High Performance and Sustainable Building:

A Federal lay of the land

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GSA PBS
Sustainable Design Expert

Overview

• Guiding Principles
• The Policy Landscape
• Interagency Sustainability Working Group (ISWG)
• The Feds and LEED
• Tools and Resources
• Focus on Existing Buildings
Sustainable buildings balance the triple bottom line by utilizing an integrated approach to design, construction, operation and decommissioning.
HPSB Policy Drivers


- **EPACT, Section 109 (2005)** – 30% below ASHRAE 90.1-2004; Cost effective sustainable design for new and replacement buildings

- **OMB Environmental Scorecard** – Metric #3 on HPSB
  - Real Property Asset Management Scorecard

- **MOU on Federal Leadership in HPSB (2006)**

- **EO 13423 and Implementing Instructions (2007)**

15% by 2015

- Pollution Prevention
- Renewable Energy
- Sustainable Procurement
- Greenhouse Gases
- Alternative Fuels
- Petroleum Reduction
- Energy Efficiency
- Water Conservation
• Due in early July and January with all Scorecard reporting
• Tracks and assesses agency implementation of 15% by 2015 requirement
• “Stand-alone” document or incorporate into the agency Asset Management Plan
• Required components include:
  – clear, quantifiable, achievable, and communicated vision
  – HPSB performance targets for all buildings
  – HPSB assessment of the existing building portfolio
  – cross functional team responsible for decision-making on results-oriented action items
<table>
<thead>
<tr>
<th>Management and Oversight</th>
<th>Private Sector and Non-Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of Management and Budget (OMB) – Scorecards</td>
<td><strong>e.g. USGBC, ASHRAE, etc</strong></td>
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<tr>
<td>Office of the Federal Environmental Executive (OFEE) – EO 13423</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Guidance</th>
<th>Office of High Performance Commercial Green Building (DOE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interagency Sustainability Working Group (ISWG)</td>
<td></td>
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<tr>
<td>Office of High Performance Federal Green Buildings (GSA)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Technical Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Working Groups, Offices, ISWG reps</td>
<td>- Whole Building Design Guide</td>
</tr>
<tr>
<td>Site-level Facility / Energy Managers and HPSB staff</td>
<td>- Energy Star Buildings / Products</td>
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<tr>
<td></td>
<td>- EPA Green Building Program</td>
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<td>- Labs21</td>
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<td></td>
<td>- Data Centers</td>
</tr>
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<td></td>
<td>- Building Technologies R&amp;D Subcommittee</td>
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<td></td>
<td>- National Institute of Standards and Technology</td>
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</tbody>
</table>
• Authority
  – Working Group under the Interagency Energy Management Task Force since 2001

• 280 members (~65 core) from across the Federal government and industry

• Bi-monthly meetings

• Purpose:
  – Serves as forum for information exchange
  – Advocates for sustainable building practices in new construction and existing buildings
  – Eliminates barriers to sustainable design in the Federal sector by developing policy, technical guidance and other resources
Federal Buildings Awarded LEED Certification
(as of 3-06-08)

82 Federal LEED Buildings!
### Agencies & Building Types

#### Agency Totals
- DOD 15
- DOE 13
- DOI 9
- GSA 8
- EPA 7
- DOC 3
- HHS 3
- NASA 3
- SSA 3
- DHS 3
- USDA 3
- DOJ 2
- DOT 2
- DOS 2
- DOL 1
- DVA 1

#### Building Types
- Office 37
- Laboratory 13
- Dormitory 5
- Warehouse 4
- Courthouse 4
- School 4
- Recreation 3
- Visitor Center 2
- Medical Center 1
- Transit Station 1
- Prison 1
- Rescue Station 1
- Restaurant 1

#### Rating Systems
- New Construction 77
- Existing Buildings 2
- Commercial Interiors 2
- Core & Shell 1

#### Certification Level
- Certified 43%
- Silver 36%
- Gold 20%

* GSA managed 18 additional projects with other federal agencies
** 5 buildings are listed as confidential
*** 23 certified buildings non-Federally owned (mostly build-to-suit lease)
<table>
<thead>
<tr>
<th>Agency</th>
<th>LEED Goal</th>
<th>Goal Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOE</td>
<td>Gold</td>
<td>Required for NC/MR &gt; $5M; LEED Gold preference for leases</td>
</tr>
<tr>
<td>EPA</td>
<td>Gold</td>
<td>Required for NC &gt; 20,000 sqft</td>
</tr>
<tr>
<td>NASA</td>
<td>Silver</td>
<td>Silver is required, strive for Gold</td>
</tr>
<tr>
<td>Defense – Army</td>
<td>Silver</td>
<td>Vertical construction required; LEED for Homes adopted</td>
</tr>
<tr>
<td>Commerce – NWS</td>
<td>Silver</td>
<td>“Shall strive for minimum of LEED Silver”</td>
</tr>
<tr>
<td>USDA – Forest Service</td>
<td>Silver</td>
<td>Required for offices, visitor centers, research facilities &gt;2500 sqft</td>
</tr>
<tr>
<td>USDA</td>
<td>Silver</td>
<td>Design for LEED Silver</td>
</tr>
<tr>
<td>GSA</td>
<td>Certified</td>
<td>Required for NC/MR, Silver recommended (some regions require)</td>
</tr>
<tr>
<td>State</td>
<td>Certified</td>
<td>Required now</td>
</tr>
<tr>
<td>Defense – Navy</td>
<td>Certified</td>
<td>Required now, potentially Silver in near future</td>
</tr>
<tr>
<td>HHS</td>
<td>Certified</td>
<td>LEED or Green Globes for projects &gt; $3M</td>
</tr>
<tr>
<td>Defense - Pentagon</td>
<td>Certified</td>
<td>Long-term goal of LEED rating for entire Pentagon</td>
</tr>
<tr>
<td>Smithsonian</td>
<td>Certified</td>
<td>NC/MR to aim for a minimum of LEED certification</td>
</tr>
<tr>
<td>Defense - Air Force</td>
<td>Certified</td>
<td>Required by FY '09, self-certified</td>
</tr>
<tr>
<td>Interior</td>
<td>-</td>
<td>Incorporating LEED criteria for NC and EB, not required</td>
</tr>
</tbody>
</table>
• Interagency cooperation managed by NIBS
• Design Guidance focused on Federal facilities
• Federal Green Construction Guide for Specifiers
• **FREE** Continuing Education
  1) Integrated Design
  2) Whole Building Approach to Labs
  3) Planning for Secure Buildings
  4) Optimizing O&M
• Feb 2008: about 33,500 hits and 57,000 downloads *per day*

www.wbdg.org
FEMP’s High Performance Federal Buildings Database: 43 Federal Case Studies

www.eere.energy.gov/femp/highperformance

BT’s High Performance Buildings Database: 99 Total Case Studies

www.eere.energy.gov/buildings/database
### Selected Projects

Your 43 currently selected project(s) are shown in the table below. (click here for help).

<table>
<thead>
<tr>
<th>Picture</th>
<th>Name</th>
<th>Owner</th>
<th>Location</th>
<th>Building Type</th>
<th>Floor Area (ft²)</th>
<th>Annual Purchased Energy (kEtuf²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alfred A. Arraj U.S. Courthouse</td>
<td>General Services Administration</td>
<td>Denver, CO</td>
<td>Public order &amp; safety</td>
<td>319,000</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Annie Creek Restaurant and Gift Shop</td>
<td>Xanterra Parks and Resorts</td>
<td>Crater Lake, OR</td>
<td>Restaurant; Retail</td>
<td>10,400</td>
<td>785</td>
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<tr>
<td></td>
<td>Assateague Island National Seashore</td>
<td>National Park Service</td>
<td>Chincoteague, VA</td>
<td>Recreation; Interpretive Center; Park</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Assateague Mobile Bathhouse Project</td>
<td>National Park Service</td>
<td>Chincoteague, VA</td>
<td>Park; Other</td>
<td></td>
<td></td>
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<td></td>
<td>BPA Ampere Annex</td>
<td>Bonneville Power Administration (BPA)</td>
<td>Vancouver, WA</td>
<td>Commercial office; Industrial</td>
<td>3,000</td>
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<td></td>
<td>Baca/Dio'y oshi Community School</td>
<td>Bureau of Indian Affairs</td>
<td>Prewitt, NM</td>
<td>K-12 education</td>
<td>76,900</td>
<td>33</td>
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<tr>
<td></td>
<td>Bremerton B&amp;Q Building 1044</td>
<td>Naval Base Kitsap-Bremerton</td>
<td>Bremerton, WA</td>
<td>Multi-unit residential</td>
<td>99,800</td>
<td>46.2</td>
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<td></td>
<td>CDC Headquarters</td>
<td>Centers for Disease Control and Prevention</td>
<td>Atlanta, GA</td>
<td>Commercial office; Public order &amp; safety</td>
<td>355,000</td>
<td>22.3</td>
</tr>
</tbody>
</table>
1. Sustainable Building Guiding Principles for EB (in development)
2. Incorporating HPSB into Real Property Asset Management and Environmental Management Systems
3. Assessment tools for EB and Training (e.g. LEED EB workshops)
4. Addressing additional first cost for some HPSB Guiding Principles
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www.wbdg.org/sustainableEO