

# Executive Order 13423 and Real Property Management



Update to the Energy Facilities Contractors Group  
Infrastructure Management Working Group

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# *Agenda*

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- Overview of Executive Order 13423
- Goals of Executive Order 13423
- Sustainable Buildings: Guiding Principles
- Secretary's TEAM Initiative
- The High Performance Sustainable Building Working Group

# ***Overview of Executive Order 13423***

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- Executive Order 13423: “Strengthening Federal Environmental, Energy and Transportation Management”
  - Signed January 24, 2007
  - Establishes goals for:
    - ✓ Energy efficiency
    - ✓ Acquisition
    - ✓ Renewable energy
    - ✓ Sustainable buildings
    - ✓ Electronics Stewardship
    - ✓ Fleet Management
    - ✓ Water conservation



# ***Overview of Executive Order 13423***

- Executive Order 13423: “Strengthening Federal Environmental, Energy and Transportation Management”
  - Signed January 24, 2007
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    - ✓ Energy efficiency
    - ✓ Acquisition
    - ✓ Renewable energy
    - ✓ **Sustainable buildings**
    - ✓ Electronics Stewardship
    - ✓ Fleet Management
    - ✓ Water conservation

***Discussion Areas***

# *Goals of Executive Order 13423*



- Energy Efficiency:
  - “...improve energy efficiency ...through a reduction of energy intensity by 3 percent annually through the end of FY15 or 30 percent by the end of FY15 relative to the agency’s FY03 baseline...”
- Water Conservation:
  - “...reduce water consumption...relative to FY07 baseline...by 2% annually through the end of FY15 or by 16% by the end of FY15...”
- **Sustainable Buildings:**
  - “...new construction and major renovation of buildings to comply with *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* set forth in the *Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding*... and 15% of existing Federal capital asset building inventory of the agency incorporates the sustainable practices in the *Guiding Principles*...by FY15”

# ***Sustainable Buildings: Guiding Principles***

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- From: “*Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*”
  - 1. Employ Integrated Design Principles
    - Integrated Design
      - Integrated project team in all stages of project planning and delivery
      - Establish and incorporate performance goals for siting, energy, water, materials and indoor environmental quality
      - Consider all stages of life to include deconstruction
    - Commissioning
      - Employ total building commissioning tailored to the building size and complexity
      - Designate a commissioning authority, have a plan, verify plan was followed

# ***Sustainable Buildings: Guiding Principles***

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- From: “*Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*”
  - 2. Optimize Energy Performance
    - Energy Efficiency
      - Establish a whole building performance target and design to reach Energy Star targets; where applicable
      - Design to reduce energy by 30% versus ASHRAE Std. 90.1-2004 in new buildings
      - Design to reduce energy by 20% versus ASHRAE Std. 90.1-2004 in major renovations
    - Measurement and Verification
      - Install building level meters in new and major renovated buildings to track and continuously optimize performance
      - Compare performance versus plan
      - Share results and lessons learned (through High Performance Buildings Database)

# ***Sustainable Buildings: Guiding Principles***

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- From: “*Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*”
  - 3. Protect and Conserve Water
    - Indoor Water
      - Employ strategies that in aggregate use a minimum of 20% less potable water than baseline
    - Outdoor Water
      - Employ strategies to reduce outdoor portable water consumption by a minimum of 50% less than baseline
      - Employ design and construction strategies that reduce storm water runoff and polluted site water runoff

# ***Sustainable Buildings: Guiding Principles***

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- From: “*Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*”
  - 4. Enhance Indoor Environmental Quality
    - Ventilation and Thermal Comfort
      - Meet ASHRAE 55-2004; Thermal Environmental Conditions for Human Occupancy (includes humidity control) and ASHRAE 62.1-2004 Ventilation of Acceptable Indoor Air Quality
    - Moisture control
      - Prevent moisture flows and condensation to prevent building damage and mold
    - Day lighting
      - Achieve 2 percent in 75 percent of all spaces occupied for critical visual tasks. Provide lighting control and appropriate glare control.
    - Use Low Emitting materials – carpet, paint, sealants etc.
    - Protect Indoor Air Quality during construction
      - Follow SMACNA Guidelines

# ***Sustainable Buildings: Guiding Principles***



- From: “*Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings*”
  - 5. Reduce Environmental Impact of Materials
    - Recycled content
      - 10% of project material cost expended on materials with recycled content
    - Biobased content
      - Use biobased products from renewable sources and sustainable wood products
    - Construction Waste
      - Plan to recycle 50% of construction waste where markets or on-site recycling opportunities exist
    - Ozone Depleting Compounds
      - Eliminate use of ozone depleting compounds during and after construction where alternative environmentally friendly products are available



# ***Secretary's TEAM Initiative***

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- The Secretary expects DOE to be a Leader in compliance with the Executive Order as well as the Energy Policy Act of 2005
  - Established the Transformational Energy Action Management (TEAM) initiative
    - TEAM is Chaired by the Assistant Secretary for Energy Efficiency and Renewable Energy (EE/RE)
    - TEAM is the integrator of all energy reduction and sustainability initiatives

# ***High Performance Sustainable Buildings Working Group (HPSBWG)***

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- HPSBWG is a working group chartered<sup>1</sup> to support the TEAM with respect to generating a strategy for compliance with the sustainable buildings goals of the E.O.
  - Chaired by EE/RE
  - Key Membership:
    - NNSA and DOE real property owning programs
    - Federal Energy Management Program
    - Office of Engineering and Construction Management
    - Office of Health Safety and Security
    - Office of General Council

10/23/2007

<sup>1</sup>The Charter is currently being approved. HPSBWG has been working issues concurrent with Charter approval.

# ***High Performance Sustainable Buildings Working Group (HPSBWG)***

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- HPSBWG strategy for compliance with the sustainable buildings goals of the E.O.
  - Strategy falls under two areas:
    - New buildings / major renovations and;
      - Guiding principles easier to apply to and clearly written with a consideration to new buildings
      - DOE Order 413.3A discusses goal of green construction. Office of Health Safety and Security leads preparation of guide to recommended practice
      - Likely outcome: compliance with E.O. satisfied by application of recognized green building standard
    - Existing buildings (more challenging)

# ***High Performance Sustainable Buildings Working Group (HPSBWG)***

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- Challenge of Existing Buildings
  - Calculation of 15% portfolio compliance
    - Portfolio make-up (operational status, excess year, type of building, new assets on line)
    - Calculation of contribution
  - Applicability of Guiding Principles
    - Integrated design would not apply nor would construction waste recovery but commissioning could
    - Energy consumption
  - Industry benchmarks for existing buildings are not as mature as those for new buildings
  - Reporting to allow meaningful baselines and targets to be established
    - Budget implications of the 15% by FY15 goal

# ***High Performance Sustainable Buildings Working Group (HPSBWG)***

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- Short to Mid-Term Goals of HPSBWG
  - Recommend a way forward to the TEAM on new and existing buildings
    - Generate guidance applying a “measuring stick” for meeting the sustainability goals of the E.O.
    - Establish meaningful measures verifying compliance with the goals of the E.O.
    - Determine an appropriate reporting process to capture the data.
  - Establish data capture process and generate a compliance baseline
  - Determine a Departmental compliance glide path



# ***Conclusion***

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Sustainability is here to stay and be implemented...



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***Thank you***