

Army Sustainability Committee (ASC)  
Meeting Minutes

14 December 2006

**Welcome and Opening Remarks**

COL Jeff Phillips (ODEP) began by welcoming members to the meeting and reviewing the agenda (Enclosure 1). He noted that Mr. Tad Davis was having a meeting with AEPI, COL O'Keefe (AEC) and Debbie Potter (IMCOM) in follow up to Darden III and that attendance today would be light. He then introduced COL Keenan, the newly appointed DEP, who joined the meeting to meet everyone, and asked each attendee to introduce themselves, mark the attendance sheet (Enclosure 2), and make necessary corrections to the listed contact information if needed.

**Review 26 October 2006 Meeting Minutes**

COL Phillips next asked the group if any changes were needed to the minutes from the 26 October 2006 meeting. No one had any comments at this time, so the group approved the minutes with no additional changes. LMI will ensure that the final minutes are posted to the Army sustainability website. COL Phillips then noted that Darden IV would be held in March 2007 at UVA in Charlottesville, VA. He had suggested to Mr. Davis that attendees should include Garrison Commanders that have not yet begun the sustainability process, as well as USACE districts (e.g., Seattle District) that have been doing great work in sustainable design and development, along with other districts that have not. He also suggested that Mr. Davis should send out the implementation plan as soon as possible. If any ASC members have additional suggestions in this area, they should send them to COL Phillips who will in turn forward them to Mr. Davis. Karen Baker (AEPI) will probably be the POC for Darden IV. COL Phillips also noted that they recently conducted a 1-day off-site on sustainability for GO/SES level personnel, so they now have a lot of senior level buy-in. Additional 1-day sessions are planned.

Other ASC members then updated the group as listed on the agenda: old business, new business, and wrap-up.

**Old Business**

**Update of P2 Section of Army Sustainability Website**

Bob Shakeshaft (AEC) and Aaron Sprouse (AEC-BAH) next updated the committee on revisions that are nearly complete on the P2 section of the sustainability website. They stressed that the revisions are only up and running on a development site because they would like to make them available for further review and comment before going final. The main effort was directed at changing out the original boilerplate placeholder information that was compiled from existing sites. The revised site offers a basic introductory page and P2 101 information; a history of P2 in the Army; information on how P2 integrates with EMS and sustainability; guidance on how to identify and fund P2

projects; information on related Army programs like technology and AERTA; P2 policy and guidance; P2 drivers and metrics; FAQs; P2 lessons learned; links to AKO and other sites; and reference materials, installations, etc. LTC Mike Speth (NGB-ARNG) also suggested including a P2 Opportunity Assessment tool that is available. If ASC members have ideas for other links, information, or tools that might be included, they should pass them on to Bob Shakeshaft at AEC. Bob noted that he will also develop a template that will allow installations to submit lessons learned directly for posting to the site.

COL Phillips asked for more specifics on the funding aspects of the site. He noted that P2 funding is largely allocated to salaries and plans. If we are to discuss funding, it is very important that we are accurate in what we say. It should also include lessons learned and success stories from installations that have been successful in funding P2 projects. The key question is how can we get away from the more compliance based programs and be more proactive. LTC Speth emphasized that this is the gap that exists now in sustainability – how will we be able to invest in smart projects like energy efficient lighting and energy when there is so much competition for resources? P2 lessons learned should evolve into sustainability lessons learned. In addition, we might consider implementing a sustainability investment fund.

Doug Warnock (ODEP) noted that funding is a sensitive area that is not addressed anywhere else on the website. Because of this, he suggested that we not include it here. He also reminded everyone that changes to the website must be formally vetted through the committee while it still resides on the LMI development site. In addition, it must go through the established ACSIM clearance process that applies to all information that will be posted to a website. COL Phillips is the approval authority under that process. The AEC PAO security staff will also review the revised website.

Bob Shakeshaft clarified that the funding section really focuses on doing your homework, calculating payback, and making the case to the GC for funding P2 projects. COL Phillips suggested that we might change the title of that section to either Return on Investment or Business Case Analysis.

## **New Executive Order Status Update**

MAJ Jason Hamby (ARNG Installations Division) next updated the committee on the status of the forthcoming new EO on *Enhancing Government Performance Through Effective Environmental, Energy, and Fleet Management*. He included a one-page summary of the key elements of the EO (Enclosure 3), a copy of the draft EO itself (Enclosure 4), and a proposed appendix to the EO (Enclosure 5). MAJ Hamby noted that the EO is still in draft and could not be found anywhere on the Internet. The EO will be very significant to the Army and any organization working P2/sustainability issues. It revokes several other EOs and condenses them all into one. It also adds many conditions that must be met to implement its goals. No date has been set for Presidential review or signature.

It includes very significant language on EMS; essentially mandating that if you do not have an EMS you must have a Compliance Management Plan (CMP) instead. OSD is currently preparing a comprehensive CMP for DoD, so each individual component will

not have to prepare one. The new EO includes 8 sustainable practice goals, and some of the goals require agencies to issue policies on how they will achieve them within 90 days of issuance of the EO.

### **Sustainability Workplan Status Update**

MAJ Hamby continued the discussion by reviewing the status of the sustainability workplan. This workplan is to identify and address the major activities the ASC would like to accomplish over the next 2-3 years, and will ideally take the form of an SOP or campaign plan. COL Phillips asked for confirmation from the committee that we want to do this and deliberately map out where we want to go. Everyone agreed that it is a good idea and that we should proceed. COL Phillips also noted that Dr. College (DACSIM) said we need to build more sustainability initiatives into the next POM cycle. Leslie Walrath (ODEP) said we need to start including Bob Sperberg (ASCIM Facilities) and his staff in what we are doing in this area. They are currently looking at these types of projects as individual pet rocks, but we need projects that eventually become Army standards. If we can do this, then facilities will automatically POM for them and it will become transparent to our installations.

COL Phillips noted that we should hold a separate meeting sometime in Jan 2007 with the right people to start hashing this out. All agreed this would be the best approach to getting things started. COL Phillips suggested we schedule a 1.5 hour meeting and/or establish a formal ASC working group (WG) with representation from OASA (I&E), ODASA (ESOH), ACSIM—FD, G-3, G-4, ODEP, NGB-ARNG, NDCEE, AEPI, CERL, AEC/IMCOM, AMC, BRAC, RCI, and CHPPM. He asked Doug to set the meeting up and to report back at the next ASC meeting.

### **New Business**

#### **Army Sustainability Awards Concept**

COL Phillips stated that he recently held a VTC with AEC to discuss the concept of Army Sustainability Awards. Mr. Davis asked AEC and ODEP to see how we could integrate this with the existing environmental awards process. There is no hard timeline to get back to Mr. Davis, but we need to start putting ideas together now. Bill Sproul (ODEP), who currently manages the environmental awards process, developed a strawman concept for sustainability award guidelines/standards about 18 months ago. There are currently three options: (1) keep status quo with OSD awards; (2) add Army sustainability awards to OSD program; (3) establish separate Army sustainability awards in addition to the OSD awards.

The value of the OSD award is that it is more prestigious than an Army award. LTC Speth suggested that we might add sustainable practices criteria to the existing OSD/Army awards. COL Phillips suggested that we keep the existing OSD process, but also create some Army sustainability awards. As with other initiatives, we would have the Army lead the way with a new idea, get it into practice, and then have OSD add it to their program. The question is, if we proceed with the latter option, do we want installation sustainability awards, or environmental sustainability awards?

COL Phillips suggested that we form a WG to develop options, and then present them to COL Keenan and Mr. Davis. He also pointed out that we need to be able to define what we mean by a sustainable installation if we are going to require installations to be sustainable. LTC Speth noted that several states and regions have already established sustainability criteria, and Army installations are free to participate in their programs. Perhaps we should have Rosye Faulk (IMCOM) join the WG since she has good insight into the Army Communities of Excellence process, which would be similar to what we want. COL Phillips asked Doug Warnock to set up the WG and solicit volunteers. He noted that Bill Sproul should be included. He also said the WG should meet in Jan 07 and plan to brief Mr. Davis and COL Keenan at the end of Jan or early Feb 2007.

### **Center for Advancement of Sustainability Innovations (CASI)**

Bill Goran briefed the committee on the newly formed CASI at ERDC-CERL (Enclosure 6). A principal focus of CASI is to help the Army field the new technologies, knowledge sharing, and other support that will be needed to implement the Army Strategy for the Environment (ASE) and the Army Energy Strategy (AES) for Installations. Its primary purpose is helping to develop and implement sustainability strategies, such as the SPiRiT to LEED transition, 2004 ASE, 2005 AES, etc.

The center will offer expertise in a variety of fields ranging from planning and design to military ecosystems and life cycle cost analysis, and will provide much improved access to that expertise. He is developing a skills inventory to determine what they have and what they need, and will share this with the set of partners he is currently working with. Major projects under way or in development include the development of sustainability standards and assessments. Upcoming events include establishing a stakeholder group to help identify and prioritize initiatives, creating agreements and a forum for linkages with partnering organizations, and setting up Web capabilities and linkages to the Army Sustainability website in early 2007 (the latter to be coordinated with LMI).

Current partners include several ERDC labs, the University of Illinois, Sandia National Laboratory, NREL, National Defense Center for Environmental Excellence (NDCEE), Huntsville Installation Center of Expertise, and the Army Environmental Command.

### **DoD Sustainable Installations Initiative (SII)**

Dave Eady presented a briefing (Enclosure 7) on the status of the DoD SII, which is being run by Concurrent Technologies Corporation/NDCEE in cooperation with several partner organizations. SII is a Congressionally-directed 3-year program designed to help DoD installations develop sustainability plans and management systems to achieve objectives, identify technology requirements and opportunities and develop "roadmaps" to guide implementation, and develop, demonstrate and validate technology solutions that support installation sustainability goals.

FY04 activities were designed to lay the foundation for SII and determine needs and technology opportunities, and to conduct initial strategic planning and tool development. One product of this initial effort was a list of about 75 projects to work on (this list has not yet been prioritized, although some projects were identified as high priority). FY05 activities included the completion of some installation sustainability assessments, and

completion of demonstration and evaluation projects on Zero energy homes and a landscape management system. FY06 efforts focused on institutionalizing sustainability by providing strategic-level planning and analysis and supporting the installation sustainability planning process. It also included activities designed to help transfer technology solutions in support of sustainability objectives, and to demonstrate the costs and benefits of sustainable alternatives. The focus of these activities was on sustainable buildings, renewable energy systems, water resources, training landscapes, and industrial processes.

In the coming months SII will focus on joint service analysis and implementation activities, regional planning initiatives, and additional technology demonstration and validation projects. They are also working closely with COL Phillips and Manette Messenger (IMCOM SE Region) to develop sustainability success stories and help build a solid business case for sustainability.

### **Wrap-up and Next Meeting**

COL Phillips thanked the attendees for their participation and reminded everyone that the next meeting will be held on 22 Feb 07, from 1300-1500 in the same building location (Presidential Towers) with the room number to be determined.

Before dismissing the group, he recounted the two principal due outs from the meeting, which were as follows:

- Set up meeting to discuss sustainability work plan (ACTION: Doug Warnock)
- Set up small WG to discuss alternatives for a sustainability awards program (ACTION: Doug Warnock)

There being no further business, the meeting adjourned at 1500.

Enclosures:

- 1 – Agenda
- 2 – Attendees
- 3 – Summary of Draft Executive Order
- 4 – Draft Executive Order
- 5 – Draft Executive Order Appendix
- 6 – Center for Advancement of Sustainable Innovations Briefing
- 7 – Sustainable Installations Initiative Briefing

## Enclosure 1 – Agenda

Army Sustainability Committee Meeting Agenda  
ODEP Conference Room PT 9300 (9<sup>th</sup> Floor)  
Presidential Towers, Crystal City, VA

Thursday, 14 December 2006  
1300-1500 hrs

Call in # 410-436-1000 (Conference Code 0981)

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1300 – 1305	Welcome/Opening Remarks	COL Phillips
1305 – 1310	Review October 2006 Meeting Minutes	COL Phillips/All
1310 – 1350	Old Business	
	a. Website P2 Update Status	Bob Shakeshaft
	b. Over view of Draft Sustainability Executive Order	MAJ Hamby
	c. Proposed Sustainability Work Plan Discussion	MAJ Hamby
	d. Other	COL Phillips/All
1350 – 1450	New Business	
	a. Sustainability Awards Discussion	COL Phillips
	b. Center for Application of Sustainable Innovation (CASI)	Dr. Bill Goran
	c. NDCEE Sustainable Installations Initiative	Dave Eady
1450 – 1500	Wrap-up, assign tasks/schedule, and set next meeting date	COL Phillips

The purposes of this meeting are to:

- 1) update the ASC on the sustainability website P2 section update;
- 2) discuss the draft sustainability EO;
- 3) discuss the concept of a sustainability work plan;
- 4) discuss the concept of sustainability awards;
- 5) discuss the ERDC's Center for Application of Sustainable Innovation (CASI);
- 6) discuss the NDCEE's Sustainable Installations Initiative; and
- 7) identify further tasks the ASC should undertake in support of installation sustainability and assign responsibility for achieving them.

**Next ASC Meeting Thu, 22 Feb 2007**

**Enclosure 2 - ASC Meeting Attendees (14 Dec 06)**

	<b>Name</b>	<b>Organization</b>	<b>Phone</b>	<b>Email address</b>
	Baker, Karen	AEPI	703-604-2300	Karen.baker@us.army.mil
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## Enclosure 3 – DRAFT Executive Order Summary

### ENHANCING GOVERNMENT PERFORMANCE THROUGH EFFECTIVE ENVIRONMENTAL, ENERGY, AND FLEET MANAGEMENT Draft Executive Order Summary:

#### The EO:

1. Revokes EO 13148-Greening the Government Through Leadership in Environmental Management, as well as 13101-Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, 13123-Greening the Government Through Efficient Energy Management, 13134-Developing and Promoting Bio-based Products and Bio-energy, 13149-Greening the Government Through Federal Fleet and Transportation Efficiency (All from the Clinton Administration) 13221-Energy Efficient Standby Power Devices (Bush Administration)
2. No scheduled date for presidential review / signature.
3. Requires EMS with provisions of EO 13148.
4. Has eight sustainable practice Goals:
  - a. Energy Efficiency
  - b. Renewable Energy
  - c. Water Conservation
  - d. Acquisition
  - e. P2, HAZMAT, Recycling
  - f. High Performance Buildings
  - g. Vehicle Fleet Management
  - h. Electronics Stewardship
5. Federal Environmental Executive has oversight responsibility.
6. Requires annual reporting starting JAN 2009.

#### The Implementation Requirements:

1. EMS
2. Compliance Management Plans (for agencies that do not have an EMS).
3. Energy efficiency, water efficiency, renewable energy (DOE to issue policy within 90 days of EO issuance)
4. Acquisition (Office of FED Procurement Policy to issue policy within 90 days of EO issuance)
5. Pollution Prevention, Management of Toxic and Hazardous Materials and recycling.
6. Sustainable Design/High performance Buildings (refers to the *Guiding principles for federal leadership in high performance and sustainable buildings*)
7. Fleet Management (alternative fuel use, exemptions for All tactical, emergency, CIA, Native American, and state-run fish and wildlife vehicles)
8. Electronics Stewardship

Conclusion: Is comprehensive with significant goals and contains extensive conditions that must be met in order to realize the goals.

**Draft 10/5/06**

1:00 pm

**Executive Order**

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**Enhancing Government Performance Through  
Effective Environmental, Energy, and Fleet Management**

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Part 1 – Policy

Section 101. Policy. It is the policy of the Federal Government, and the purpose of this order, to ensure that each executive department and agency (agency) is committed to and manages its environmental and energy issues in a sustainable, environmentally and economically sound manner that supports agency missions, ensures compliance with environmental and energy laws and regulations, and leads to more efficient government operations and continual improvement. Sustainable environmental management and stewardship considerations and goals shall be a fundamental and integral component of Federal Government policies, operations, planning, and management.

The Federal Government has made significant progress in improving environmental and energy performance through a series of Executive Orders, Memoranda of Understanding, and other guidance. This order intends to build on that body of work and success by integrating and updating prior practices and requirements into a cohesive, strategic approach to further ensure enhanced performance and compliance with legal and statutory requirements.

Section 102. Sustainable Practices. Each agency shall implement sustainable practices in the following areas:

- (a) Energy efficiency
- (b) Renewable energy
- (c) Water conservation
- (d) Acquisition
- (e) Pollution and waste prevention and recycling, including the reduction or elimination of the purchase and use of toxic or hazardous chemicals
- (f) High performance building construction, lease, operation, and maintenance
- (g) Vehicle fleet management
- (h) Electronics stewardship

The Council on Environmental Quality (CEQ), the Office of the Federal Environmental Executive (OFEE), and the Office of Management and Budget (OMB) shall provide implementation oversight and, in consultation with affected agencies, shall establish specific

guidance, requirements, policies, procedures for compliance and applicability for each of the sustainable practices and goals in this order and Appendix.

Section. 103. Environmental Management Systems. Each agency shall use environmental management systems (EMS) at all appropriate organizational levels as the primary management approach for addressing internal agency operations related to its own environmental aspects of agency activities, including those environmental aspects related to energy and transportation functions. EMS will serve as the management framework under which agencies identify, manage, and improve sustainable practices, , and address the reporting requirements of this order. Where agencies, organizations or facilities have or are developing EMS as required by Executive Order 13148, the provisions of this order shall be integrated into the EMS at the appropriate organizational level. In regard to regulatory compliance management of each agency, if no EMS exists, a Compliance Management Plan shall be developed and implemented at the appropriate organizational level.

## Part 2 -- Goals

Section. 201. Energy Efficiency. Each agency shall achieve a 3 percent annual reduction in energy intensity, or 30 percent by 2015, compared with a 2003 baseline.

Section. 202. Renewable Energy. Each agency shall meet statutory goals for purchasing electric energy from renewable sources. To promote continued growth of renewable energy, agencies shall ensure that at least 50 percent of renewable energy comes from “new” renewable sources. To the extent feasible, agencies shall also implement on-site renewable energy generation projects.

Section. 203. Water Conservation. Each agency shall commence or continue efforts to measure and reduce water use. Beginning in fiscal year FY 2008, each executive agency, through life-cycle cost effective measures, shall reduce water consumption intensity by 2 percent annually through 2015, relative to FY 2007 baseline consumption levels.

Section. 204. Acquisition. Agencies shall incorporate this order’s requirements into all acquisition programs. At a minimum, each agency shall preference procurement of: recycled content products; Energy Star, FEMP-designated energy and water-efficient products, and

energy from renewable sources; biobased products; environmentally preferable products and services; alternative fuel vehicles and alternative fuels, and non-ozone depleting substances. All new and renewed contracts, especially for construction, transportation, janitorial services, and other operations and maintenance, shall ensure these requirements are included and met.

Section. 205. Pollution Prevention, Management of Toxic and Hazardous Materials, and Recycling. Each agency shall conduct its activities, including acquisitions, to reduce the quantity of toxic and hazardous chemicals and materials purchased, used, and/or disposed as expeditiously as possible. Where certain toxic or hazardous chemicals are mission critical and cannot be readily reduced, those chemicals shall be managed throughout their life cycle in the most environmentally responsible manner practicable. Each agency shall establish and submit to the Federal Environmental Executive (FEE) within 90 days of the date of this order, solid waste diversion goals to be achieved by December 31, 2010.

Section. 206. High Performance Buildings. Beginning in FY 2007, when funding the design for construction of new Federal buildings, new buildings for Federal occupancy, or major renovation projects, each agency shall ensure that such designs and construction meet or exceed statutory goals and the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* in the Whole Building Design Guide (Guiding Principles). In addition, consistent with capital asset rehabilitation and maintenance cycles, each agency shall ensure that, by 2015, at least 15 percent of its existing Federal building inventory incorporates the sustainable practices found in the Guiding Principles.

Section. 207. Vehicle Fleet Management. Beginning in FY 2007, each agency shall reduce covered petroleum consumption in fleet vehicles by 2 percent annually through 2015 relative to the FY 2005 baseline. Each agency shall increase consumption of alternative fuels by at least 10 percent annually relative to FY 2005 baseline consumption levels until it achieves 100 percent use of alternative fuels in alternative fuel vehicles.

Section. 208. Electronics Stewardship. Beginning in FY 2007, each agency shall: acquire 95 percent of its electronic products as Electronic Product Environmental Assessment Tool (EPEAT)-registered (for products for which there are EPEAT standards); ensure that Energy Star® features are enabled on 100 percent of computer and monitors; have policies and programs to extend the useful lifetime of electronic equipment; and ensure that 100 percent of non-usable electronic products are reused, donated, sold or recycled using environmentally sound management practices.

### Part 3 -- Management, Accountability and Leadership

Section. 301. Executive Agencies. (a) The head of each agency is responsible for meeting the goals and requirements of this order by ensuring that all necessary actions are taken to integrate environmental accountability into agency day-to-day decision-making and long-term planning processes, across all agency missions, activities, and functions.

(b) Within 30 days after the date of this order, the head of each agency shall notify the OMB and the FEE of the name and contact information for a senior official at the Assistant Secretary level or above or equivalent at that agency. The senior official shall be responsible for that agency's implementation of this order and submission of required reports. The role of this official replaces and consolidates the roles of the current Agency Environmental Executives and Energy and Transportation Senior Officials.

Section. 302. Steering Committee. The Steering Committee on Greening the Government through Waste Prevention and Recycling established by a prior executive order is hereby renamed the Steering Committee on Enhancing Government Performance Through Effective Environmental, Energy, and Fleet Management ("Steering Committee"). The Steering Committee shall be composed of the Chair of the CEQ, the FEE, and the Administrator of the Office of Federal Procurement Policy (OFPP). The Steering Committee, which shall be chaired by the Chair of the CEQ, shall provide the FEE with policy direction in the implementation of this order.

Section. 303. Federal Environmental Executive. (a) The Federal Environmental Executive shall be designated by the President and report to the Chair of the CEQ. The FEE shall oversee the OFEE and take all actions necessary to ensure that the agencies comply with the requirements of this order.

Section. 304. Office of the Federal Environmental Executive (OFEE). (a) The Steering Committee shall re-charter the Task Force established by a prior executive order to now be known as the OFEE, which shall be chaired by the FEE and be composed of staff from executive agencies that reflect the breadth and complexity of the Federal community. The Steering Committee, in consultation with the agencies, shall determine the necessary staffing and resources of the OFEE. The OFEE shall have the duty of assisting the FEE and the agencies in implementing this order, subject to policy direction provided by the Steering Committee. The OFEE shall report through the FEE to the Chair of the Steering Committee.

(b) Agencies shall provide, to the extent practicable and permitted by law, staff, resources, and other support to OFEE and the FEE, upon request from the FEE.

(c) The Environmental Protection Agency (EPA) shall continue to provide primary administrative funding and logistics support to OFEE, and provide and support the Presidential designee position occupied by the FEE.

(d) The FEE shall convene and direct a Coordinating Committee consisting of EPA, the Department of Energy (DOE), the Department of Agriculture (USDA), the Defense Logistics Agency (DLA), the General Services Administration (GSA), and other executive agencies, as appropriate, to develop common solutions, initiate pilots, and coordinate the activities of the existing sustainable practice area work groups to ensure implementation of this order, eliminate redundancies and inconsistencies, and simplify and consolidate reporting. OMB may assist and support the FEE as appropriate in directing this committee.

(e) The FEE shall conduct an annual White House/Presidential Awards program to honor outstanding Federal and individual efforts to promote the goals of this order. Candidates for the White House/Presidential Awards shall be selected from agency programs that demonstrate exceptional performance in implementing this order.

Section. 305. OMB Responsibilities. (a) The OMB Deputy Director for Management, in consultation with the FEE, OFPP, EPA, and DOE shall ensure government-wide implementation of this order and evaluate agencies' progress and status in implementing this order through agency scorecards.

(b) Each agency's budget submission to OMB shall specifically request funding necessary to achieve the goals of this order and be within each agency's planning guidance level.

(c) OFPP shall reissue Policy Letter 92-4 on the Procurement of Environmentally-Sound and Energy-Efficient Products and Services to incorporate elements of the sustainable practices and goals of this order and provide guidance on implementation of them in coordination with other acquisition policies and procedures.

#### Part 4 – Reporting

Section. 401. Agency Annual Reporting. Beginning January 15, 2009, and annually thereafter, agencies shall report to CEQ on actions and activities taken during the preceding fiscal year to implement this order. Statutorily required reporting will continue on their prescribed schedules.

(a) Prior to FY 2008, OFEE, in consultation with OMB, shall work with the agencies responsible for current statutory and pre-existing executive order reports to streamline, consolidate and simplify their reporting requirements and address metrics and other elements relevant to this order. OFEE will also coordinate and ensure that reporting requirements for this order, E.O. 13352, and E.O. 13327 do not create redundant or conflicting requirements.

(b) Existing reporting procedures in place at the date of this order for orders revoked by this order shall be continued until superseded pursuant to section 401(a) of this order.

(c) Report to the President. The FEE shall prepare a biennial report to the President on the actions taken by executive agencies to comply with this order. The report shall incorporate information from agency annual reports submitted under this order.

#### Part 5 – General Provisions

Section. 501. Applicability. (a) Except as provided otherwise in applicable law, this order applies to Federal agencies with facilities in any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, and any other territory or possession over which the United States has jurisdiction. Agencies with facilities outside of these areas, however, are encouraged to make best efforts to comply with the goals of this order for those facilities.

(b) Each agency shall ensure that new or renewed contracts that provide for contractor operation of a government-owned or –leased facility or government-owned facilities and vehicles include provisions that obligate the contractor to comply with the applicable requirements of this order.

(c) Each agency shall ensure that new or renewed agreements, permits, licenses, or other legal obligations with tenants or concessionaires include applicable provisions towards implementing this order.

Section. 502. Related Documents. Agencies shall adhere to the Implementation Requirements included as an Appendix to this order, and with subsequent guidance issued in accordance with Section 102 of this order. The Federal Acquisition Regulation (FAR) Council shall develop acquisition policies and procedures for contractors to supply agencies with all information necessary for compliance with this order. The FAR Council shall maintain, and amend as appropriate, existing energy and environmental provisions in Part 23 or other parts of the FAR. Agencies shall use published FAR clauses in all applicable contracts.

Section. 503. Executive Orders 13327 and 13352. Consistent with the Federal Government's commitment to cooperative conservation and real property asset management, where appropriate, each agency shall incorporate the goals and requirements of E.O.s 13327 and 13352 in implementing the provisions of this order.

Section. 504. Judicial Review. This order is intended only to improve the internal management of the executive branch and is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, or entities, its officers, employees or agents, or any other person.

Section. 505. Exemptions. (a) Except as otherwise required by applicable law, in the interest of national or homeland security, the head of any agency may request from the Assistant to the President for National Security Affairs (for national security interests) or the Assistant to the President for Homeland Security and Counterterrorism (for homeland security interests) an exemption from complying with any or all provisions of this order for particular agency facilities, with the following exceptions: (1) an exemption issued under this subsection will be for a specified period of time that may exceed 1 year, unless otherwise determined by the Assistant to President for National Security Affairs or the Assistant to the President for Homeland Security and Counterterrorism; (2) notice of any exemption granted under this section for provisions not otherwise required by law is only required to be submitted to the Director of OMB and the Chair of the CEQ. If granted an exemption, each agency shall, to the maximum extent practicable and without compromising national or homeland security, strive to comply with the purposes, goals, and implementation requirements in this order. Nothing in this order affects limitations on the dissemination of classified information pursuant to law, regulation, or executive order.

(b) Except as otherwise required by applicable law, upon a showing of compelling reasons of national policy, the head of any agency may request from the Director of OMB and the Chair of CEQ an exemption from complying with any or all provisions of this order, with the following exceptions: (1) an exemption issued under this subsection will be for a specified period of time that may not exceed 1 year, unless otherwise determined by the Director of OMB and the Chair of the CEQ; (2) notice of any request for exemption under this subsection for provisions not otherwise required by law is required to the FEE.

Section. 506. Revocation. Existing agency activities implemented pursuant to Executive Orders 13101, 13123, 13148, 13134, 13149, and 13221 shall continue to be implemented in accordance with successor provisions in this order (including for example implementation plans, training programs). Executive Orders 13101, 13123, 13134, 13148, 13149, and 13221 are hereby revoked.

Section. 507. Preservation of Authority. Nothing in this order shall be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, regulatory, and legislative proposals. Nothing in this order shall be construed to affect the statutory authority or obligations of any Federal agency. This order does not pre-empt the authority of agencies such as EPA, DOE, and USDA to implement laws and regulations.

THE WHITE HOUSE,

Draft 10/5/06  
1:15 pm

APPENDIX TO EXECUTIVE ORDER

**Implementation Requirements for Executive Order Entitled “Enhancing  
Government Performance Through Effective Environmental, Energy, and  
Fleet Management”**

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To ensure effective and efficient implementation and to meet the goals of this Executive Order, executive departments and agencies (agency) shall implement the following requirements in accordance with Sections 102 and 502 of this Executive Order and this Appendix.

In accordance with 304 (e) of this order, the Office of the Federal Environmental Executive (OFEE) will direct the existing sustainable practice area WGs, and any new groups created under this order, to coordinate with the executive agencies and develop the necessary guidance to ensure agency implementation of the requirements of the order.

#### Overarching Principles for Implementing and Achieving the Goals of this Order:

- Where an EMS has been determined to be appropriate, it shall serve as the framework under which agencies identify, collect, and manage performance measurement information, and respond to the reporting requirements of this order. Agencies shall maintain updated objectives and targets and shall commit to proactive communications with interested parties.
- Agencies shall identify annual pilot projects which test and measure results from purchasing and using the types of products & services identified by statute or this Order. Pilots can be identified by individual agencies or coordinated with OFEE as a government-wide initiative. All pilots should be relevant to an agency's mission, and some agencies may be requested to serve as a lead agency in coordinating a pilot and government-wide results.
- Each agency shall use life-cycle cost analysis in planning and making determinations about investments in all capital assets, services, and procurements, which will lower the government's costs, achieve sustainable design principles, reduce energy and water consumption, and reduce the environmental impact/footprint of the government.
- In order to hold individuals accountable for results, each agency shall include successful implementation of this Order in position descriptions and performance evaluations of agency heads, senior officials and relevant agency staff, such as energy and facility managers, program managers, agency and field office directors, contracting officials, and others as appropriate.
- Each agency should employ incentive and award programs to reward exceptional individual and team performance in implementing the goals of this Order.
- Each agency shall ensure that all appropriate personnel receive initial training and refresher courses to implement the goals of this Order.
- Each agency is encouraged to designate a cross-functional support team consisting of procurement, legal, budget, facility and energy management, technical support and others as appropriate to expedite implementation of this order and collaborate with other agencies.

#### **Definitions**

For terms used in this executive order and this Appendix, the definitions in the Resource Conservation and Recovery Act, National Energy Conservation Policy Act, Energy Policy Act of

2005, Public Law 109-58 (EPA Act 2005), Emergency Planning and Community Right-to-Know Act, and the Pollution Prevention Act apply.

“Acquisition” means the acquiring of supplies and services as defined in Part 2 the Federal Acquisition Regulation.

“Appropriate facility or organization” means any Federal facility or organization that conducts activities that can have a significant impact on the environment, either directly or indirectly, individually or cumulatively, due to the operations of that facility's or organization's mission, processes or functions.

“Cooperative conservation” means actions that relate to use, enhancement, and enjoyment of natural resources, protection of the environment, or both, and that involve collaborative activity among Federal, State, local, and tribal governments, private for-profit and nonprofit institutions, other nongovernmental entities and individuals.

“Environmental Management System” means a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. EMS implementation reflects accepted quality management principles based on the “Plan, Do, Check, Act,” model using a standard process to identify current activities, establish goals, implement plans to meet the goals, determine progress, and make improvements to ensure continual improvement.

“Energy efficiency” refers to reduction in energy consumption measures at a facility that reduce the need for energy.

“Energy Intensity” means energy consumption per gross square foot of building space, including industrial and laboratory facilities.

“Energy Savings Performance Contract” means a contract that provides for the performance of services for the design, acquisition, financing, installation, testing, operation, and where appropriate, maintenance and repair, of an identified energy or water conservation measure or series of measures at one or more locations. Such contracts shall provide that the contractor must incur costs of implementing energy savings measures, including at least the cost (if any) incurred in making energy audits, acquiring and installing equipment, and training personnel in exchange for a predetermined share of the value of the energy savings directly resulting from implementation of such measures during the term of the contract. Payment to the contractor is contingent upon realizing a guaranteed stream of future energy and cost savings, with any savings in excess of that guaranteed by the contractor accruing to the Federal Government.

“Environmentally preferable” means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, product,

manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

“EPA-designated item” means an item designated by the Environmental Protection Agency (EPA) in a Comprehensive Procurement Guideline and for which EPA recommended procurement practices, including recovered materials content levels, in a Recovered Materials Advisory Notice.

“Executive agency” or “agency” means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

“Facility” means any building, installation, structure, land, and other property owned or operated by, or constructed or manufactured and leased to, the Federal Government, as well as any fixture or part thereof. This term includes a group of facilities at a single location managed as an integrated operation, as well as government owned contractor operated facilities.

“Life cycle cost” means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product. For purposes of the energy and water efficiency sustainable practices of this order, “life-cycle costs” means the sum of the present values of investment costs, capital costs, installation costs, energy costs, operating costs, maintenance costs, and disposal costs, over the lifetime of the project, product, or measure. Additional guidance on measuring life-cycle costs is specified in 10 C.F.R. 436.19.

“Life-cycle cost-effective” means the life-cycle costs of a product, project, or measure are estimated to be equal to or less than the base case (i.e., current or standard practice or product). Additional guidance on measuring cost-effectiveness is specified in 10 C.F.R. 436.18 (a), (b), and (c), 436.20, and 436.21.

“New renewable energy” means renewable sources placed in service after January 1, 1999.

“Ozone-Depleting Substances” means any substance designated as a Class I or Class II substance by the Environmental Protection Agency in 40 CFR Part 82.

“Pollution prevention” means “source reduction” as defined in the Pollution Prevention Act of 1990 (42 U.S.C. 13102), and other practices that reduce or eliminate the creation of pollutants through (a) increased efficiency in the use of raw materials, energy, water, or other resources, or (b) the protection of natural resources by conservation.

“Recycling” means the series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

“Renewable energy” means energy produced by solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project.

“Sustainable” means to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

“Utility Energy-Efficiency Service Contract ” means a local utility provides up-front project funding for energy efficiency investments and Federal agencies pay for the services over time, either on their utility bill, or through a separate demand-side management agreement.

“Waste prevention” means any change in the design, manufacturing, purchase, or use of materials or products, including packaging, to reduce their amount or toxicity before they are discarded. Waste prevention also refers to the reuse of products or materials.

## Environmental Management Systems (Sec. 103)

Each agency shall, at all appropriate organizational levels, develop, implement, and maintain an EMS, for identifying and addressing agency environmental issues and improving agency performance in accordance to the schedule to be agreed upon between the agency and the Federal Environmental Executive (FEE). The EMS shall reflect the EMS elements and framework found in the ISO 14001:2004(E) International Standard or equivalent, and once implemented, shall be reviewed and updated annually or more frequently, as appropriate by the senior manager accountable for implementation of that EMS. EMS shall be used for, but not limited to, the pursuit of sustainable practices described in this order, to support compliance with environmental and energy regulations and to enable the prevention of pollution and efficient energy management.

(a) Where an agency's environmental issues are best addressed in management of the operational elements of its facilities or organizations, and/or where pursuit of sustainable practices is best carried out at the facility or organizational level, the agency shall ensure that all appropriate facilities or organizations develop, implement, and maintain an EMS.

(b) Where an agency's environmental issues are primarily represented in the administrative, decision-making, and/or business infrastructure actions of that agency or its component organizations, and/or where pursuit of sustainable practices is best carried out at the agency or component level, the agency shall develop, implement, and maintain an EMS at that level to respond to those issues and opportunities. Agencies may develop, implement, and maintain an EMS at both the organizational or facility level and at the agency or component level.

(c) Where tenant, contractor, and concessionaire activities affect an agency's environmental issues, those activities shall be addressed in the development, implementation and maintenance of the EMS.

(d) Where an agency owns or manages public lands on which non-governmental entities are present and whose activities are permitted, licensed, or otherwise authorized or regulated, that agency shall consider the environmental impacts of such activities in its EMS.

(e) For the purpose of this order, an EMS shall be considered fully implemented when (1) it has been the subject of a formal audit by a qualified party outside the control or scope of the EMS, (2) audit findings have been recognized by the appropriate level of the agency implementing the EMS, and (3) the appropriate senior manager accountable for implementation of the EMS has declared conformance to EMS requirements. Once conformance has been declared, the EMS shall then be audited by a qualified party outside of the control or scope of the EMS at least every three years from the date of the initial declaration.

## **Compliance Management Plans**

(a) In those executive agencies where no EMS exists, at all appropriate organizational levels and in accordance to the schedule to be agreed upon between the agency and the FEE, those

executive agencies shall develop and implement compliance management plans based on the recommendations outlined in the Environmental Compliance Management Improvement Initiative dated October 6, 2004. Where an EMS exists at the appropriate organization level, the elements of the Compliance Management Plan shall be part of the EMS, and a separate compliance management plan is not required.

(b) Each compliance management plan shall formally include the following elements at the appropriate level:

(i) A clear, sustained, and up-to-date commitment by senior leadership to achieve and maintain environmental compliance. This commitment shall be integrated into agency strategic plans and agency policies.

(ii) Clearly articulated roles and responsibilities related to environmental performance at all levels to ensure accountability for less than desired environmental performance.

(iii) Implementation of an environmental compliance audit program that identifies compliance needs and possible root cause of non-compliance.

(iv) Integration of compliance management system information and resource allocation procedures to ensure that audits findings and possible non-compliance root causes are tracked and addressed, including allocation of funding.

## Energy Efficiency, Water Efficiency and Renewable Energy (Secs. 201, 202, and 203)

### Energy and Water Management Strategies and Tools

Each agency shall use a variety of energy management strategies and tools to meet the goals of the order, including the following:

- (a) Direct annual appropriated funding requests to implement high priority efficient energy and water management projects and all those with a 10-year payback or less.
- (b) Use Energy Savings Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC), when direct funds are not available and when life-cycle cost-effective, to reduce energy use and cost in facilities and operations. Renewable energy measures may be included in ESPC and UESC.
- (c) Use off-grid generation systems, including solar hot water, solar electric, solar outdoor lighting, small wind turbines, fuel cells, and other off-grid alternatives, where such systems are life-cycle cost-effective and offer benefits including energy efficiency, pollution prevention, source energy reductions, facility energy reliability, security enhancement, avoided infrastructure costs, or expedited service.
- (d) Conduct energy and water audits of at least 10 percent of facilities each year, meet Energy Star Building criteria, and integrate this building rating tool into general facility audits.
- (e) Explore efficiency opportunities in industrial facilities and EPA's Labs21 partnership to encourage the development of sustainable, high performance, and low-energy laboratories nationwide.
- (f) Purchase electricity from sources that use high efficiency electric generating technologies in order to reduce greenhouse gas intensity of the source of the electricity.

### Renewable Energy

**DOE shall issue detailed guidance within 90 days of issuance of this order regarding achievement of the renewable energy goal and better use and investment in off-grid generation.**

## Acquisition (Sec. 204)

### Office of Federal Procurement Policy Guidance

Within 90 days of the issuance of this order, the Office of Federal Procurement Policy shall issue guidance directed to the acquisition community on sustainable procurement policies and strategies. This guidance shall address, but not be limited to:

1. Requirements for an Effective Agency Acquisition Program and Purchasing Plan. The plans shall ensure compliance with statutory and Executive Order requirements for the preferential procurement of products and services. Elements of the program must minimally include:

(a) Training for acquisition staff, purchase cardholders, and purchase card administrators.

(b) Compliance monitoring and corrective action with regard to the requirements.

(c) Pilot programs for purchasing, testing, and use of newly available products or products not yet designated in the statutory programs.

(d) A written purchasing plan addressing mandatory procurement of:

- (1) EPA-designated items under section 6002 of the Resource Conservation and Recovery Act of 1976 (RCRA);
- (2) Energy Star, FEMP-designated, and water-efficient products under section 553 of the Energy Policy Act of 2005 and this order;
- (3) Alternative fuel vehicles and alternative fuels under section 303 of the Energy Policy Act of 1992, as amended by the Energy Policy Act of 2005;
- (4) Biobased products designated by the U.S. Department of Agriculture (USDA) under section 9002 of the Farm Security and Rural Investment Act of 2002 (FSRIA);
- (5) Environmentally preferable products and services;
- (6) Non-ozone depleting substances under the Clean Air Act.

(e) Justifications for not purchasing the products or services listed in (d), including written justifications for any purchase or acquisition worth more than \$3,000.

2. Coordination with Federal Acquisition Policy. OFPP guidance shall further instruct agencies on coordination of this program with other acquisition policy and initiatives. This may include:

- (i) using Federal Business Opportunities (FedBizOpps) and other e-procurement tools to publicize and promote requirements for sustainable acquisition;
- (ii) adding requirements to agencies' automated contract writing systems;
- (iii) including requirements for sustainability in annual procurement forecasts;

- (iv) identifying strategic sourcing opportunities for purchasing preferential products and services;
- (v) tracking compliance through the Federal Procurement Data System, and
- (vi) incorporating these goals into Competitive Sourcing studies.

3. Policy Compliance and Listing of Preferred Products in Federal Catalogs. The OFPP policy letter shall address the provision of compliant products by the sources of supply, such as GSA's Federal Acquisition Service, Defense Logistics Agency (DLA), the Javits-Wagner-O'Day (JWOD) program, or Federal Prison Industries (UNICOR). The policy letter shall also address implementation of the sustainable procurement requirements consistent with other provisions of Federal procurement law.

#### Minimum Content Standard for Printing and Writing Paper

(a) Each agency shall continue to use the following minimum content standards when purchasing printing and writing papers or support services that include the supply of written documents: 30 percent post-consumer fiber or, if papers containing 30 percent post-consumer fiber are not reasonably available, do not meet reasonable performance requirements, or are only available at an unreasonable price, 20 percent post-consumer fiber.

(b) EPA shall recommend in a Recovered Materials Advisory Notice the types of printing and writing papers to which this content standard applies.

#### Review of Comprehensive Procurement Guidelines

EPA shall review existing product designations in the Comprehensive Procurement Guidelines for effectiveness, obsolescence, and consistency with the biobased products designation program, environmentally preferable purchasing program, and Energy Star® program. EPA shall delete those designations that are ineffective in meeting the objectives of RCRA section 6002 or are obsolete due to market changes.

#### Environmentally Preferable Products and Services

Each agency shall purchase environmentally preferable products and services, using EPA's Guidance on the Acquisition of Environmentally Preferable Products and Services. At a minimum, agencies shall purchase environmentally preferable janitorial products and services, office electronic products, and meeting services.

#### Energy Efficient Standby Power Devices

(a) Each agency, when it purchases commercially available, off-the-shelf products that use external standby power devices, or that contain an internal standby power function, shall purchase products that meet Federal Energy Management Program specifications for low standby for covered products. If such products are not available, agencies shall purchase products with the lowest standby power wattage while in their standby power-consuming mode. Agencies shall adhere to these requirements, when life-cycle cost-effective and practicable and where the relevant product's utility and performance are not compromised as a result.

## Reporting

OFPP and OFEE shall continue to jointly send an annual data questionnaire to the agencies to obtain information on agency progress in implementing the purchasing, waste prevention, and recycling requirements of the order, RCRA, the Energy Policy Act, and FSRIA. The questionnaire shall incorporate the tracking and reporting recommendations of the Coordinating Committee established under section 304 of this order.

## ***Prevention of Pollution and Management of Toxic and Hazardous Materials***

(a) Within 12 months of the date of this order, each agency, at all appropriate organizational levels including appropriate facilities and organizations, shall develop written goals and support actions to identify and reduce the release and use of toxic and hazardous chemicals and materials including toxic chemicals, hazardous substances, ozone-depleting substances (ODSs), and other pollutants that may result in significant harm to human health or the environment.

(b) In identifying the list of toxic chemicals, hazardous substances, and other pollutants in subsection (a), each agency shall consider:

1. Risks to people, property, the environment, mission capability, and business costs.
2. Existing environmental hazard lists such as priority chemicals identified by EPA's Resource Conservation Challenge, the substitutes for ODSs identified by EPA's Significant New Alternatives Policy Program, and the Department of Defense Watch List Chemicals.
3. Where appropriate, each agency shall consider regional- and watershed-based environmental improvement efforts such as the Chesapeake Bay Prioritized Toxics of Concern Program, the Great Lakes Bi-national Strategy or local watershed efforts.

(c) Each agency shall comply with the provisions set forth in sections 301 through 313 of EPCRA, section 6607 of PPA, all implementing regulations, and future amendments to these authorities, in light of applicable EPA guidance and without regard to the Standard Industrial Classification (SIC) or North American Industrial Classification System (NAICS) delineations.

## **Recycling Programs**

(a) Each agency shall maintain cost-effective waste prevention and recycling programs in all of its facilities, and where appropriate, leased facilities and facilities managed by the General Services Administration (GSA). Each agency should recycle materials to the maximum extent practicable, considering cost, return on investment, and availability of markets. Recycling programs shall be compatible with applicable State and local recycling requirements and can include cooperative programs with State or local agencies or non-profit organizations.

(b) Each agency also shall continue to designate recycling coordinators for each facility or installation that has a recycling program.

## **Retention of Funds**

(a) The GSA Administrator shall continue the program that returns to agencies the proceeds from the sale of recycled materials.

(b) Each agency in non-GSA managed facilities, to the extent permitted by law, shall continue to implement their plans to retain the proceeds from the sale of recovered materials.

## Sustainable Design/High Performance Buildings (Secs. 203, 204 and 206)

(a) Each agency shall locate, design, construct, maintain, and operate its buildings and facilities in an energy- and water-efficient, sustainable, and economically viable manner, consistent with its mission. In implementing the goals of this order, each agency shall pursue the following objectives:

- (1) Reduction in life cycle cost of facilities' environmental and energy attributes.
- (2) Improvement in energy efficiency and water conservation.
- (3) Provision of safe, healthy, and productive built environments.

### (b) High Performance Building Plans

(1) Each agency shall develop and submit to OMB a plan for all new facilities and renovation projects to implement design, construction, and maintenance and operation practices in support of high-performance buildings goals of this order. This plan shall also address existing facilities' maintenance and operation practices in support of the goals of this order.

(2) The plan shall address how to employ integrated design principles, optimize energy performance, protect and conserve water, enhance indoor environmental quality, and reduce environmental impacts of materials in accordance with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*. Technical Guidance for implementing the Guiding Principles and other best practices in the Whole Building Design Guide ([www.wbdg.org](http://www.wbdg.org)).

(3) The plan shall be developed and implemented in coordination with designers, engineers, architects, energy, environmental, real property, facility managers and maintenance personnel, acquisition and financial officers within each agency.

(4) OFEE shall assist and support OMB as appropriate in fulfilling these requirements.

### Buildings Showcase

GSA shall showcase high performance and sustainable buildings and supply and services acquisition.

### Leased Facilities

When entering into leases for Federal occupancy, including the renegotiation or extension of existing leases, agencies shall incorporate lease provisions that support the Guiding Principles.

Build-to-suit lease solicitations shall contain criteria encouraging sustainable design and

development, energy efficiency, and verification of building performance per the Guiding Principles. In addition, all government-owned military housing shall incorporate the sustainable building goals/principles described in sec. 206 of the order.

Each agency shall include a preference for buildings that meet the goals of the Guiding Principles in the selection criteria for acquiring leased buildings.

### District Energy Systems

Where life-cycle cost effective, each agency shall implement district energy systems, and other highly efficient systems, in new construction or retrofit projects when life-cycle cost-effective.

## Fleet Management (Sec. 207)

### Applicability

The fleet management provisions of this order apply to fleets covered by section 303(b) of the Energy Policy Act of 1992. The agency petroleum reduction goal for fleets in section 207 of the order applies to each agency operating 20 or more motor vehicles within the United States. Each agency shall, when calculating the replacement or reduction levels required in section 207, include fuel use from all covered vehicles, including light-duty, medium-duty, and heavy-duty vehicles unless such vehicles meet the following exemptions. DOE will determine if vehicles have been properly exempted.

- (a) Motor vehicles used for motor vehicle manufacturer product evaluations or tests.
- (b) Law enforcement and emergency vehicles, including those vehicles that are used in an emergency capacity, by the agency, greater than 75 percent of the year. Agencies with vehicles meeting this definition (as approved by DOE) will have a baseline (and related record-keeping) adjustment to reflect this change.
- (c) Military tactical vehicles, defined as motor vehicles (excluding general-purpose motor vehicles) designed to military specification or a commercially designed motor vehicle modified to military specification to meet direct transportation support of combat or tactical operations. These vehicles are inherently mission-critical and are used for no other purpose.
- (d) Vehicles owned and operated by the Central Intelligence Agency.
- (e) Vehicles that are not licensed for use on all roads and highways.
- (f) Federally owned vehicles operated solely by Indian nations or state-run Fish and Wildlife services, as applicable.

### Fueling Infrastructure

- (a) To support the use of alternative fuel in AFVs, each agency shall, to the maximum extent practicable, arrange for fueling at commercial facilities that offer alternative fuels for sale to the public. When placing AFVs at their facilities, each agency shall give preference to locations that have, or will soon have, access to alternative fueling stations.
- (b) Each agency should team with State, local, and private entities to support the expansion and use of public access alternative fuel refueling stations. This effort shall include evaluating streamlining regulatory and permitting requirements associated with locating, constructing, and operating such refueling stations.
- (c) Each agency shall assist and support GSA and DOE in their efforts to resolve alternative fuel usage tracking issues with industry.

### Plug-In Hybrids

GSA shall issue a fleet order for plug-in hybrids in all vehicle categories when such vehicles become commercially available at a reasonable incremental cost to comparable vehicles (less than 25 percent).

### Data and Tracking

(a) Each covered agency is required to provide compliance data to OMB and DOE no later than December 31 of each year, starting with the FY 2006 data and each year thereafter.

(b) In fulfilling the AFV acquisition requirements of section 303 of the EPCA of 1992, regardless of geographic placement, each agency shall receive the following credits:

- (1) two credits for each dedicated light-duty AFV,
- (2) three credits for each dedicated medium-duty AFV, and
- (3) four credits for each dedicated heavy-duty AFV.

(c) Each dual-fuel AFV (flexible fuel or bi-fuel) will receive one credit, regardless of vehicle size class. No credit is provided for AFVs that are not licensed for use on all roads and highways. This credit is available only for vehicles classified as AFVs under the Energy Policy Act of 1992.

(d) Each agency shall implement internal policies that will ensure accurate tracking of the vehicle acquisitions and inventory, mileage, fuel consumption and other relevant data.

(e) In consultation with OMB, DOE shall specify the format and collection methods for data to be submitted. Data shall include vehicle data by fuel type and location, including street address and/or zip code.

(f) GSA shall supply to each agency on a monthly basis, by vehicle tag number, fuel use data (petroleum and alternative fuel) for covered GSA-leased vehicles. Each agency shall track comparable data for all covered agency-owned and commercially leased vehicles.

(g) Within 90 days of issuance of this order, GSA and the Defense Energy Support Center (DESC) shall resolve all fuel-related billing and payment issues regarding cross-service agreements with GSA-leased vehicles using on-site alternative fuel stations provided by DESC.

### Fleet Improvements

To meet the goals of this order, each agency shall “right-size” its fleets, employing the most fuel-efficient vehicle for the required task and having the appropriate number of vehicles relative to need.

(a) Each agency shall acquire high fuel economy vehicles, including the acquisition of smaller sized vehicles, hybrid-electric vehicles, and other advanced technology vehicles.

(b) Each agency shall also employ efficiency strategies such as low rolling resistant tires, synthetic oil, and other technologies as they become available.

### Petroleum Reduction

To achieve the petroleum reduction goal of Sec. 207, each agency shall strive to reduce vehicle miles traveled through fleet management practices, as well through other practices such as use of mass transportation/agency shuttles and increased use of videoconferencing.

## Electronics Stewardship (Sec. 208)

(a) Each agency shall seek to reduce the environmental and energy impacts of its electronic equipment purchase, use, and disposal through continual improvements to the acquisition, design, specifications, material choices, distribution, and use of new electronic equipment, and the reuse, de-manufacturing, and recycling of surplus electronic equipment. Each agency shall:

(1) Increase its demand for more energy efficient and environmentally sustainable electronic equipment that is cost effective, while maintaining or improving equipment quality and performance.

(2) Identify and implement best life cycle management business practices for electronic equipment.

(3) Reduce the economic and environmental life cycle costs of Federal electronic equipment.

(4) Promote growth of the market and infrastructure for the reuse, donation, transfer, sale, de-manufacturing, and recycling of obsolete electronic equipment.

(5) Coordinate and cooperate with other public and private sector efforts aimed at achieving similar goals.

(b) Within 120 days of the date of this order, each agency shall develop a plan to implement electronics stewardship practices in support of the goals of Section 208 of this order. The plan shall:

(1) Address the three life-cycle phases for electronics assets: acquisition, operations and maintenance, and end-of life.

(2) Be developed and implemented in coordination with the energy, environmental, information technology, acquisition, financial and property officers, and facility managers and maintenance personnel, within each agency.

### Federal Electronics Challenge

Each agency and its facilities shall choose either to become a partner in the Federal Electronics Challenge, or to implement an equivalent electronics stewardship program that addresses purchase, operation and maintenance, and end-of-life management strategies for electronic assets consistent with FEC's recommended practices and guidelines.

END



## Center for the Advancement of Sustainability Innovations - CASI

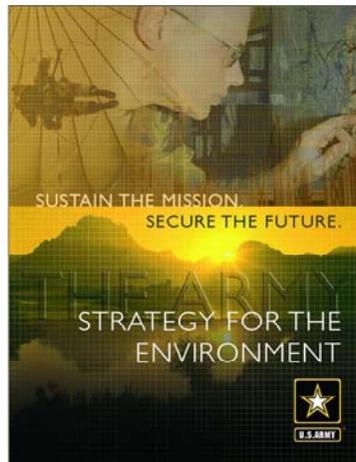
Construction Engineering Research Laboratory,  
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27-373-6735 . Facsimile: 217-373-7222 . Email: [william.d.goran@us.army.mil](mailto:william.d.goran@us.army.mil)

### The Army Strategy for the Environment and the Army Energy Strategy for Installations require new technologies, knowledge sharing and support

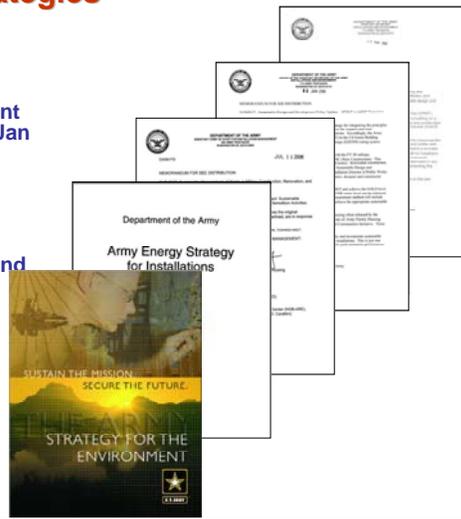
***“Sustainability connects our activities today to those of tomorrow with sound business and environmental practices.”*** [2004, GEN Schoomaker, Chief of Staff of the Army and Hon. R.L. Brownlee, Secretary of the Army]

- **Goals**
  - Foster a sustainability ethic
  - Strengthen Army operations
  - Meet test, training, and mission requirements
  - Minimize impacts and total ownership costs
  - Enhance well-being
  - Drive innovation



## ERDC/CERL has a proven track record in providing technical support for development of sustainability strategies

- Sustainable Project Rating Tool (SPiRiT) – GSA award, ASA(I&E) Policy 2002
- Sustainable Design and Development ASA(I&E) Policy Update Memo dtd Jan 2006 (SPiRiT to LEED)
- Sustainable Mgmt of Waste in MILCON, etc. ACSIM Memo dtd Jul 2006
- ACSIM Technology Standardization Program – 2005: LED traffic lights and waterless urinals mandated
- 2004 Army Strategy for the Environment (contributions)
- 2005 Army Energy Strategy for Installations (contributions)
- OSD 320/366 reports on Encroachment (contributions)



U.S. Army Engineer Research and Development Center  
Construction Engineering Research Laboratory

## ERDC's Center will offer expertise in a variety of fields, including:

- Planning (regional, master, facility, infrastructure)
- Design (facilities, basecamps, infrastructure, landscapes)
- Energy conservation (options analysis, cost/benefit analysis)
- Fuel cells and renewable energy sources and systems (solar, wind, geothermal, biomass & microgrids)
- Sustainable Materials
- Military ecosystems (watersheds, wetlands, habitats, mission impact and ecosystem service dynamics)
- Preservation (historic structures, cultural resources, landscapes)
- Operations (facilities, infrastructures, and lands)
- Economics and life cycle cost analysis

U.S. Army Engineer Research and Development Center  
Construction Engineering Research Laboratory

## **CASI will provide improved access to the expertise and services that the Army needs**

- **Facilitate stakeholder forums to identify “next step” roadmaps and action plans for achieving Army (and Defense) sustainability objectives**
- **Leverages investment of customers by building and retaining corporate knowledge in web-based frameworks**
- **Evaluate context and performance (assessments) of sustainability initiatives**
- **Provide a one-stop shop for Army and Defense organizations to gain access to expertise and tools that support sustainability**
- **Promotes communication and information dissemination about sustainability principles and practices**
  - **Monthly installation “sustainable solutions” video conferences between ERDC and Bragg (and other installations and service providers)**

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Construction Engineering Research Laboratory

## **Projects Underway\* (or in the Works)**

- **Sustainability Standards**
  - **Web-based LEED course for construction managers - USACE\***
  - **Tailored assessment plan with Green Building Council for “large volume” organization - USACE\***
  - **Evaluations of LEED ND (neighborhood development - with NDCEE)\***
  - **Exchange with Chinese military – OSD/ACSIM**
  - **LEED-EB (existing building) – ACSIM**
  - **LEED Implementation Workshops – Ft. Hood\***
  - **LEED Showcase Facility – ESTCP\***
- **Sustainability Assessments**
  - **Regional planning assessment (SSA/AEPI)\***
  - **Installation sustainability assessment (AEPI)**
  - **ISR-NI (linkage to mission analysis)**
  - **Sustainable acquisition assessments**
  - **Energy conservation and assessments for buildings (ACSIM/IMA)\***
  - **Energy use assessments for industrial buildings (ACSIM/IMA)\***

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\* funded project

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## These are the next steps...

- A stakeholder group will be formed to help identify and prioritize initiatives
- Also the Center is creating agreements and a forum for linkages with partnering organizations
- Web capabilities and linkages to the Army Sustainability website will be implemented early in 2007

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U.S. Army Engineer Research and Development Center  
Construction Engineering Research Laboratory

## Center affiliates will bring a breadth and depth of knowledge relating to sustainability challenges

- ERDC
  - Environmental Laboratory
  - Information Technology Laboratory
  - Cold Regions Research and Engineering Laboratory
  - Topographic Engineering Laboratory
- University of Illinois
  - Center for Sustainable Design Assistance
  - Smart Energy Design Assistance Center
- Sandia National Laboratory, NREL
- National Defense Center for Environmental Excellence (NDCEE)
- Huntsville Installation Center of Expertise
- Army Environmental Center



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U.S. Army Engineer Research and Development Center  
Construction Engineering Research Laboratory



**TRANSFERRING TECHNOLOGY SOLUTIONS**  
Supporting Readiness, Sustainability, and Transformation

# Sustainable Installations Initiative

*Advance the Vision – Drive Innovation*

David S. Eady, CTC/NDCEE

NDCEE is operated by: 



National Defense Center for Environmental Excellence

## Sustainable Installations Initiative (SII): Advancing the Vision – Driving Innovation

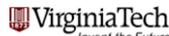
- 3-year (FY04-06) congressionally directed program with BA4 funds
- Support DoD installations to develop sustainability plans and management systems to achieve objectives
- Identify technology requirements and opportunities—develop “roadmaps” to guide implementation
- Develop, demonstrate and validate technology solutions that support installation sustainability goals



## Current SII Participants & Contributors (to name a few – but not all)



Booz | Allen | Hamilton



## FY04 SII – Laying the Foundation

- **Information Exchange and Needs Assessment**
  - Technology-focused workshops in Southeast Region
  - Multi-service awareness workshop in Hawai'i
- **Technology Opportunities and Project Definition**
  - Access database of sustainability plans and projects
  - Comprehensive list of technology needs and opportunities
- **Strategic Planning and Tool Development**
  - Roadmaps to guide implementation plans for energy projects
  - Knowledge base of best available (sustainable) technologies and strategies for facilities and infrastructure



## FY05 SII – Evaluating Options & Making Plans

- **Sustainable Facilities and Infrastructure Assessment**
  - Targets Army Transformation and BRAC 2005 investments, using Fort Belvoir area development plans and installation master plan
  - Evaluates applicability of draft LEED rating systems and application guides for Army sustainable development planning
- **Installation Sustainability Planning Support**
  - Pennsylvania (PA) National Guard (“Fort PA”)
  - US Army Garrison Hawai‘i
  - US Army Installation Command - Europe



## FY05 SII – Bending Metal

- **Demonstration and Validation – Zero Energy Homes**
  - Analyze costs and benefits (i.e. performance) of renewable energy technologies on existing military housing in Hawai‘i
  - Optimize technology solutions for military housing to achieve a zero (net) energy requirement
  - Engaged with Actus Lend Lease and US Army Garrison Hawai‘i
- **Demonstration and Validation - Landscape Management System**
  - Identified as priority project for Navy NW and other Pacific NW military installations as a forestry/fire management tool
  - Used for fire risk assessments, non-market value assessments, insect thresholds, and carbon accounting
  - Models landscape-level impacts and changes



## FY06 SII – Institutionalize Sustainability

- **Army and DoD Sustainability Program Development and Implementation**
  - ✓ Provide strategic-level planning and analysis
  - ✓ Support installation sustainability planning process
- **Technology development, demonstration and validation**
  - ✓ Drive innovation and transfer technology solutions in support of sustainability objectives (*"bend metal"*)
  - ✓ Demonstrate costs and benefits of sustainable alternatives
  - ✓ Focus on sustainable buildings, renewable energy systems, water resources, training landscapes, and industrial processes



## Path Forward: Regional Sustainability Solutions

- Joint-service analysis and implementation
  - Strategic sustainability assessments
  - Sustainable joint basing strategies
  - Joint sustainability implementation plans
  - Global basing strategies
- Regional planning initiatives
  - National Guard state organizations
  - Hawaiian Islands and Pacific Rim region
  - Southwest region
  - Tidewater region / Hampton Roads
- Technology demonstration and validation projects



## Other Sustainability-Related NDCEE Projects

- **Joint Service Initiative**
  - DoD Natural Infrastructure Management Framework Development
  - Overseas Field Validation of Army Installation Status Report for Natural Infrastructure
  - Vegetative Roofing
- **Solid Waste Reduction Technologies**
  - Construction and Demolition Waste
  - Food waste
  - Deployment waste
- **Natural Infrastructure and Sustainability Analysis for Global Basing**
- **Strategic Sustainability Assessment (SSA) Project**
  - Regional sustainability analysis methods
  - Future impacts to Army triple bottom line
  - Army Foresight Reports
- **Sustainability Analysis Tools for Strategic Planning and Decision-Making**
- **Mission Critical ESOH Technologies**



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