive to the Department's energy reduction goals. While OMB and the Department recognize projects registered for LEED® certification prior to October 2008 (and that subsequently receive certification) as compliant with the Guiding Principles, LEED® certification alone does not ensure compliance with building energy reduction mandates. These findings call into question the necessity and the value added of required third-party certification.

Costs of LEED® Certification

We also found that the costs associated with attaining different levels of LEED® certification are ambiguous. When we asked bureau staff to estimate the cost of attaining different levels of LEED® certification, their estimates ranged from a few hundred to a million dollars. Project managers seeking LEED® certifications mostly based their decisions on contractor estimates of what could be achieved within available funds. They also emphasized non-economic factors, namely pride, intra-agency competition, and acknowledgement of leadership in sustainability as reasons for pursuing higher levels of certification. We are concerned that the bureaus' reliance on LEED® certification, in the absence of a Departmental mandate and without clear cost justification of the selected certification level, may inflate costs for new large-scale construction projects funded by the Recovery Act, while not necessarily ensuring the Department's ability to reach its long-term energy reduction goals.

Recommendations

We recommend that the Department:

1. Increase training and provide additional guidance on how the Compliance Tool should be used and when it should be completed in the life-cycle of appropriate projects.
2. Determine if ANSI-accredited third-party certification of new construction projects ensures that energy mandates are met over time. If not, eliminate the requirement for ANSI-accredited third-party certification in guidance to bureaus.
3. Determine if other (non ANSI-accredited) third-party certification methods for new construction projects will ensure that energy mandates are met over time. If not, eliminate the requirement for third-party certification in guidance to bureaus.
4. If third-party certification will ensure that energy mandates are met over time, require bureaus to identify the costs and savings anticipated for the approach and level of certification selected.

cc: Deputy Secretary, Department of the Interior
Assistant Secretary, Policy, Management, and Budget
Director, Office of Acquisition and Property Management
Director, Office of Environmental Policy and Compliance
Acting Director, Office of Financial Management
Departmental GAO/OIG Audit Liaison
Audit Liaison, Office of the Secretary