INTRODUCTION TO ENERGY STAR® IN FEDERAL REAL ESTATE LEASE PROCUREMENT
MARCH 19, 2013

Complying with the Energy Independence and Security Act’s requirement for Energy Star buildings for leased by the Federal Government
Lessons

1. ENERGY STAR® Concepts
2. Federal ENERGY STAR® Leasing Requirements
3. Cost-Effective Energy-Efficiency Improvements
4. ENERGY STAR® Tools and Resources
Lesson 1

ENERGY STAR® Concepts
Lesson 1 Learning Objectives

- Identify basic ENERGY STAR® concepts and terminology
- Recognize how buildings earn the ENERGY STAR® Label
- Identify the characteristics of the “Designed to Earn the ENERGY STAR®” certification
ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE).

Developed 20 years ago by the EPA, it is a recognized labeling program to identify energy-efficient products and buildings.
ENERGY STAR® Products

- Over 18,000 products in 60 product categories are ENERGY STAR® labeled
- ENERGY STAR®-qualified products use 30-75 percent less energy than other products
ENERGY STAR® Buildings

- Over 1.2 million new homes have the ENERGY STAR® Label
- Over 21,000 commercial and industrial buildings, representing approximately 3 billion square feet, have the ENERGY STAR® Label
The ENERGY STAR® Label identifies the level of the building’s energy performance.

*The EPA analyzes a building’s past twelve months of energy usage.*

Buildings achieving a **score of 75+ (on a 100-point scale)** are eligible for the label. This represents the top 25 percent of buildings measured.
ENERGY STAR® Commercial Building Types

Bank/Financial Institutions
Courthouses
Data Centers
Dormitories
Hospitals
Hotels
Houses of Worship
K-12 Schools
Medical Offices
Office Buildings
Retail Stores
Supermarkets
Warehouses
Multi-Family
Senior Care

21,000 Buildings in the U.S. are ENERGY STAR® Labeled, with only 7,000 Energy Star Office Buildings
Benchmarking

Benchmarking through ENERGY STAR® allows for comparison of a building against a national sample of similar buildings. Buildings within the **fifteen building type categories** can be benchmarked.

The Commercial Buildings Energy Consumption Survey (CBECS) serves as the national database against which buildings are compared. The current system was established in 2003 and will be updated in 2014.
ENERGY STAR® Portfolio Manager

- EPA’s ENERGY STAR® Portfolio Manager
  - Free Online Benchmarking Application – use of tool to track building performance is mandatory when seeking ENERGY STAR®
  - Using monthly utility data, Portfolio Manager generates a score from 1 to 100, with considerations made to building type and climate.

- A score of 75…
  - Eligible for the ENERGY STAR® label.
  - Building operators can continue to use the Portfolio Manager tool to track changes in energy and water use, as well as CO2 emissions, to achieve greater cost savings and environmental performance over time.
Benchmarking in Portfolio Manager: Required Information

- **Building Identifiers**
  - Name, street address, and zip code

- **Space Data**
  - Space type, total floor area, age, occupancy
  - Office: square footage, hours of operation, personnel, number of computers, percentage of gross floor area that is air-conditioned/heated

- **Energy Use**
  - Building-specific invoice information from all purchased energy
  - At least 12 consecutive months to start, to be updated with monthly usage data
Three key documents are needed to achieve the ENERGY STAR®:

- **ENERGY STAR® Data Checklist**
  A summary of a building’s physical information, operating statistics, and total energy consumption. This information must be validated by a professional engineer or registered architect putting their seal onto the data.

- **Letter of Agreement**
  This letter summarizes the requirements of the ENERGY STAR® label and the building’s qualifications therefore and commits the building owner/manager to those provisions.

- **Statement of Energy Performance**
  This document is a computer printout of the results from the Portfolio Manager tool of a building’s energy performance information.

ALL OF THE ABOVE DOCUMENTS ARE AVAILABLE THROUGH PORTFOLIO MANAGER
**Statement of Energy Performance (SEP)**

**Data Checklist**

**Application Letter / Letter of Agreement**
Statement of Energy Performance (SEP)

- Communicates info about energy performance
- Validated by a licensed Professional Engineer or Registered Architect
- Does not represent an official ENERGY STAR® Score
ENERGY STAR® Label Application Steps

- Obtain Energy Performance Score of 75-100 from Portfolio Manager
- Have data verified by Professional Engineer or Registered Architect
- Submit three documents
  - Statement of Energy Performance (SEP)
  - Data Checklist
  - Letter of Agreement
ENERGY STAR® Utility Data and Occupancy Requirements

- 12 months of utility data with 50% average occupancy
- Application within 120 days of last month of utility data utilized
- Renewing label annually is not required for GSA leases

**ENERGY STAR® Application Timeline**

- **12 Months of Utility Data with 50% Average Occupancy**
- **Date of Application**
- **120 days**

Month 1 → Month 12
Target Finder Tool

EPA’s Target Finder is a tool that provides an estimated ENERGY STAR® score for a planned or existing building.

Design projects that earn a score of 75 or higher are eligible for the “Designed to Earn the ENERGY STAR®” certification.

Target Finder normalizes for factors that affect energy use intensity such as climate, building size, and occupancy level.
“Designed to Earn the ENERGY STAR®”

- Certification given to a to-be-built building or building under construction designed by an architect to achieve high energy performance
  - Building must earn a score of 75 or higher in Target Finder
  - Architects and owners can set energy targets and receive an ENERGY STAR® estimate during the design process

energystar.gov/targetfinder
ENERGY STAR® is an EPA and DOE program that identifies energy-efficient products and buildings.

ENERGY STAR® Portfolio Manager is a free, online tool used to benchmark buildings and portfolios.

Buildings earn the ENERGY STAR® Label by scoring 75+ in Portfolio Manager.

Building owners must submit a Statement of Energy Performance, a Data Checklist, and a Letter of Agreement to apply for the ENERGY STAR® Label.

Target Finder is a free, online tool that assigns an estimated ENERGY STAR® score to buildings in design or under construction.

Buildings in design or under construction can achieve the “Designed to Earn the ENERGY STAR®” certification by scoring 75+ in Target Finder.
Lesson 2

Federal ENERGY STAR® Leasing Requirements
Lesson 2 Learning Objectives

Recognize the origins of ENERGY STAR® requirements for federal leasing

Identify key ENERGY STAR® requirements related to federal leasing
Origins of ENERGY STAR® Requirement for Leasing

The ENERGY STAR® requirement addresses Section 435 of the Energy Independence and Security Act (EISA) of 2007, Public Law 110-140.

Effective December 19, 2010, all federal agencies must lease from buildings that have earned the ENERGY STAR® in the most recent year.
Key Points about ENERGY STAR® and Federal Leasing

- EISA is a federal law
- ENERGY STAR® requirement supports GSA sustainability goals
- ENERGY STAR® RLP paragraphs are a key part of mandatory green language required for compliance with Guiding Principles
Proof of ENERGY STAR® Label

Dear WilliamPollock:

Congratulations! You have earned EPA’s ENERGY STAR for 901 SSIZ - US CUSTOMHOUSE, Second & Chestnut Street, Philadelphia, PA for the fiscal year 2022.

EPA is happy to help you celebrate earning the ENERGY STAR for your building. Further details will be provided in materials you will receive in the next several weeks, but here are a few highlights to get you started:

Your building will automatically be added to the ENERGY STAR for Buildings registry, which includes over 150,000 buildings that are part of our national registry. This registry provides information to industry, governmental agencies, and others to highlight national leaders in energy efficiency. The date that displays on the building registry and on your certification is the date that your application was accepted by EPA. If you have questions about when your building will be considered for approval. If you have any questions about your building, please contact the EPA at buildingenergy@epa.gov.

The ENERGY STAR certification mark (logos) are available at energystar.gov/buildingscert. You may use the ENERGY STAR certification logo in all of your communications to your ENERGY STAR labeled buildings.

Congratulations! You have earned EPA’s ENERGY STAR for Building. Congratulations! You have earned EPA’s ENERGY STAR for Building. Congratulations! You have earned EPA’s ENERGY STAR for Building. Congratulations! You have earned EPA’s ENERGY STAR for Building.

Sincerely,
Jonathan, Director, Commercial & Industrial Branch, ENERGY STAR

☐ Building owner must indicate whether offered building has earned ENERGY STAR® label (and exact date label was granted)

☐ Offeror must provide proof of ENERGY STAR® label by due date of Final Proposal Revision (FPR)

☐ EPA Certificate of Achievement or Notification Email required
ENERGY STAR® Leasing Requirement: Time Frame

Buildings must have earned the ENERGY STAR® label within 12 months prior to the due date of the FPR. Note that this is the exact date of the notice of award from the EPA, not the year on the label itself.

Label awarded on October 1, 2012

FPR due September 30, 2013: last date of eligibility
Exceptions to ENERGY STAR® Requirement

No ENERGY STAR® space is available in the delineated area that meets the agency’s functional needs, including location.

The agency is remaining in a building they currently occupy.

The lease will be in a building of historic, architectural, or cultural significance (verified or eligible for listing on the National Register of Historic Places).

The size of the lease is 10,000 rentable square feet or less.
In Lieu of ENERGY STAR® ...

Under the four exceptions, in lieu of ENERGY STAR®, the Lessor must make Cost-Effective Energy Efficiency Improvements.
Insufficient Occupancy Issues

- The RLP allows up to 18 months to achieve the ENERGY STAR® Label for buildings with 50% average occupancy or less.
- The Offeror must show specified evidence of the capability to achieve the ENERGY STAR® Label.
- If the Offeror uses Target Finder, they must provide a Statement of Energy Design Intent (SEDI) reflecting a score of 75 or higher or obtain the “Designed to Earn the ENERGY STAR®” certification.
Every new lease in existing or new space must be in an ENERGY STAR®-Labeled building unless it meets one of the four exceptions.

For buildings to earn an ENERGY STAR® Label, a score of 75+ is required within 12 months prior to the FPR.

If a building meets one of the four exceptions, Cost-Effective Energy Efficiency and conservation improvements are required.
ENERGY STAR® Requirement: New Construction

The ENERGY STAR® Label is required for New Lease Construction projects greater than 10,000 sf. The label must be obtained within 18 months of occupancy. The “Designed to Earn the ENERGY STAR®” certification is required prior to issuance of a building permit. Projects 10,000 sf or less require ENERGY STAR® or Cost-Effective Improvements.
When ENERGY STAR Is Not Required

ENERGY STAR® is not required for certain leases:

1. Short-term extensions (generally 6-18 months)
2. Expansions “within the scope of the lease” (refers to the materiality of the expansion to the original space)
3. Evaluated or unevaluated renewal options

Cost-Effective Energy Efficiency Improvements are encouraged (though not required).
Summary

- The ENERGY STAR® requirement addresses EISA.
- All federal leases must be in ENERGY STAR® space unless one of four exceptions applies.
- If an exception applies, the Offeror must commit to making Cost-Effective Energy Efficiency Improvements.
- The ENERGY STAR® Label is required for New Lease Construction projects greater than 10,000 sf.
- The ENERGY STAR® Label is not required for three leasing situations.
Lesson 3

Cost-Effective Energy Efficiency Improvements
Lesson 3 Learning Objectives

- Recognize when Cost-Effective Energy Efficiency Improvements are required
- Define Cost-Effective Energy Efficiency Improvements
- Identify example improvements
Exceptions to ENERGY STAR® Requirement

No ENERGY STAR® space is available in the delineated area that meets the agency’s functional needs, including location.

The agency is remaining in a building they currently occupy.

The lease will be in a building of historic, architectural, or cultural significance (verified or eligible for listing on the National Register of Historic Places).

The size of the lease is 10,000 rentable square feet or less.
Under the four exceptions, in lieu of ENERGY STAR®, the lessor must make Cost-Effective Energy Efficiency Improvements.
Cost-Effective Energy Efficiency Improvements

A building owner must indicate whether the offered building has earned the ENERGY STAR® Label (and the date the label was granted). If no label is earned within 12 months prior to FPR, the owner must commit to Cost-Effective Energy Efficiency Improvements.

The owner must also indicate in writing (typically on the offer Form 1364) which energy efficiency improvements they are willing to make. The energy efficiency and conservation improvements must be cost-effective over the firm term of the lease.
Offeror's Required Commitment to Making Improvements

“If one or more of the statutory exceptions applies, and the offered space is not in a building that has earned the ENERGY STAR® Label within one year prior to the due date for final proposal revisions, Offerors are required to include in their lease proposal an agreement to renovate the building for ALL energy efficiency and conservation improvements that it has determined would be cost effective over the firm term of the lease, if any, prior to acceptance of the space (or no later than one year after the Lease Award Date of a succeeding or superseding lease).”
Definition of “Cost Effective”

“The term ‘cost effective’ means an improvement that will result in substantial operational cost savings to the landlord by reducing electricity or fossil fuel consumption, water, or other utility costs. (An improvement must pay for itself, including interest costs, in expected energy savings during the firm term of the lease.)”

“If no improvements are proposed, the Offeror must demonstrate to the Government using the ENERGY STAR® Online Tools why no energy efficiency and conservation improvements are cost effective. If such explanation is unreasonable, the offer may be considered technically nonresponsive.”
Examples of Improvements

- HVAC systems
- Lighting
- Building envelope
- Chilled and hot water, steam distribution
- Renewable energy systems
- Water and sewer conservation systems
- Electrical peak shaving/load shifting
- Changes in metering
- Process improvements

The length of the firm term of the lease will significantly impact what will be cost-effective
First Example of Lighting Improvement: Compact Fluorescent Lamps (CFLs)

- Install CFLs and eliminate incandescent bulbs
  - Simple, low-cost ($10-20 each)
  - 30-60% energy savings
  - Required by Government
  - Incandescent bulbs being phased out
Lighting Improvement: Merchandise Mart in Chicago

- **Common area light retrofit**
  - Project cost: $80,300
  - Energy reduction: 887,700 kwh/year
  - Return on Investment (ROI): 1 year

- **Exit lights retrofit**
  - Project cost: $23,200
  - Energy reduction: 98,110 kwh/year
  - ROI: 2.5 years
Second Example of Lighting Improvement: Occupancy Sensors

- Install occupancy sensors in restrooms, conference rooms, hallways, offices
  - Cost: $200-800 each

- Merchandise Mart restrooms
  - Project cost: $15,400
  - Energy reduction: 423,430 kwh/year
  - ROI: 0.5 year
Example of HVAC Improvement: Variable Frequency Drives (VFDs)

- Install control in motors, mechanical equipment, pumps
  - Cost: $800-1,000 each

- Merchandise Mart
  - Project cost: $207,900
  - Energy reduction: 553,340 kwh/year
  - ROI: less than 4 years
Examples of Building Envelope Improvements

- Window re-caulking
  - Reduces air leaks to ensure a tight envelope
  - Cost: $100/window

- Roof insulation
  - Install higher R-value (higher R-value=better insulation)
  - Reduces energy loss through roof

- Window replacement
  - Reduces air and water leaks
  - Install high-efficiency or ENERGY STAR windows
Summary

- In lieu of an ENERGY STAR® label, an Offeror must commit to making Cost-Effective Energy Efficiency Improvements.
- “Cost Effective” means that the improvement must pay for itself in energy savings through the firm term of the lease.
- Examples of improvements include improvements to lighting, HVAC, and the building envelope.
Lesson 4

ENERGY STAR® Tools and Resources
Lesson 4 Learning Objectives

Identify tools and resources with information about ENERGY STAR®, pursuing the ENERGY STAR® label, and ENERGY STAR® buildings
ENERGY STAR® Training Resources

- Live webinars
- Self-guided modules
- Recorded presentations

www.energystar.gov
www.energystar.gov/benchmark
www.energystar.gov/eslabel
www.energystar.gov/financialevaulation
www.energystar.gov/buildingstraining
www.gsa.gov/leasing
www.eere.energy.gov/femp
1-877-337-3463 FEMP Help Desk
Helps real estate and operations professionals assess the financial value of energy efficiency investments

Includes net investment, reduction in operating expenses, energy savings, return on investment (ROI), internal rate of return (IRR), net present value (NPV), and impact on asset value
Location of the Building Upgrade Value Calculator on EnergyStar.gov
ENERGY STAR® Building Database

ENERGY STAR’s® labeled Buildings database identifies ENERGY STAR®-Labeled buildings. The site is updated regularly to reflect newly labeled buildings and facilities.

Over 21,000 buildings are listed and searchable by facility type, label year, location (city, state, zip), owner, street address, and building name.
Find ENERGY STAR®-Labeled Buildings on CoStar

The CoStar® subscription database is a major provider of commercial real estate information, with over 2 million properties. The database identifies ENERGY STAR® and LEED® buildings, including their space availability and pricing.

www.costar.com
Summary

- ENERGY STAR® has training resources available on its website.
- The ENERGY STAR® Building Upgrade Value Calculator helps real estate professionals assess the financial value of energy efficiency improvements.
- Real estate professionals, including Leasing Specialists, can locate ENERGY STAR®-labeled buildings through the ENERGY STAR® database and CoStar.