

MEMORANDUM FOR HEADS OF DEPARTMENTAL ELEMENTS

FROM: SAMUEL W. BODMAN

SUBJECT: DOE Federal Leadership in High Performance and Sustainable Buildings

In my memorandum of August 21, 2007, I indicated the Department of Energy, under the TEAM initiative would exceed the goals established in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. In particular, my expectation is the Department build and maintain energy efficient, environmentally sensitive buildings that provide a comfortable and productive working environment. To advise the TEAM on meeting this goal, the High-Performance Sustainable Buildings Working Group (HPSBWG) was chartered with representatives of each of the Department's real property owning programs.

To simplify benchmarking, The HPSBWG has recommended the Department apply the Leadership in Energy and Environmental Design (LEED) criteria established by the United States Green Buildings Council as the compliance standard for sustainability and energy efficiency in our new and existing buildings. Currently, LEED offers a viable process to match the Guiding Principles to LEED credits for both new construction and existing buildings. I concur with this recommendation and request you implement the Guiding Principles of the Executive Order and LEED as follows:

1. New Buildings and Major Renovations: All new buildings will incorporate the guiding principals of Executive Order 13423 in as much as practical. Moreover, unless specifically waived by the Acquisition Executive in consultation with the Senior Energy Official, as of October 1st, 2008, all new buildings or major building renovations at Critical Decision One (CD-1) or lower with a value exceeding \$5M will comply with the guiding principals of the Executive Order and be certified to a LEED *Gold* Standard. Progress in meeting this requirement will be tracked by the cognizant Acquisition Executive.

Major renovations are defined as those construction activities that result in replacement of the Real Property Record, Change of the Building Usage Code or replacement of multiple building systems that significantly impact building operations and/or extend its useful life.

2. Existing Buildings and Preference for Leased Space: All real property owning programs will develop and implement a plan; documented within their Ten Year Site Plans to reach a level of at least 15% of their enduring buildings as compliant with the Guiding Principles of Executive Order 13423. This will be accomplished by documenting appropriate LEED building credits. Progress in meeting this requirement will be tracked within the Department's Facilities Information Management System.

Existing and new leased spaces should be treated similarly to existing buildings and may be applied to the attainment of the fifteen percent compliance by documenting which LEED® Existing Building (EB) credits have been achieved, including a plan through the lease agreement.

During fiscal year 2008, Programs will assess the building inventory to determine the extent to which the Guiding Principles for HPSB are being applied. This assessment will be included in the Programs' Ten Year Site Plans and serve as a baseline for compliance with the 15% sustainability target. The scope of the building inventory will be later defined by the HPSBWG.

Attached is a Support Document articulating the genesis, chronology and background of the High-Performance Sustainable Building component of the TEAM initiative. Additional information, guidance on data collection and reporting, and assistance will be provided by the HPSB Work Group to the TEAM Initiative on an on-going basis. I expect the Department to set the example for all Federal agencies in High Performance and Sustainable Buildings. Please take this opportunity to establish a leadership role in maximizing our use of Departmental technical expertise and the use of energy efficiency and renewable energy technologies.

High Performance and Sustainability Buildings Support Documentation

Executive Order- January 2007

Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management

–challenges each agency to reduce greenhouse gases; substantially increase the use of energy efficiency and renewable energy technologies; adopt sustainable “green building” design practices for construction and retrofits; and significantly reduce the use of petroleum in vehicle fleets. This order requires all Federal Agencies and departments to “conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner”
72 FR 3919

The Executive Order outlines the following goals for agencies:

- (a) improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to the baseline of the agency's energy use in fiscal year 2003;
- (b) ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use;
- (c) beginning in FY 2008, reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015;
- (d) require in agency acquisitions of goods and services (i) use of sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and (ii) use of paper of at least 30 percent post-consumer fiber content;
- (e) ensure that the agency (i) reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency, (ii) increases diversion of solid waste as appropriate, and (iii) maintains cost-effective waste prevention and recycling programs in its facilities;
- (f) ensure that (i) new construction and major renovation of agency buildings comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006), and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the Guiding Principles;
- (g) ensure that, if the agency operates a fleet of at least 20 motor vehicles, the agency, relative to agency baselines for fiscal year 2005, (i) reduces the fleet's total consumption of petroleum products by 2 percent annually through the end of fiscal year 2015, (ii) increases the total fuel consumption that is non-petroleum-based by 10 percent annually, and (iii) uses plug-in hybrid (PIH) vehicles when PIH vehicles are commercially available at a cost reasonably comparable, on the basis of life-cycle cost, to non-PIH vehicles; and

(h) ensure that the agency (i) when acquiring an electronic product to meet its requirements, meets at least 95 percent of those requirements with an Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic product, unless there is no EPEAT standard for such product, (ii) enables the Energy Star feature on agency computers and monitors, (iii) establishes and implements policies to extend the useful life of agency electronic equipment, and (iv) uses environmentally sound practices with respect to disposition of agency electronic equipment that has reached the end of its useful life.

Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU) – January-March 2007

The Executive Order requires the Department of Energy to ensure that new construction and major renovations of its buildings comply with or exceed the guiding principles set forth in the *Federal Leadership in High Performance and Sustainable Buildings* Memorandum of Understanding (MOU). With this MOU, signatory agencies commit to federal leadership in the design, construction, and operation of High-Performance and Sustainable Buildings. A major element of this strategy is the implementation of common strategies for planning, acquiring, siting, designing, building, operating, and maintaining High Performance and Sustainable Buildings.

The MOU establishes a common set of guiding principles:

1. Employ Integrated Design Principles (Integrated Design, Commissioning)
2. Optimize Energy Performance (Energy Efficiency, Measurement & Verification)
3. Protect and Conserve Water (Indoor Water, Outdoor Water)
4. Enhance Indoor Environmental Quality (Ventilation and Thermal Comfort, Moisture Control, Daylighting, Low-Emitting Materials, Protect Indoor Air Quality during Construction)
5. Reduce Environmental Impacts of Materials (Recycled Content, Biobased Content, Construction Waste, Ozone Depleting Compounds)

The Guiding Principles will help DOE achieve the following MOU goals:

- **Reduce** the total ownership cost of facilities and the life-cycle cost of facilities' environmental and energy attributes;
- **Improve** energy efficiency and water conservation and utilize renewable energy;
- **Provide** safe, healthy, and productive building environments; and,
- **Promote** environmental stewardship through responsible land use and material procurement.

GovEnergy 2007 Conference- Remarks by Secretary Bodman –August 8th 2007

The President highlighted his particular commitment to promoting energy efficiency through Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management – in January of this year. In so doing, he made it very clear that the federal government must lead by example in pursuing unprecedented gains in energy efficient programs and sustainable energy policies. The Department of Energy has an important and unique leadership role to play in this undertaking. And so, today I am announcing what we at the Department call the Transformational Energy Action Management

or TEAM initiative for short. This puts DOE on a path to meet or exceed the President's goals --- over and above his Executive Order and those mandated by the Energy Policy Act of 2005.

The TEAM Initiative will allow the Department of Energy to be an example among the federal agencies, to serve as an energy efficiency leader for the entire federal government.

Building upon the already ambitious goals laid out in the President's Executive Order, the requirements for the TEAM Initiative are as follows:

- Achieve no less than 30% energy intensity reduction across the agency. The path to achieving this goal will be outlined in a binding plan to be put in place for all DOE sites by 2008
- Maximize installation of secure, on-site renewable energy projects at all DOE sites
- Require that DOE's entire fleet operate their Alternative Fuel Vehicles exclusively on alternative fuels
- Baseline, implement and monitor a Department-wide plan by FY 2008 to reduce water consumption at least 16%
- Strive to achieve a LEED Gold standard for all new construction, and major renovations
- Ensure the implementation of an enhanced and widely applied Environmental Management System to manage the environmental energy and transportation components of all our activities.

**Memorandum from Secretary Samuel Bodman to the Heads of Departmental Elements
– August 21 2007**

DOE's senior management has been working on a Transformational Energy Action Management (TEAM) Initiative to create and implement a plan designed to expedite attainment of the requirements imposed by the Executive Order. It is the Secretary's intent that the TEAM initiative ensures that the Department:

- Becomes the first agency to meet all environmental, energy and transportation goals and requirements of the President's Executive Order
- Exceeds the Executive Order goals in several key areas including reduced energy intensity and greenhouse gas emissions, building efficiency, clean energy production and use and fleet management
- Leads all major Federal agencies in overall environmental, energy, and transportation management

Members of the TEAM Initiative Steering Committee and support staff met during May and submitted a detailed plan to the Secretary on June 6th, 2007. The Secretary has endorsed this plan and asked department officials to make every effort to achieve the goals set forth therein at the earliest possible time. In short, this plan provides for:

1. Process and procedure models to deliver sustainable environmental performance and the most cost-effective energy efficiency improvements, throughout the department at the fastest rate reasonable;
2. Executable plans to be initiated this year and finalized in detail no later than the end of 2008 to meet, and in some cases exceed, the executive order goals;
3. Centralized and streamlined internal processes supported by a "center of excellence" transition team to facilitate the award of Energy Savings Performance Contracts (ESPCs), which leverage private sector capital to finance the deployment of environmental and energy efficiency technologies, on-site renewable energy generation, advanced-meters, and water conservation measures, and which are enforceable through rigorous measurement and verification protocols;
4. Standards for new construction and major renovations (such as a LEED Gold Standard) to minimize energy consumption and maximize use of energy efficiency and renewable technologies;
5. A department-wide program designed to expedite and enhance the implementation of on-site renewable energy generation;
6. Alternative fuel delivery infrastructure; and
7. An enhanced Environmental Management System implemented throughout the Department to serve as the primary management approach for implementing the Executive Order requirements.

High Performance Sustainable Buildings Working Group (HPSBWG)- September 2007

Charter: The purpose of the High Performance Sustainable Buildings Working Group (HPSBWG) is to support the Department in implementation of the TEAM Initiative supporting Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. The Executive Order requires the Department of Energy to ensure that new construction and major renovations of agency buildings comply with or *exceed* statutory requirements and address each of the five guiding principles set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU) for planning, acquiring, siting, designing, locating, constructing, maintaining, and operating its facilities

Team Leadership

- Department's Designated Senior Agency Official (SAO), Andy Karsner (and HPSBWG Champion)
- Chair: Energy and Efficiency and Renewable Energy Office (EERE)

HPSB Working Group Activities and Recommendations: The HSBWG has been meeting regularly with all real property owning Programs and the National Nuclear Security Administration (NNSA): the Office of Environmental Management (EM), the Office of Science (SC), the Office of Fossil Energy (FE), the Office of Nuclear Energy (NE), the Office of Energy Efficiency and Renewable Energy (EERE), and the Office of Legacy Management (LM), and Support Offices including: the Office of Engineering and Construction Management (OECM), General Council (GC), and the Office of Health Safety and Security (HSS).

The HSBWG has reviewed the Guiding Principles and existing rating systems, such as the United States Green Building Council's Leadership for Environmental and Energy Design (USGBC LEED®)

and the Green Building Institute's Green Globes. The HSBWG also heard from GSA on their sustainable design program. The General Services Administration, Environmental Protection Agency, NASA, Department of Agriculture, and the Department of Defense services are already directing their new building programs to meet LEED® criteria. The HSBWG has recommended that the Department utilize the LEED® rating system to implement and verify the implementation of the Guiding Principles. Currently, LEED® offers a viable process to match the Guiding Principles to LEED® credits for both new and existing construction and to track performance over time to ensure that DOE capital asset building inventory meets the requirements of the Guiding Principles.

The USGBC currently has a robust training initiative and is supported by local chapters nationwide to train individuals and diverse organizations on green building principles. USGBC also provides LEED® professional accreditation that distinguishes individuals with detailed knowledge of LEED® project certification requirements and design principles who must demonstrate that knowledge by passing an exam. There are over 35,000 LEED® Accredited Professionals today including LEED® Accredited Professionals located throughout our national laboratories. USGBC's rapid growth in trained and accredited architects, general contractors, manufacturers and distributors in LEED® criteria assure that the Department's diverse construction needs and leadership position can be adequately supported.

DRAFT