Federal Buildings Personnel Training Act 2010

NEBB Conference

John Simpson, P.E., LEED AP O+M
• Core Competencies, Curriculum for Federal Facilities Workforce – June 2012
• Federal Personnel must demonstrate CC through: courses, certifications, licenses, degrees and registrations – June 2013
• Continuing Education Program – develop or identify
• FM Service Contractors
FEDERAL HIGH-PERFORMANCE GREEN BUILDINGS

Identify Core Competencies for anyone performing:

- Building O&M
- Energy Management
- Sustainability
- Water Efficiency
- Building Performance Measures

Three additional areas are included in the law and thus our focus is:

- Decreased Operating Costs: 8.9% → 13.6%
- Increased Building Values: 7.5% → 10.9%
- Improvement in ROI: 6.6% → 9.9%
- Increased Occupancy: 3.5% → 6.4%
- Rent Rise: 3.0% → 6.1%

Green Building saves up to 50% in energy costs, leading to 33%-39% reduction in CO2 emissions


www.nyas.org
Step 1

- National Program Development
- Research on existing Facilities
- Operation and Management Programs
- Utilized existing DOE/NREL Project

The Bennett Federal Office Building
Step 1

• Breakdown into manageable parts:
  ✓ CC, methods to demo, curriculum — 2012
  ✓ Continuing Ed, Contract modifications and method to demo — late 2012-2013
Step 2

Core Competencies (Synthesis of Resources)

- Facility Managers
- Building Operators/Engineers
- Resource Efficiency Managers

Resources

Crosswalks of Many Organizations

Job Task Analysis + Review and Comment

Knowledge Hubs

SMEs and Other Resources

IFMA, FEAA, BOMA, ASHRAE, AEE, AFE, USGBC...
GSA/PBS, DOD, DOE, FAA, VA...
& other Industry, Academic, and Gov Agency Pubs
& other NAS Pubs
Core Competencies for Federal Facilities Asset Management Through 2020: Transformational Strategies
<table>
<thead>
<tr>
<th>Step 2</th>
<th>DRAFT PROPOSED Core Competencies for Level I Federal Facilities Manager (GS5,7, 9-11) (Junior Officers) (Senior Enlisted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical</strong></td>
<td><strong>Business</strong></td>
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<tr>
<td><strong>Energy Management</strong></td>
<td><strong>Contracting</strong></td>
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<td>1. Demonstrate knowledge of your responsibilities regarding energy management - CAFE, HVAC, etc.</td>
<td>1. Demonstrate understanding of the concepts of Life-Cycle Analysis and how to use them to support strategic decision-making. How can you use these in your job?</td>
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<td>2. Demonstrate knowledge of your interface with the local or regional energy manager or energy team</td>
<td>2. Contract generally by way of competitive bidding and the award of contracts. What processes does your organization use to award contracts?</td>
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<td>3. Demonstrate knowledge of the facility energy reduction goals and what your part is in meeting those goals</td>
<td>3. Demonstrate understanding of the concepts of LEED, ENERGY STAR, and ASHRAE standards. Are these concepts relevant to your job?</td>
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<td>4. Demonstrate understanding of renewable resources and methods to reduce consumption of non-renewable resources, minimize waste, and increase reuse/reduction/recovery</td>
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<td>5. Sustainability</td>
<td>5. Demonstrate understanding of your job responsibilities as it relates to sustainability. What processes does your organization use to address sustainability issues?</td>
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<td><strong>Life-cycle Analyses</strong></td>
<td><strong>Occupant Interface</strong></td>
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<td>1. Demonstrate knowledge of the mission of your agency and how does your facility support that mission?</td>
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<td>7. Leadership</td>
<td><strong>Safety, Security, Emergency Management</strong></td>
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<td>1. Demonstrate understanding of your agency’s mission and how mission accomplishment is measured</td>
<td>1. Demonstrate understanding of the concepts of LEED, ENERGY STAR, and ASHRAE standards. Are these concepts relevant to your job?</td>
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<td>2. Demonstrate understanding of how your job, and your leadership, contributes to that mission and your agency’s mission</td>
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<td>3. Demonstrate understanding of your role as a member of the team in the event of a crisis and how team members work together to ensure leadership opportunities are seized and new teams are formed through actions and actions taken</td>
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<td>4. Regulatory/Statutory/Agency Compliance</td>
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### Core Competencies – Government Facility Managers

#### Level I (GS7, 9-11) and Junior Officers/Senior Enlisted

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<th>Technical</th>
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| 1. Building Systems | a) Demonstrate an appropriate level knowledge of all building related systems and components specific to the individual’s facility (ies). Systems and programs include: HVAC, mechanical, electrical, plumbing, structural, roofing, landscape, elevators, pest control, waste management, CMMS, environmental, safety, security, fire, emergency response, energy, and preventative maintenance. Competence in the process by which this knowledge was developed and how that process could be used to develop the knowledge of more and different facilities. Location of O&M manuals for all systems and components.  
b) Demonstrate knowledge of IT systems: In-house SME, typical service issues and solutions, contact information for service calls, priority of restoration, redundancy requirements, access requirements and occupant requirements.  
c) Demonstrate knowledge of key building performance measures, where and how to read them, reporting requirements and your impact on them.  
d) Demonstrate an appropriate level of knowledge of Building Automation System (BAS) and how your job interfaces with it. |
| 2. Continuous Retuning | a) Demonstrate an understanding your interface with the building operators/technicians and energy manager (if appropriate).  
b) Demonstrate an understanding what data is necessary for continuous retuning and how your job impacts that data.  
c) Demonstrate knowledge of what to do in case of a system failure an/or component failure. What are the systems and/or components with high failure rate or susceptibility of performance degradation? |
| 3. Energy Management | a) Demonstrate knowledge of your responsibilities regarding energy management – COTR, M&V, audits etc?  
b) Demonstrate knowledge of your interface with the local or regional energy manager or energy SME?  
c) Demonstrate knowledge of the facility energy reduction goals and what is your part in meeting them?  
d) Demonstrate an understanding the local energy and conservation programs. |
| 4. Sustainability | a) Demonstrate knowledge of renewable resources and methods to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments.  
b) Demonstrate knowledge of water efficiency principles that are applicable in both the public and private arena; knowledge of goals, baseline, and target.  
c) Demonstrate knowledge of your agency’s Strategic Sustainability Performance Plan (SSPP) and your role in meeting its goals. |
## Step 2

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<th>5. Life-cycle Analysis</th>
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<td>d) Demonstrate knowledge of where to find information on Sustainability initiatives and subject matter experts.</td>
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<td>e) Demonstrate knowledge of regulations other than SSPP and how those regulations impact your job.</td>
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<td>f) Demonstrate knowledge of your Agency’s and your facility’s resiliency and adaptation initiatives.</td>
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<td>a) Demonstrate knowledge of the mission of your agency and how does your facility support that mission?</td>
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<td>c) Demonstrate understanding of how to use LCA software if required.</td>
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<th>Business</th>
<th>6. Contracting</th>
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<td></td>
<td>a) Complete government COTR requirements.</td>
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<td>b) Demonstrate understanding of what products and services are contracted and which ones impact your duties and what are your associated responsibilities.</td>
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<td>c) Demonstrate understanding of what technical knowledge that you will need to COTR your contract.</td>
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<td>d) Demonstrate understanding of your access to SME’s and Contracting Officers to assist you.</td>
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<td>e) Demonstrate understanding of your reporting and quality assurance requirements.</td>
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<td>f) Demonstrate understanding of and ability to implement dispute resolution procedures.</td>
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<th>Behavior</th>
<th>7. Occupant Interface</th>
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<td>Behavioral capabilities involve the leadership, communication, negotiation, and change management skills required to integrate functions, people, and processes across traditional lines and the capacity to innovate within a dynamic operating environment.</td>
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<td>a) Know your role in Occupant interface: face-to-face meetings, Space management, IT requirements, Communications requirements, Comfort requirements, parking, productivity measurements, behavioral influence, representing your Agency, during and during emergency.</td>
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<td></td>
<td>a) Demonstrate understanding of, and be fully qualified under your Agency’s Safety Program and OSHA as it relates to your job.</td>
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<td></td>
<td>b) Demonstrate understanding of your role in the following: fire alarm and system certifications, fire drills; evacuation drills, routes and procedures; life safety drills; HAZMAT drills; emergency power and operations procedures; Natural disaster procedures and Occupant Emergency Plans.</td>
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<td></td>
<td>c) Demonstrate knowledge emergency contact numbers and information.</td>
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<td></td>
<td>d) Demonstrate appropriate level of knowledge of physical and cyber security issues and how your job impacts and is affected by them.</td>
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<th>9. Leadership</th>
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<td>a) Demonstrate understanding of your Agency’s mission and how mission accomplishment is measured.</td>
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<td>b) Demonstrate understanding of how your job, and your facility (ies), contributes to that mission accomplishment.</td>
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### 10. Regulatory/Statutory/Agency Compliance

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<td>a)</td>
<td>Demonstrate understanding of the laws and executive orders that impact your facility (ies) and your role, your Agency and the occupants. (Ex. EISA, EO 13514, 10 CFR)</td>
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<tr>
<td>b)</td>
<td>Demonstrate understanding of what other Agency regulations impact your facility and your role. (Ex. EPA, GSA, Dept of Homeland Security.</td>
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<tr>
<td>c)</td>
<td>Demonstrate understanding of what your internal Agency policies and regulations impact your facility (ies) and your role. (Ex. GSA orders, DOD orders, Commanding Officer orders etc)</td>
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<tr>
<td>d)</td>
<td>Demonstrate understanding of both State and local (city, county) policies and regulations impact your facility (ies) and your role.</td>
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<tr>
<td>e)</td>
<td>Demonstrate a basic understanding of building codes and building “standards”.</td>
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Facilities Management Institute

FMI: OPTIMIZING THE BUILT ENVIRONMENT

FMI.gov

FEDERAL HIGH-PERFORMANCE GREEN BUILDINGS
Step 3

Facilities Mgmt Institute (FMI)

- Web Tool (Reporting)
- Host Online Training (ex)
- Knowledge Portal

- Communications
  - FBPTA News/Updates (ex)
  - Monthly Newsletters
  - Lighting
  - SF Tool
  - FM Guidelines
  - Guiding Principles
  - National Labs
  - Personal Comfort Furniture
  - Resiliency Adaptation
  - Area GIS Mapping
  - IOT Technologies
  - Optimizing Org Design
  - Resilience and Performance Building Process
  - White Papers (ex)
  - IFMA GIS
  - SFP
  - FMI WP
  - FBS - High Performance G8

Green Building Advisory Committee

Interaction tool

Move from update to X1
Inform/Advertise
Step 3

Facilities Mgmt Institute (FMI)

- Web-tool (Reporting)
- Host On-line Training ex)
- Knowledge Portal

Communications

Interaction tool

- Blogs: Topics of interest e.g. ISO 223
- Forum: Q&A on topics, ask for info or assistance
- Subject Matter Experts: From various fields e.g. HVAC, BAS, Environmental, Union
- Core Competencies
- Feedback on CC
- Proposed Additions/Deletions
- Curriculum
- Feedback
- Proposed Additions/Deletions
- Continuing Education Program
- Feedback
- Proposed Additions/Deletions
- Proposed Research Topics
- Integrated Project Delivery
- Topics for GB Advisory Committee
Step 3

Facilities Mgmt Institute (FMI)

Communications

Interaction tool

Web-tool (Reporting)

Knowledge Portal

FEMP

Ongoing Commissioning

Building Systems

DOD

Behavior

PBS

Sustainability Primer

FAA

Leadership

FAI

Performance Contracting

Green Purchasing

Retuning
• **FM Community of Practice Website** – site with custom branding as a knowledge portal for communication, collaboration and sharing

• **Learning Management Sys** – Web-tools for mapping career path, GAP Analysis, database for personnel complying with FBPTA, Query and supervisor rollup capable, searchable, input training course that meet CC (On ramp)
Working with OPM

• **Workforce Analysis** (how affected) – for work groups: 1100, 1600, 0801

• **Competency Based Performance Plans** – elements, stds, behavioral benchmarks

• **Career Path Development** – for 1176, 1640, 0801 – includes research to determine all Gov/Industry/Academic courses available that align with CC and supports IDPs

• **Classification Consulting Service** – create a REM series using the 0801 with a parenthetical

  ✓ **Ex 0801(REM)**
What’s Planned?

- Convene a group of SMEs to determine:
  - To develop best method(s) to mod our FM contracts to insert the required core competencies, methods to demonstrate and continuing education requirements
  - This method, along with a verification procedure must be approved by the Administrator
  - Agencies with current Performance contracting form a basis model
  - Partner with FAI
What’s Planned?

- Continuing Education Program to ensure Fed Facilities Workforce obtains and maintains “state-of-the-art and beyond” core competencies

  ✓ Vehicle to drive concepts from:

  **Achieving High-Performance Federal Facilities – Strategies and Approaches for Transformational Change**
Other Issues:

• What happens if I ignore the law?
  o No “Enforcement Clause”
• Metrics – BSC
• Senior Managers
Questions

Feedback