Guidance on Purchasing EPEAT Registered Products

"the federal government can and should lead by example when it comes to creating innovative ways to reduce greenhouse gas emissions, increase energy efficiency, conserve water, reduce waste, and use environmentally responsible products and technologies".

- President Obama, October 2009

Holly Elwood
Senior Program Manager
Pollution Prevention Division
Office of Chemical Safety and Pollution Prevention
US Environmental Protection Agency

The Environmentally Preferable Purchasing Program

- Established in 1993 by Executive Order, and reaffirmed in Obama's EO 13514
- Mandated EPA to:
  - Help federal agencies buy greener products and services
  - Harness federal purchasing power to green markets
- Lead Agency efforts to:
  - Work with stakeholders to create life cycle, multi-attribute environment performance standards for priority products that feds procure and
  - Provide technical assistance to help feds buy products meeting these standards
- Focus on electronics, buildings, meetings

Feds Required to Buy EPEAT Registered Products

- Executive Orders 13514 and 13423
  - Require purchase and lease of EPEAT® registered electronics under both sustainable acquisition and electronics stewardship goals
  - Must achieve a 95% acquisition rate
- Federal Acquisition Regulation (FAR) Part 23
  - Requires acquisition of EPEAT® registered electronics
  - Must achieve a 95% acquisition rate
  - Contracting clause requires acquisition of Bronze registered products, alternate clause for Silver or higher

What is EPEAT®?

- The Electronic Product Environmental Assessment Tool (EPEAT)
- A system to help purchasers evaluate, compare and select electronic products based on their environmental attributes
- A system to enable manufacturers to obtain market recognition through achievement of specific performance criteria in electronic product design and sales
- Not an EPA Program

What is EPEAT?

- Set of voluntary performance criteria that define required and optional environmental attributes for electronic products
- System for listing products that meet the performance criteria
- Method for verifying that listed products have achieved specified performance criteria

What Products Does EPEAT Cover?

Currently:

Computer Desktops, Laptops, and Monitors

Imaging equipment: (Printers, Copiers, Multi-Function Devices, Scanners, Fax Machines,

Digital Duplicators, Mailing Machines)

Televisions

Up next:

Servers

Mobile devices

How are Standards EPEAT Uses Created?

- Developed through ANSI accredited Standard Development Organizations
- Open, consensus based process used
- Active participation from manufacturers, suppliers, recyclers, academics, government representatives, purchasers, and environmental advocacy organizations

EPEAT Tiers

- EPEAT Bronze
  - Meets all 23 mandatory criteria

- EPEAT Silver
  - Meets all mandatory criteria and at least 50% of the optional criteria

- EPEAT Gold
  - Meets all mandatory criteria and at least 75% of the optional criteria

EPEAT Expanded to Cover TVs and Imaging Equipment

- IEEE 1680.2 Standard for the Environmental Assessment of Imaging Equipment and the IEEE 1680.3 Standard for the Environmental Assessment of Televisions both were approved as final IEEE standards on August 30th, 2012
- The final standards are now available at: http://grouper.ieee.org/groups/1680/EASC/
- Imaging equipment products were added to the Registry on January 29th, 2013.
- Televisions were added to the EPEAT Product Registry March 3, 2013

What is Greener About Products Meeting these Standards?

- Products must meet several required criteria for:
  - Energy Conservation (Energy Star, FEMP)
  - Environmentally Sensitive Materials
  - Materials Selection
  - Design for End of Life
  - Product Longevity/Life Cycle Extension
  - Packaging
  - Corporate Performance
  - End of Life Management
  - IE Products – Consumables, Indoor Air Quality
- Products can also meet more stringent optional criteria in each of these categories

When Do I Need to Start Buying EPEAT Registered Imaging Equipment and Televisions?

- Short answer – now!
- May 31st, 2013 – Memo issued by OMB's Office of Federal Procurement Policy and CEQ's Office of the Federal Environmental Executive directing agencies to begin procuring EPEAT registered imaging equipment and televisions
- The memo states that "While the FAR is in the process of being updated, agencies should begin purchasing, as appropriate, EPEAT certified products for these two new categories, which can be found on the EPEAT Product Registry at www.epeat.net."
- Agencies' OMB Energy and Sustainability Scorecard scores will be impacted by progress towards meeting this requirement in 2014

New EPEAT Products Covered*

- Imaging Equipment (IE)
  - Printers
  - Copiers
  - Scanners
  - Facsimile Machines
  - Multifunction devices
  - Digital duplicators
  - Mailing machines
- Televisions (TVs)
  - Any display sold primarily as a "television" (size 15 inches and up)
  - Includes CRT, LCD, LED, and plasma televisions

** Product coverage is harmonized with ENERGY STAR® categories*

Product Availability as of August 22, 2013

- Imaging Equipment:
  - 501 EPEAT registered imaging equipment products
  - Manufactured by: Canon, Dell, Eastman Kodak, Epson, Fujitsu Limited, HP, Konica Minolta, Lexmark, Ricoh, Samsung, Xerox
  - Over 80 % of the imaging equipment market represented
- Televisions
  - 125 EPEAT registered televisions
  - Manufactured by: LG, Samsung
  - Over 40 % of the television market represented

- No known price differential for these products

- If you don't see a product on the Registry that you want to procure, let your vendors know!

Finding EPEAT Registered IE and TV Products

- Find on the EPEAT Registry: www.epeat.net
- Procure registered products via:
  - GSA multiple award schedules (36, 58, 67, and 70)
  - GSA Federal Strategic Sourcing Initiative (FSSI) Office Supplies 2 BPA
  - GSA FSSI Print Management Services BPA
  - DOD Emall
  - NASA SEWP
  - NIH NITAC BPA
  - Ask your Agency IT department if your Agency IT hardware contract offers EPEAT registered IE and TVs
- Specify you want EPEAT registered products in all Task Orders!!

Using Existing Contracts

- If your contract includes language on purchasing EPEAT registered IE and TVs when they become available
  - You should be able to buy EPEAT registered!
  - May need to specify EPEAT registered in task or delivery orders
- If your contract requires Silver or Gold registered products:
  - Check to ensure that enough Silver and Gold registered products are available on the Registry to meet this requirement
- If your contract does not include language on purchasing EPEAT registered IE and TVs
  - You may still be able to buy EPEAT registered
  - Check if you can specify EPEAT registered products in task or delivery orders
  - Check if you can add EPEAT registration requirements in upcoming technology refreshes or contract modifications

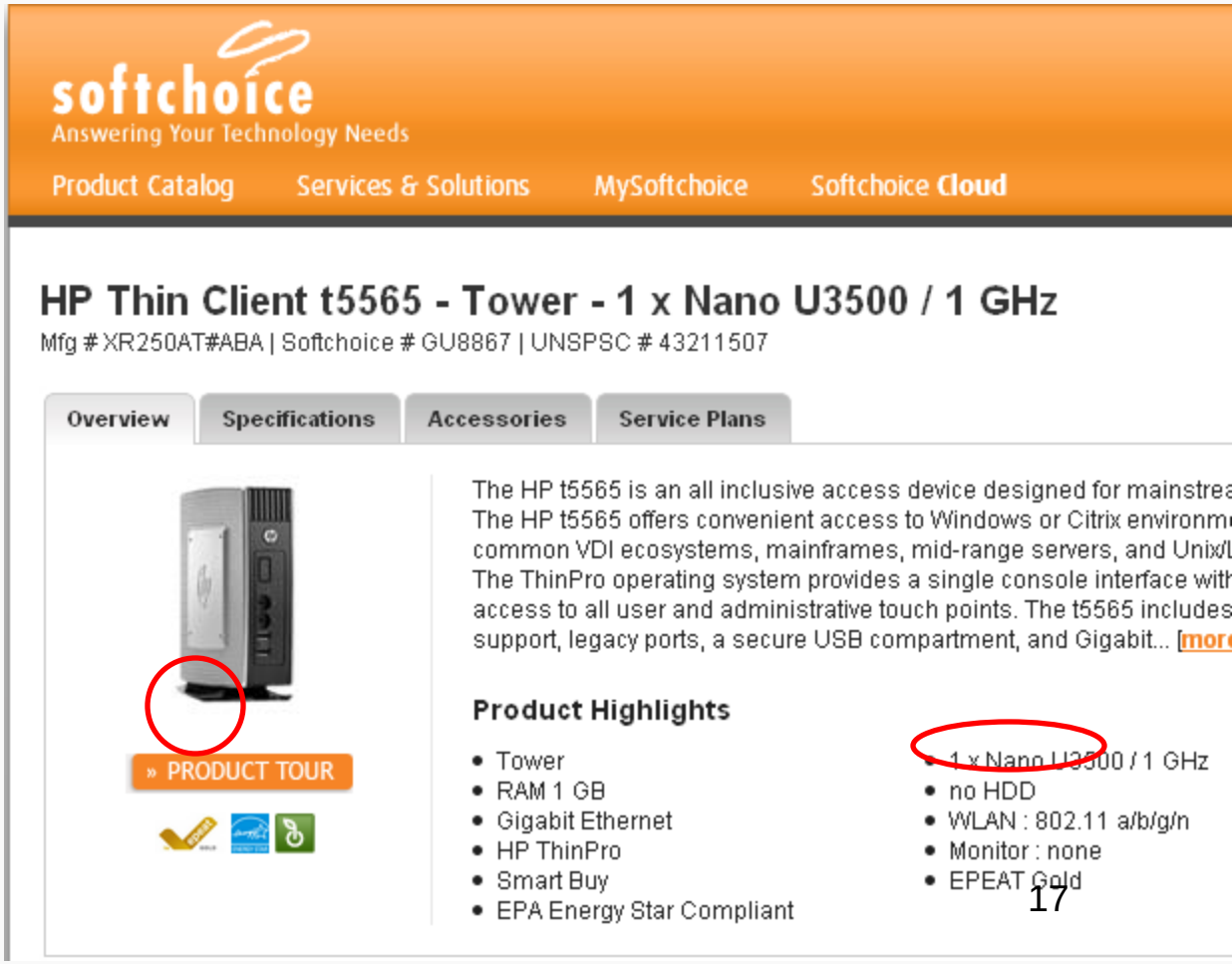
Recommended Language for New Contracts

- "Under this contract, the Contractor shall deliver, furnish for Government use, or furnish for contractor use at a federally controlled facility, only imaging equipment and/or televisions that at the time of submission of proposals and at the time of award were EPEAT Bronze registered or higher.

  For information about EPEAT, see www.epa.gov/epeat."

Recommended Language for New Contracts

- “Suppliers are required to block non-EPEAT registered products on their electronic catalogs that customers may buy from through this contract”.



Reporting Requirements Related to EPEAT

- All agencies are required to report to OMB on their procurement of EPEAT registered products as part of the Federal Energy and Sustainability Scorecard

- Agencies must share:
  - a. FY 12 IT contracts include EPEAT clauses? (Yes/NO, if not, indicate when to be completed):

    b. Indicate % of EPEAT products purchased in FY 2012 Agency-wide:
    i. Number EPEAT Monitors purchased:
    ii. Number non-EPEAT Monitors purchased:
    iii. **% EPEAT Monitors Purchased:**
    iv. Number EPEAT PCs purchased:
    v. Number non-EPEAT PCs purchased:
    vi. **% EPEAT PCs purchased:**
    vii. Number EPEAT Laptops purchased:
    viii. Number non-EPEAT Laptops purchased:
    ix. **% EPEAT Laptops purchased:**

Reporting Related to EPEAT Expansion

- OFEE and OMB have not finalized the questions related to EPEAT registered IE and TV products
- Will most likely mirror questions for computers
- May use sample products to reduce reporting burden
- Final guidance will be shared via the Federal Electronics Stewardship Work Group

Recommended Language for New Contracts

- "Suppliers are required to provide quarterly reports quantifying the number of EPEAT registered products purchased under this contract. The information must be reported in a matrix providing the following data for the current quarter, the fiscal year, and the duration of the contract".

Desktops	1	0	5	12
Notebooks	0	1	3	10
Displays	0	0	0	30
Televisions	1	1	0	0
Printers	0	5	0	0
Copiers	0	2	0	0
MFDs	1	1	0	0

EXAMPLE

Need Further Assistance?

- Holly Elwood, EPA
  - elwood.holly@epa.gov
  - 202-564-8854
  - www.epa.gov/epeat
- Federal Electronics Challenge (FEC) Program provides assistance to federal facilities to improve environmental stewardship of our electronics. FEC Partners can email questions or requests for technical assistance to fec@epa.gov

What is ENERGY STAR Purchasing?

- ENERGY STAR Purchasing helps organizations identify, specify, and purchase ENERGY STAR® qualified products as part of an overall energy management strategy.

BUY PRODUCTS THAT MAKE A DIFFERENCE

U.S. Environmental Protection Agency • U.S. Department of Energy

EPA

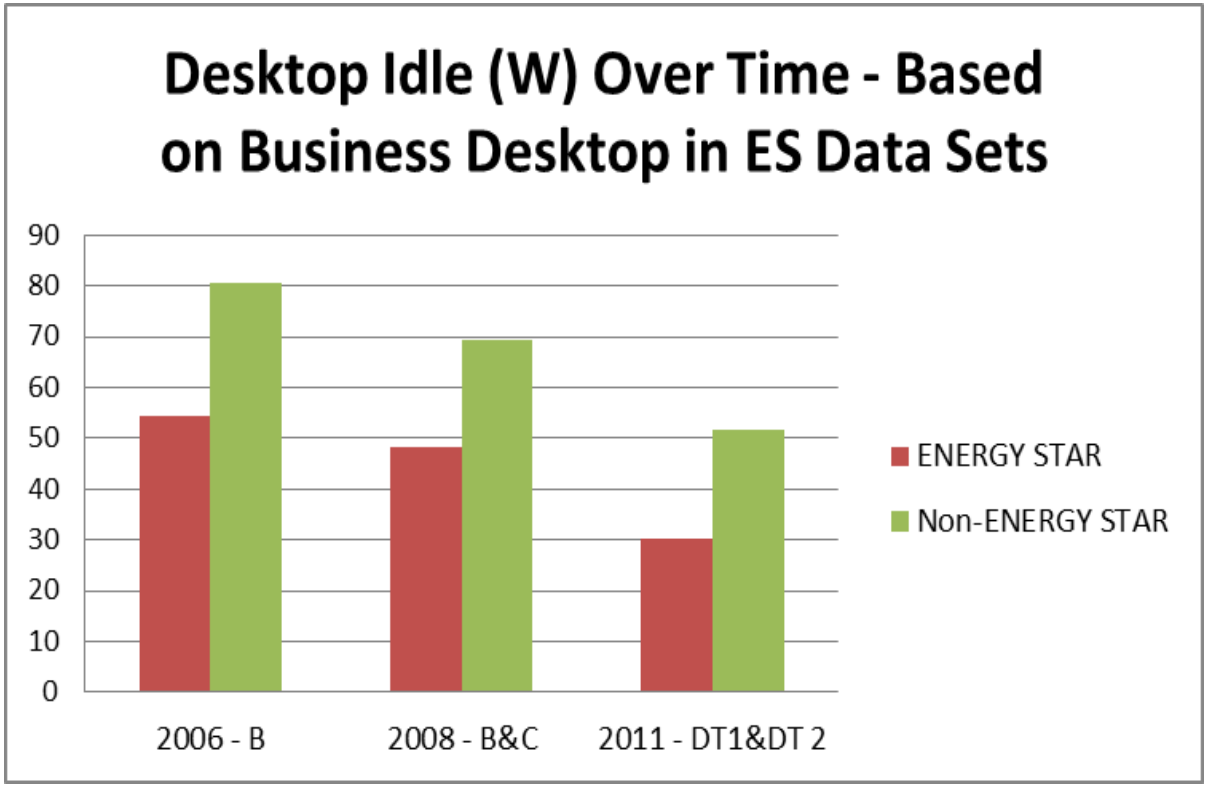
What Are ENERGY STAR Qualified Products?

- More than 65 product categories (www.energystar.gov/products)
- Over 1,600 manufacturers use ENERGY STAR to differentiate more than 40,000 models
- More than 300 million ENERGY STAR qualified products sold in 2012
- 4.5 billion products since 1993

Benefits of ENERGY STAR Qualified Products

- Consume less energy
  - Reduced kWh – reduced CO2 emissions
  - Reduced kWh – less heat – reduced A/C expenses
- Equivalent or better quality
- Annual and life cycle cost savings
  - Additional funds for programmatic uses
- Publicly demonstrate commitment to environment
- Third-party certification procedures bolster the integrity of the program and ensure energy-efficient performance

How does ENERGY STAR Drive the Market?



- ENERGY STAR specifications change over time to ensure:
  - Certified products are industry leaders
  - Transforms the market to greater energy efficiency*

* 2011 data is draft data from a preliminary version of ENERGY STAR computer specification

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How Can I Embrace ENERGY STAR Purchasing?

- Go to www.energystar.gov/purchasing
- Take the following steps:
  - Step 1: Modify your Procurement Language
  - Step 2: Educate your Vendors and Personnel
  - Step 3: Select ENERGY STAR Products to Purchase
  - Step 4: Estimate your Potential Savings

Step 1: Modify Your Procurement Language

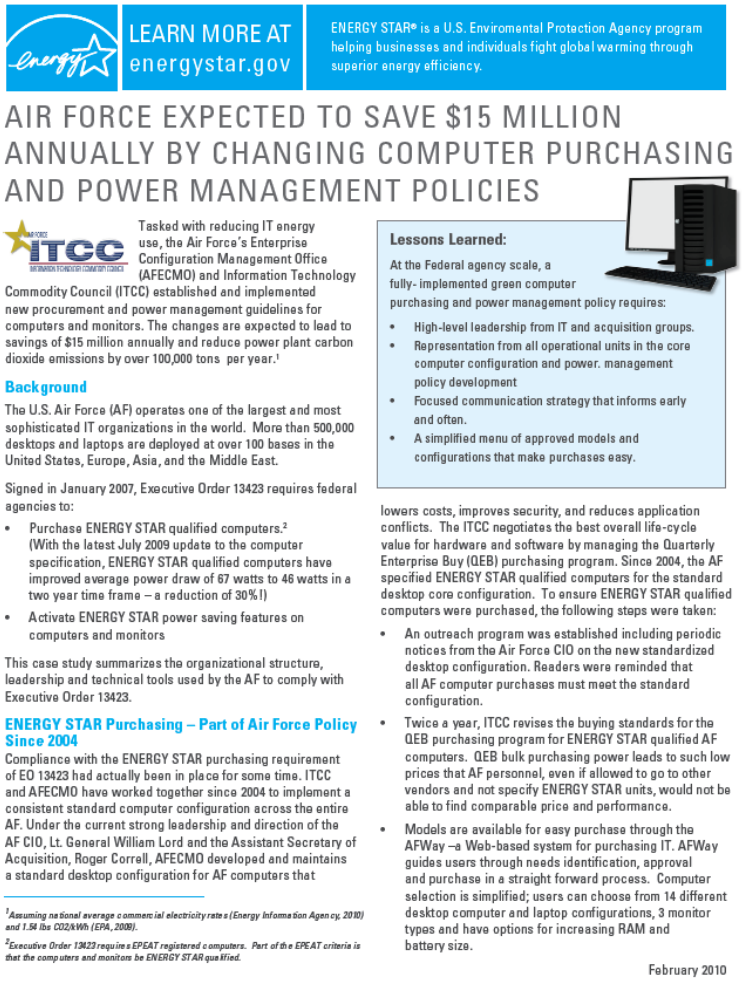
- Federal agencies and many states are required to purchase ENERGY STAR-qualified products
- Simply insert this language into contracts and purchasing agreements:
  - The Vendor Must:
    Provide products that earn the ENERGY STAR. The vendor is encouraged to visit energystar.gov for complete product specifications and updated lists of qualifying products.

Step 2: Educate Your Vendors and Personnel

- Notify your vendors and personnel regarding this new direction in your purchasing policy
- Educate them using webinars, articles in newsletters, etc.
  - Repeat the message to reinforce it and ensure new employees and vendors are aware
- The ENERGY STAR program can help with:
  - Template outreach materials
  - Hosting webinars
  - Case studies
    - Air Force
    - State of Massachusetts

Air Force Saves $15 M Annually Purchasing Qualified Computers

- Desktops and laptops are deployed at over 100 bases in the United States, Europe, Asia, and the Middle East.
- Organization-wide purchasing of ENERGY STAR qualified computers established
- Savings of $15 million annually reducing power plant carbon dioxide emissions by over 100,000 tons per year.



LEARN MORE AT energystar.gov

ENERGY STAR® is a U.S. Enviromental Protection Agency program helping businesses and individuals fight global warming through superior energy efficiency.

AIR FORCE EXPECTED TO SAVE $15 MILLION ANNUALLY BY CHANGING COMPUTER PURCHASING AND POWER MANAGEMENT POLICIES

Tasked with reducing IT energy use, the Air Force's Enterprise Configuration Management Office (AFECMO) and Information Technology Commodity Council (ITCC) established and implemented new procurement and power management guidelines for computers and monitors. The changes are expected to lead to savings of $15 million annually and reduce power plant carbon dioxide emissions by over 100,000 tons per year.[1]

Background

The U.S. Air Force (AF) operates one of the largest and most sophisticated IT organizations in the world. More than 500,000 desktops and laptops are deployed at over 100 bases in the United States, Europe, Asia, and the Middle East.

Signed in January 2007, Executive Order 13423 requires federal agencies to:

- Purchase ENERGY STAR qualified computers.[2] (With the latest July 2009 update to the computer specification, ENERGY STAR qualified computers have improved average power draw of 67 watts to 46 watts in a two year time frame – a reduction of 30%!)
- Activate ENERGY STAR power saving features on computers and monitors

This case study summarizes the organizational structure, leadership and technical tools used by the AF to comply with Executive Order 13423.

ENERGY STAR Purchasing – Part of Air Force Policy Since 2004

Compliance with the ENERGY STAR purchasing requirement of EO 13423 had actually been in place for some time. ITCC and AFECMO have worked together since 2004 to implement a consistent standard computer configuration across the entire AF. Under the current strong leadership and direction of the AF CIO, Lt. General William Lord and the Assistant Secretary of Acquisition, Roger Correll, AFECMO developed and maintains a standard desktop configuration for AF computers that lowers costs, improves security, and reduces application conflicts. The ITCC negotiates the best overall life-cycle value for hardware and software by managing the Quarterly Enterprise Buy (QEB) purchasing program. Since 2004, the AF specified ENERGY STAR qualified computers for the standard desktop core configuration. To ensure ENERGY STAR qualified computers were purchased, the following steps were taken:

- An outreach program was established including periodic notices from the Air Force CIO on the new standardized desktop configuration. Readers were reminded that all AF computer purchases must meet the standard configuration.
- Twice a year, ITCC revises the buying standards for the QEB purchasing program for ENERGY STAR qualified AF computers. QEB bulk purchasing power leads to such low prices that AF personnel, even if allowed to go to other vendors and not specify ENERGY STAR units, would not be able to find comparable price and performance.
- Models are available for easy purchase through the AFWay –a Web-based system for purchasing IT. AFWay guides users through needs identification, approval and purchase in a straight forward process. Computer selection is simplified; users can choose from 14 different desktop computer and laptop configurations, 3 monitor types and have options for increasing RAM and battery size.

Lessons Learned:

At the Federal agency scale, a fully- implemented green computer purchasing and power management policy requires:

- High-level leadership from IT and acquisition groups.
- Representation from all operational units in the core computer configuration and power. management policy development
- Focused communication strategy that informs early and often.
- A simplified menu of approved models and configurations that make purchases easy.

February 2010

[1] *Assuming national average commercial electricity rates (Energy Information Agency, 2010) and 1.54 lbs CO2/kWh (EPA, 2009).*

[2] *Executive Order 13423 requires EPEAT registered computers. Part of the EPEAT criteria is that the computers and monitors be ENERGY STAR qualified.*

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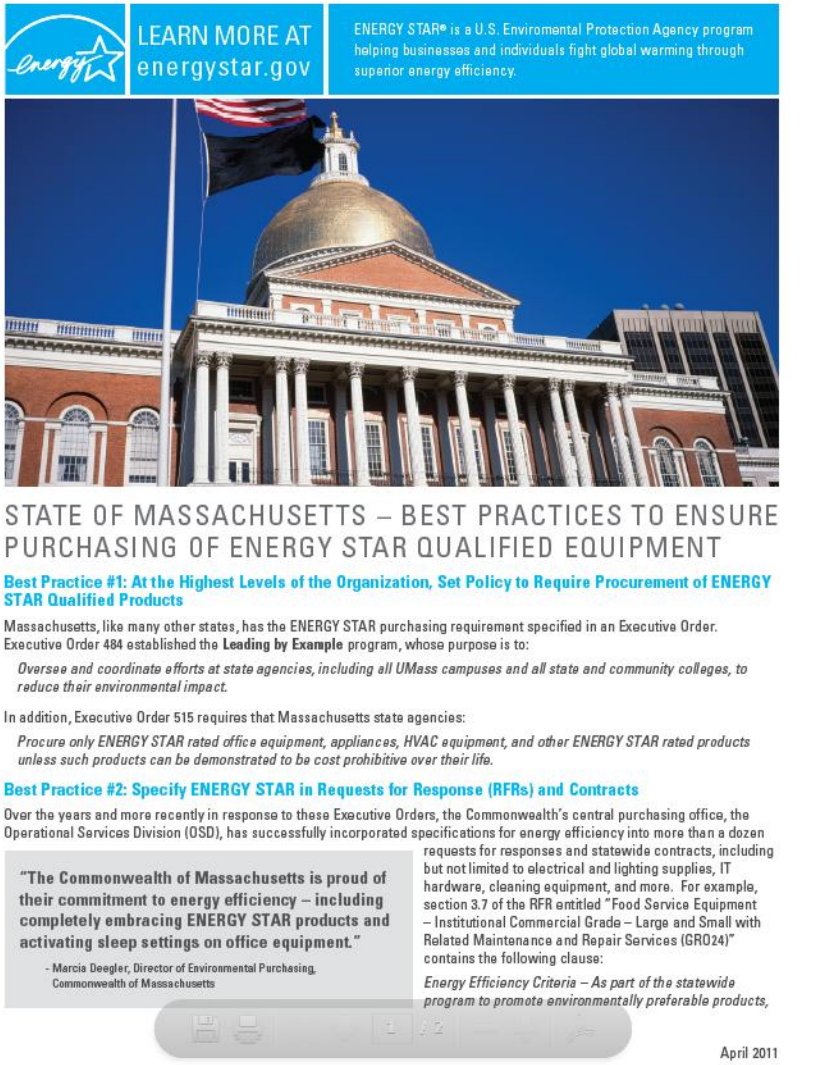
State of Massachusetts Best Practices for Purchasing ENERGY STAR

- Require ENERGY STAR at highest levels via executive order
- Incorporate language into all contracts and requests for responses
- Train buying community
- Enforce provisions



LEARN MORE AT energystar.gov

ENERGY STAR® is a U.S. Enviromental Protection Agency program helping businesses and individuals fight global warming through superior energy efficiency.

STATE OF MASSACHUSETTS – BEST PRACTICES TO ENSURE PURCHASING OF ENERGY STAR QUALIFIED EQUIPMENT

Best Practice #1: At the Highest Levels of the Organization, Set Policy to Require Procurement of ENERGY STAR Qualified Products

Massachusetts, like many other states, has the ENERGY STAR purchasing requirement specified in an Executive Order. Executive Order 484 established the **Leading by Example** program, whose purpose is to:

Oversee and coordinate efforts at state agencies, including all UMass campuses and all state and community colleges, to reduce their environmental impact.

In addition, Executive Order 515 requires that Massachusetts state agencies:

Procure only ENERGY STAR rated office equipment, appliances, HVAC equipment, and other ENERGY STAR rated products unless such products can be demonstrated to be cost prohibitive over their life.

Best Practice #2: Specify ENERGY STAR in Requests for Response (RFRs) and Contracts

Over the years and more recently in response to these Executive Orders, the Commonwealth's central purchasing office, the Operational Services Division (OSD), has successfully incorporated specifications for energy efficiency into more than a dozen requests for responses and statewide contracts, including but not limited to electrical and lighting supplies, IT hardware, cleaning equipment, and more. For example, section 3.7 of the RFR entitled "Food Service Equipment – Institutional Commercial Grade – Large and Small with Related Maintenance and Repair Services (GRO24)" contains the following clause:

"The Commonwealth of Massachusetts is proud of their commitment to energy efficiency – including completely embracing ENERGY STAR products and activating sleep settings on office equipment."

- Marcia Deegler, Director of Environmental Purchasing, Commonwealth of Massachusetts

Energy Efficiency Criteria – As part of the statewide program to promote environmentally preferable products,

April 2011

Lessons Learned

- High-level leadership from IT and acquisition groups
- Representation from all operational units in the core computer configuration development
- A simplified menu of approved models and configurations that make purchasing easy
- Focused communication strategy that informs early and often

Step 3: Select ENERGY STAR Products

- ENERGY STAR label covers over 65 product categories including:
  - Residential products (e.g., consumer electronics, white goods)
  - Office equipment (e.g., computers, copiers)
- The program recently added a number of other commercial products including:
  - Uninterruptible Power Supplies
  - Professional Signage
  - Servers

Professional Displays (PDs)

- Rugged displays (panels designed for 12 to 24 hrs. per day usage) purchased by:
  - Fortune 500: lobbies; conference rooms
  - Airports: replacing CRT flight info monitors
  - Restaurants/Cafeterias: menu boards
  - Retail: outdoor advertising; large display walls
  - Higher Ed: common areas, class rooms
  - Government: public areas

Professional Displays

- Due to their high usage, ENERGY STAR qualified PDs savings can save $350 over their lifetime.
- Large selection of ENERGY STAR certified PDs made by the major manufacturers

Servers

- Requirements:
  - Power supply efficiency targets that scale with size
  - Maximum idle power consumption levels set by category and also scale
  - Server must have the ability to measure and report its power, temperature, and processor utilization
  - Each server must have its own Power & Performance Data Sheet
  - Blade servers will be covered soon - Timing depends ability to determine approach for Idle measurement

New ENERGY STAR Servers can Consume 54% Less Power

- Replacing an older server with a new ENERGY STAR-qualified model will save energy *and* deliver more processing power in the bargain

FIGURE 3: BASELINE WORKLOAD -- POWER COMPARISON AT LOAD LEVEL

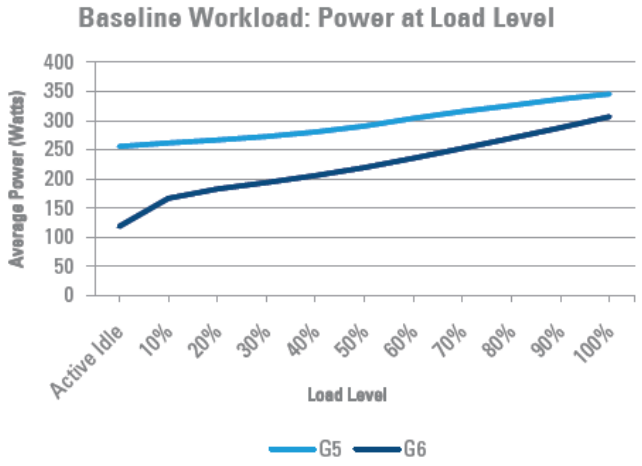
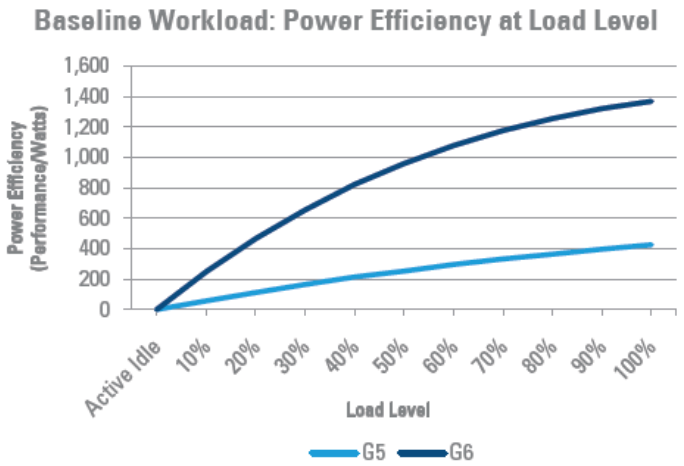


FIGURE 6: BASELINE WORKLOAD -- POWER EFFICIENCY COMPARISON AT LOAD LEVEL



Uninterruptible Power Supplies (UPSs)

- UPSs provide:
  - Temporary supply emergency power to critical devices
  - Corrections for input power problems such as power surges, voltage drops, and frequency distortions.
- ENERGY STAR UPS specification covers all UPSs
  - Small devices protecting your computer
  - 8-ton units designed to y provide a data center with a MW power.
- Specification effective date: 8/1/2012.

Uninterruptible Power Supplies

- ENERGY STAR qualified UPSs cut energy losses by 33% to 55%.
- A 1000 kVA UPS used in a large data center could save $18,000 annually.
- If all currently installed UPSs met the ENERGY STAR spec, 4.6 billion kWh/year would be saved, equivalent to:
  - $471 million per year electricity cost savings
  - 3.2 million metric tons of CO2 emissions avoided or the annual CO2 emissions from 636 thousand cars

Step 4: Estimate Your Savings to Make the Business Case for ENERGY STAR

Savings Estimate for ENERGY STAR Qualified Office Equipment

LEARN MORE AT energystar.gov

Results Overview

The ENERGY STAR models of your selected equipment will save approximately 31%. Each year you will save approximately 10,737 kWh of electricity and $1,236, or $5,212 over the life of the equipment. By choosing ENERGY STAR you will reduce emissions by approximately 16,535 pounds of carbon dioxide annually. This is equivalent to the emissions of 1.5 cars.

Results Detail

	Quantity	Annual					% Savings with ENERGY STAR	Total additional purchase price for ENERGY STAR unit(s)	Simple payback period for additional initial cost (years)	Assumed equipment lifetime (years)	Life Cycle		
		Electricity cost savings	Electricity savings (kWh)	Electricity cost	Electricity consumption by ENERGY STAR unit(s) (kWh)	Emissions reduction (pounds of CO2)					Electricity cost savings	Electricity savings (kWh)	Net cost savings
Desktop Computer	100	$882	7,664	$1,863	16,186	11,803	32%	$0	immediate	4	$3,529	30,657	$3,529
Laptop Computer	50	$136	1,182	$297	2,577	1,820	31%	$0	immediate	4	$544	4,728	$544
Computer Monitor	100	$163	1,419	$599	5,200	2,185	21%	$0	immediate	5	$817	7,095	$817
Scanner	0												
Copier													
– Laser – Monochrome	5	$42	365	$42	365	562	50%	$0	immediate	6	$252	2,190	$252
– Laser – Color	0												
FAX Machine													
– Ink Jet	0												
– Laser	0												
Multifunction Device													
– Ink Jet	5	$9	81	$6	54	125	60%	$0	immediate	6	$56	486	$56
– Laser – Monochrome	0												
– Laser – Color	0												
Printer													
– Ink Jet	5	$3	26	$9	78	39	25%	$0	immediate	5	$15	128	$15
– Laser – Monochrome	0												
– Laser – Color	0												
Total	265	$1,236	10,737	$2,815	24,460	16,535	31%	$0	immediate	-	$5,212	45,284	$5,212

Notes: Life cycle cost savings are given in terms of present value based on a real discount rate of 4%. See General Assumptions tab to adjust the discount rate.
Net life cycle cost savings = life cycle cost savings - additional purchase price

If every home replaced all of their office equipment with ENERGY STAR qualified equipment, it would remove approximately 15 billion pounds of CO2 from the atmosphere every year, which is equivalent to the emissions of 1.4 million cars or planting 1.5 million acres of trees.

EPA

How ENERGY STAR Can Help

- Put you in touch with other organizations that have successfully implemented ENERGY STAR purchasing policies
- Review your purchasing policy
- Assist in the development of communication pieces that speak to variety of audiences
- Contact us at espurchasing@cadmusgroup.com

Summary

- An effective ENERGY STAR Purchasing effort benefits from:
  - High level leadership and representation from all operational units
  - A focused communication strategy
  - Making it easy to purchase ENERGY STAR products
- Implementation requires enforcement and promotion
- ENERGY STAR can help

Thank you

- Contact us:

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U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Federal Procurement of Low Standby Power Products

Christopher Payne

Technical Support Lead

Lawrence Berkeley National Lab

FEMP's Programmatic Vision

Institutionalize *persistent* and *increasing reductions* in energy used by the products purchased and used by the U.S. Government

What is Standby Power?

Standby power is the lowest power consumption a product achieves when connected to the mains.

Standby power is a **level**, not an operating **mode**.

Why Should I Care?

- Energy Independence and Security Act Sec. 524
- Executive Order 13221
- Federal Acquisition Regulations Part 23.203

…all require purchase of products with low standby power

How Can I Comply?

femp.energy.gov/standby

Table 1. Federal Purchasing Requirements and Compliance Resources for IT and Electronics			
	Product Compliance Resources *Use these resources to determine whether a product complies with requirements for Federal purchases*		
Product Category	Low Standby Product List[a]	EPEAT Registry[b]	ENERGY STAR–Qualified Product Lists[c]
Computers (desktop)[d]	X	X	
Computers (thin client)[d]			
Computers (workstation)[d]			
Computers (integrated)[d]		X	X
Computers (notebook)[d]			
Displays (computer displays)[e]			
Imaging equipment[b]			
Televisions			
Audio/video equipment			X
Computers (small-scale servers)[d]			
Displays (professional signage)[e]			
Uninterruptible power supplies			
All other product types	Buy products rated ≤1 watt, or the lowest available standby power level for the product category, per 42 U.S.C. §8259b(e)		

What If I Need More Help?

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