Federal Green Challenge
Federal Agencies Leading by Example in Sustainable Operations

TOPICS:
• Making it easier to buy greener products and services
• Final FGC Data Reporting Presentation

January 17, 2018

epa.gov/fgc
Webinar Panelists

• Michael Bloom, Sustainability and Green Program Advisor, U.S. General Services Administration, Office of Federal High-Performance Green Buildings, Speaker
• Jennifer Hazelman - GSA, Federal Acquisition Service, Office of Policy and Compliance, Sustainability Branch, Speaker
• Rob Guillemin – Federal Green Challenge Regional Coordinator, USEPA New England, Boston, MA, Speaker
• Chris Newman – Federal Green Challenge Regional Coordinator, USEPA Midwest Region, Chicago, IL, Host

https://www.epa.gov/fgc
# FGC Contacts

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<thead>
<tr>
<th>Region 1</th>
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<tbody>
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<td><strong>NJ, NY, Puerto Rico, US Virgin Islands</strong></td>
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<tr>
<td><strong>Mid-Atlantic</strong></td>
<td><strong>Southeast</strong></td>
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<tr>
<td><strong>Great Lakes</strong></td>
<td><strong>South Central</strong></td>
</tr>
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<td>(214) 665-6492</td>
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<tr>
<td><strong>Midwest</strong></td>
<td><strong>Mountains &amp; Plains</strong></td>
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<tr>
<td><strong>Pacific Southwest</strong></td>
<td><strong>Pacific Northwest &amp; Alaska</strong></td>
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<td>Theresa Blaine</td>
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Sustainable Facilities Tool
Make Effective Decisions

Presented by:
Michael Bloom
January 17, 2018
Sustainable Facilities Tool
Make Effective Decisions

Search SFTool

Discover Cost-Effective Upgrades
Determine what upgrades could be most cost-effective based on the size and location of your building.

Take the Assessment
Ensure economic facility operation by using FEDSAT to demonstrate compliance with the Federal Buildings Personnel Training Act.

Achieve High-Performance

SFTool Product Search
Save time by quickly finding brand name products that meet federal procurement requirements.

Green Procurement Compilation
Discover which products and services have federal green procurement requirements.
Facility Topics

The first step to creating a high-performance facility is to learn about the components. Use the sections below to learn how you can reduce utility costs and improve occupant health in your facility.

ENERGY
WATER
HEALTH

OTHER TOPICS
FEDERAL REQUIREMENTS
AGENCY PRACTICES

FEATURED

Child Care Centers

The focus of GSA child care facilities are to promote centers that are child-oriented, developmentally appropriate, beautiful, environmentally sensitive, health promoting and functional.
Agency Green Building Practices

Federal agencies have discovered many effective practices to make their buildings sustainable. Many share policies, strategies, case studies and tools through the Interagency Sustainability Working Group (ISWG).

See how these resources relate to the requirements of Executive Order 13693 with SFTool’s Hot Annotations.

Policies & Strategies
This section is devoted to the broad policies and strategies covering the whole government or entire agencies, services or bureaus, which set the context for achievements in Federal green building.

Read More

Tools & Training
This section covers and links to systems, methods, databases, calculators, checklists, etc. designed to help Federal officials and their partners achieve their green building goals.

Read More

Best Practices & Case Studies
One of the best ways to learn and make the case for green building innovations is to point to others’ experience in implementing these innovations – both their successes and lessons learned. This section focuses on examples of specific practices and projects that agencies have actually employed.
SFTool – What do you need to do?
Tools to help with everyday tasks.
Sustainable Facilities Tool
Make Effective Decisions

Search SFTool

SFTool Product Search
Your link to simpler environmentally responsible purchasing

GSA has expanded our Sustainable Facilities Tool (SFTool) with a new tool that streamlines sustainable product procurement for vendors and buyers. GSA wants to make it easier for project teams to buy or specify environmentally preferable products. We believe teams will benefit from linking the environmental requirements in SFTool’s Green Procurement Compilation (GPC) to a detailed product database that simplifies searching.

Light Bulbs
Last Updated: 09/19/17

Click to see brand name products that meet these requirements

A man-made source of optical radiation.

Or type https://sftool.ecomedes.com
Welcome to SFTool Product Search

Welcome to the SFTool Product Search, your link to simpler environmentally responsible purchasing.

Have an idea about improving this service? Please contact us!

Product Category
- Appliances (6,701)
- Building Furnishings (4,811)
- Cafeteria Products (3,303)
- Construction Materials (7,618)
- HVAC/Mechanical (247,626)
- Office Electronics (9,823)
- Plumbing Systems (25,568)

Brand
- Albeo (2,564)
- Columbia Lighting (6,594)
- HOLOPHANE (4,801)
- kim Lighting (2,583)
- Lithonia Lighting (1,437)
- McGraw-Edison (3,083)
- Metalux (6,101)
- Streetworks (6,534)

Federal Programs
- Energy Star Certified (65,696)
- Safer Choice Certified (1,897)
- WaterSense Certified (25,604)

Third Party Standards and Ecolabels
- BIFMA level (3,988)
- DLC Qualified (210,087)
### COMPARE DETAILS

<table>
<thead>
<tr>
<th>(3) PRODUCTS</th>
<th>IMPACT CALCULATOR</th>
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#### UNIT QUANTITY

- **Sylvania 2D4**
  - 100 units

- **Phillips 034L**
  - 100 units

- **EcoSmart 2b**
  - 100 units

#### UNIT PRICE

- **Sylvania 2D4**
  - $7.00 ea

- **Phillips 034L**
  - $13.99 ea

- **EcoSmart 2b**
  - $20.00 ea

<table>
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<th>TOTAL</th>
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<tr>
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### ENERGY CALCULATOR

![Energy Calculator Graph](image)

### SAVINGS SUMMARY

- **Monthly kWh Saved:** 3,308 kWh
- **Monthly cash saved:** $496
- **Yearly kWh saved:** 36,897 kWh
- **Yearly cash saved:** $5,655
- **Total kWh saved:** 119,062 kWh
- **Total cash saved:** $18,668
Why Upgrade?

Incorporating the right high-performance measures into your building can drive efficiency and cost savings while also increasing occupant productivity and improving health and satisfaction. In short, it’s just good business.

While building owners and tenants increasingly demand incorporation of sustainability in their facilities, they often struggle to identify high-performance improvements that can be performed within a certain budget or timeframe.

The Cost Effective Upgrades Tool

This tool is designed to help identify upgrades and energy conservation measures that can enhance your building’s sustainability. Get started by clicking the button above and selecting your building size and climate zone! If you’re curious about where the data for the tool comes from, visit our FAQ. To help with procurement, you can generate reports outlining each upgrade, including its economic benefits. This tool is just one way to lower costs if you take advantage of energy efficiency upgrades.
Cost-Effective Upgrades Tool

Please choose the building size and climate zone that most closely resemble your building’s size and location. Note that the data may vary if you only occupy a portion of a building. Click the continue button when finished.

Select Your Building Size

- 5,000 gsf
- 10,000 gsf
- 25,000 gsf
- 50,000 gsf
- 100,000 gsf

Select Your Climate Zone
Cost-Effective Upgrade Data

Below are the costs and savings for the chosen building size and climate zone. Click on a measure name for more information.

NOTE: The Cost-Effective Upgrades Tool is intended to guide conversations with building tenants, owners, and engineers. Costs and savings will vary and this list is not exhaustive. Please use the resources in the Sustainable Facilities Tool for additional measures and guidance on implementation.

Where does this data come from?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Simple Payback (years)</th>
<th>Approximate Capital Cost ($)</th>
<th>Annual Energy Savings (kBtu/sf)</th>
<th>Annual Energy Savings (kBtu/yr)</th>
<th>Annual Cost Savings ($/sf)</th>
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<td>$0.06</td>
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Shut down heating plant when there is no heating load

What is this measure?

Facilities often run their heating plants throughout the year, even on warm days. This is often done to satisfy year-round reheat loads that are inherent in multi-zone VAV systems commonly used in large office buildings. Summertime reheat loads can occur in zones that require ventilation yet have relatively low cooling requirements. Reheat is provided to prevent overcooling these zones, which are typically interior zones. In humid climates, reheat may also be required at the air handler level to reheat the air after dehumidification.

If the reheat load can be reduced, then there is less need for heating plant operation and energy can be saved. If the reheat load can be eliminated altogether, greater savings can be achieved by shutting off the entire heating plant (boilers and pumps) to reduce standby and distribution losses, and to reduce auxiliary equipment operation.

Special Considerations

- A common strategy for implementing this measure is to shut down the heating plant when the outside air temperature is above a certain value, e.g., 75°F. To be able to do this, though, reheat loads above this temperature must be eliminated or, at least, greatly reduced. Many HVAC systems in large commercial buildings operate with a certain amount of simultaneous heating and cooling, due to the nature of the systems. Minimizing this paves the way for shutting off the heating equipment.
- In addition to energy savings, this measure should result in increased equipment life due to less run hours for the heating plant.

 Estimates for this measure come from the Department of Energy’s Advanced Energy Retrofit Guide.
Submetering

Not sure what submeter is best for you? Use the Submetering Wizard to learn about submetering techniques and benefits by system. You can also mark which benefits you’ve already attained and print or export your customized list of benefits. Start by selecting the type of system you want to meter below.

**Electrical Circuit**

Electrical circuit submeters measure resource use of a single panel, or submeters can be placed at multiple points within a panel system, or at branches of a circuit to measure resource use of multiple circuits. Circuit submeters enable occupant energy-use behavioral awareness, improved tenant billing, enhanced space resource use, and optimized operations and maintenance programs.

Learn More

**Electrical System**

System-level electric submeters enable management to easily control systems such as lighting, heating and cooling, and control start and stop times from one central platform. System-level submetering enhances the O&M Staff’s ability to analyze specific energy load performance at the system-level, benchmark and optimize building performance, and enables more refined project measurement and verification.

Learn More

**Electrical - End Use Device**

End-use submetering provides the finest data resolution for energy and resource use of a particular system or equipment type for more detailed analysis. An objective of end-use submetering is to monitor equipment performance of high energy users in order to identify technology inefficiencies and validate savings estimates. Chillers, boilers, cooling towers, pumps, and motors are examples of equipment that are submetered to capture more granular performance metrics. End-use submeters can provide informative feedback mechanisms and data that can influence occupant behavior and system performance optimization.

Learn More
Fault or Anomaly Detection

Security
- Energy Security
  - Reduce fossil fuel usage
  - Reduce wide-scale blackouts
- Data Security
  - Improve Cybersecurity
- Tenant/ Personnel Safety
  - Reduce injuries, hazards

Behavioral
- Not Applicable

Economic
- Improved Asset Utilization
- Optimize building system operation
- Improve economic operation of plants
- Extended useful life of assets due to optimized utilization
- Building and Regional Capital Savings
  - Reduce onsite generation capacity investments
  - Defer onsite generation capacity investments
  - Defer building system investments
  - Optimize use of capital for major maintenance and repairs
  - Optimize use of capital for retrofits
- Building and Regional O&M Savings

Measurement and Evaluation
- Data is accessible to building occupants in graphical form
- Frequent data collection
- Measure Resource Use
- Measure source of power, amount, and quality

Occupancy Data
- Align circuit data/consumption by tenant in multi-tenant facility
- Visibility of tenant consumption data
- Visibility of tenant performance data

System and Space Monitoring
- Enables space management
- Fault or Anomaly Detection
  - Identification of where resource is consumed
  - Monitoring of Voltage
  - Remote meter reading
FEDSAT
Helping your agency comply with the Federal Buildings Personnel Training Act of 2010
LEARN MORE

The General Services Administration (GSA) Office of Government-wide Policy (OGP) developed Accelerate FM as a "cloud institute," a site to help federal facility managers keep track of progress and work toward fulfilling the FBPTA requirements.
LEARN MORE
What is the GPC?

• Identify green requirements for products
• Find out how to green service contracts
• Learn about the Federal Environmental Programs that make up the GPC
• Download previous green solicitation examples and sample contract language

www.sftool.gov/greenprocurement
Search for a product

Learn about the environmental programs

Green Procurement Compilation

The Green Procurement Compilation (GPC) is a comprehensive purchasing resource designed for federal contracting personnel, managers.

Learn More Video Introduction

Federal Department of Defense DOE Priority Products GSA Public Buildings Service Workspaces

Products

**Appliances**
Commercial and residential appliances, such as clothes washers, ovens, and refrigerators. Products in this category may also apply to the acquisition of janitorial, laundry, construction, and cafeteria...
21 Products

**Biomedical Equipment and Supplies**
Equipment and supplies that assist with activities and applications of clinical medicine.
17 Products

Services

**Cafeteria & Food Services**
Includes the preparation and offering of food and beverage items, waste management, and the ongoing management of the cafeteria space.

**Electronic Equipment Leasing**
Includes the supply, operations and maintenance, and disposal of electronic products, such as computers or imaging equipment.
BioPreferred

The U.S. Department of Agriculture (USDA) manages the BioPreferred program. BioPreferred includes both a preferential procurement program for Federal agencies and their contractors and a voluntary labeling program for the broad scale consumer. Under the Federal procurement preference program, USDA designates categories of biobased products (e.g., glass cleaners). Federal agencies and their contractors are then required to give preferential consideration to biobased products in the designated BioPreferred product categories when making purchases. As a part of the designation process, USDA establishes the minimum biobased content for the category. The technical, health, and environmental characteristics of these products are also considered.

Buying BioPreferred products? View sample solicitation/contract language.

Visit Program Site: BioPreferred

Comprehensive Procurement Guidelines (CPG) Program

Under the Comprehensive Procurement Guideline (CPG) program, the U.S. Environmental Protection Agency (EPA) designates products that are or can be made with recovered materials, and recommends practices for buying these products. Once a product is designated, procuring federal agencies are required to purchase it with the highest recovered material content level practicable. Buying recycled content products helps to ensure that the materials collected in home and office recycling programs will be used again in the manufacturing of new products.

Buying CPG products? View sample solicitation/contract language.

Visit Program Site: CPG

Electronic Product Environmental Assessment Tool (EPEAT)

EPEAT® is a comprehensive environmental rating system that makes it easy for purchasers to select environmentally preferable electronic products, and, in doing so, reward manufacturers for their environmental design efforts and create environmental benefits. Under the EPEAT system, products are measured against both required and optional criteria that cover the full life cycle of electronic products. A product must meet all of the required criteria in its category to be added to the registry. It is then rated Bronze, Silver or Gold depending on how many of the optional criteria it meets. EPEAT is staffed and managed by the Green Electronics Council (GEC), a program of the International Sustainable Development Foundation (ISDF). Federal agencies must ensure that they meet at least 95 percent of their annual acquisition requirement for electronic products with the highest EPEAT rating.
Find product requirements

Find services requirements and optional green practices
Begin live demo of the tool.
Questions?

SFTool: sftool.gov
GPC: sftool.gov/greenprocurement

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