

*Electronics Initiatives  
@ USDA*

Bob Niedzwiecki & Mark Sajbel  
Office of Procurement & Property  
Management  
1 April 2008



# United States Department of Agriculture Electronics Stewardship Plan

Concurrence:

A handwritten signature in black ink, appearing to read "Boyd K. Rutherford".

Boyd K. Rutherford  
Assistant Secretary  
Departmental Administration

Date:

7/11/2007

A handwritten signature in black ink, appearing to read "Jerry E. Williams".

Jerry E. Williams  
Acting Chief Information Officer  
Office of the Chief Information Officer

Date:

7/11/07

*“Strengthening Federal Environmental, Energy, and Transportation Management”*

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- EO 13423 elevated Electronics Stewardship to a mandatory program
  
- Lifecycle Phases:
  1. Acquisition
  2. Operations and Maintenance
  3. End of Life

## Goals of Electronics Stewardship

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1. Buy EPEAT products
2. Enable ENERGY STAR features
3. Extend computer lifespan to 4 years
4. Use environmentally sound practices for handling used computers

## EPEAT FAR Clause

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- **52.223–16** IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products.
- *As prescribed in **FAR 23.706***



## EPEAT FAR Clause

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- Under this contract, the Contractor shall deliver, furnish for Government use, or furnish for contractor use at a Government-owned facility, only personal computer products that at the time of submission of proposals were EPEAT Bronze registered or higher.

Desktop	Desktop	Workstation	Workstation	Mobile
<p>HP Compaq dc7700 cmt Mid-Range</p> 	<p>HP Compaq dc7700 cmt High-End</p> 	<p>HP xw8400 Base</p> 	<p>HP xw8400 Expanded</p> 	<p>HP Compaq 6910p</p> 

Tablet	Tablet	Display
<p>HP Compaq 2710p</p> 	<p>HP Compaq 2710p Outdoor Viewable</p> 	<p>Hyundai U90d-k 19 Inch</p> 

Display	Display
<p>Hyundai U220w-k 22 Inch</p> 	<p>Hyundai W240d-k 24 Inch</p> 

**USDA BPA**  
**#AG-3142-B-06-0035**

**brother**  
At your side



**HYUNDAI**

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## Electronic Product Environmental Assessment Tool

Green Electronics Made Easy

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### Welcome to EPEAT™

EPEAT is a system to help purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. EPEAT also provides a clear and consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products.

The EPEAT Registry on this web site includes products that have been declared by their manufacturers to be in conformance with the environmental performance standard for electronic products - IEEE 1680- 2006. The standard is summarized [here](#), and may be purchased from the [Institute of Electrical and Electronics Engineers](#). EPEAT operates a [verification program](#) to assure the credibility of the Registry.

#### EPEAT now required for all federal purchasing

The [Federal Acquisition Regulations](#) require federal agencies to purchase at least 95% EPEAT-registered products in all relevant electronic product categories.

[more....](#)

#### Latest News

##### [San Francisco Establishes EPEAT requirement](#)

#### DETAILS

[EPEAT Criteria](#)

[Participating Manufacturers](#)

[Purchasers/RFPs Using EPEAT](#)

[FAQs](#)

[Environmental Benefits](#)



# Product Search

## Product Type:

- All Product Types     Desktops  
 Integrated Systems     Monitors  
 Notebooks

## Product:

Starts with

## Manufacturer:

To select more than one manufacturer, hold down the "Ctrl" key and click the manufacturer names

- GETAC
- Hewlett Packard
- Hyundai IT America Corp.**
- Lenovo

## Rating:

- Bronze  
 Silver  
 Gold  
 All Ratings


## Monitor Type:

- All Monitor Types  
 CRT     Flat Panel

## Monitor Size:


- All Monitor Sizes

[Search Again](#)[Export to CSV](#)[Export to EXCEL](#)



<u>Product</u>	<u>Manufacturer</u>	<u>Product Category</u>	<u>Rating</u>	<u>Opt. Pts</u>	<u>Exceptions</u>	<u>Monitor Type</u>	<u>Monitor Size</u>	<u>Listing Date</u>	
<a href="#">X93W</a>	Hyundai IT America Corp.	Monitors	Silver	14		Flat Panel	19 in	3/10/2008	<input type="checkbox"/>
<a href="#">K93S</a>	Hyundai IT America Corp.	Monitors	Silver	14		Flat Panel	19 in	3/10/2008	<input type="checkbox"/>
<a href="#">K93W</a>	Hyundai IT America Corp.	Monitors	Silver	14		Flat Panel	19 W	3/10/2008	<input type="checkbox"/>
<a href="#">K224W</a>	Hyundai IT America Corp.	Monitors	Silver	14		Flat Panel	22 W	3/10/2008	<input type="checkbox"/>
<a href="#">U90D</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	19 in	7/2/2007	<input type="checkbox"/>
<a href="#">U70A</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	17 in	7/6/2007	<input type="checkbox"/>
<a href="#">U70D</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	17 in	7/6/2007	<input type="checkbox"/>
<a href="#">U90P</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	19 in	7/6/2007	<input type="checkbox"/>
<a href="#">U90A</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	19 in	7/6/2007	<input type="checkbox"/>
<a href="#">U90W</a>	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	19 W	7/6/2007	<input type="checkbox"/>


<< [Prev](#) [Next](#) >>

## 12 Search Results Found

Results Per Page 10 

**You searched for:**  
Product Type: Monitors  
Manufacturer: Hyundai IT America Corp.

 [Search Again](#)  [Export to CSV](#)  [Export to EXCEL](#)

<u>Product</u>	<u>Manufacturer</u>	<u>Product Category</u>	<u>Rating</u>	<u>Opt. Pts</u>	<u>Exceptions</u>	<u>Monitor Type</u>	<u>Monitor Size</u>	<u>Listing Date</u>	
U220W	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	22 in	7/6/2007	<input type="checkbox"/>
W240D	Hyundai IT America Corp.	Monitors	Silver	13		Flat Panel	24 W	8/24/2007	<input type="checkbox"/>

[<< Prev](#) [Next >>](#)



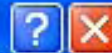
Compare Products

## 2. Operations & Maintenance

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- **Enable Energy Star® Features:**
  - “Turn off monitor” set to 15 minutes or less
  - “System Standby” set to 30 minutes or less

## Power Options Properties



Power Schemes

Advanced

Hibernate

UPS



Select the power scheme with the most appropriate settings for this computer. Note that changing the settings below will modify the selected scheme.

Power schemes

Home/Office Desk

Save As...

Delete

Settings for Home/Office Desk power scheme

Turn off monitor: After 15 mins

Turn off hard disks: Never

System standby: After 30 mins

OK

Cancel

Apply

# DEPARTMENTAL REGULATION

Number:  
3170-001

**SUBJECT:**

End User Workstation Standards

**DATE:**

December 12, 2007

**OPI:**

Office of the Chief Information Officer

## **Appendix E – Conservation and Green Standard Requirements for Workstations**

- Reiterates requirements of EO 13423 for EPEAT and Energy Star settings
- Still in DRAFT stage

## Contact Info

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Bob Niedzwiecki – [robert.niedzwiecki@usda.gov](mailto:robert.niedzwiecki@usda.gov)

Mark Sajbel - [mark.sajbel@usda.gov](mailto:mark.sajbel@usda.gov)

<http://www.greening.usda.gov/>



# Energy Consumption Demonstrations



Sandy Morgan and Mark Sajbel demonstrating the energy consumption of desktop computers, monitors and printers.



# The Results



State	Dell Optiplex GX620 Pent 4	Gateway NLX Pent 3	Dell Optiplex GX270 Pent 4	Dell Flat Panel Monitor	HP LaserJet 5 Printer	HP LaserJet 4000 Printer
On	69 w	44 w	73 w	41 w	Idle 18 w Printing 775 w/ 40 w	Idle 12 w Printing 607 w 280 to 315 w
Standby	69 w	31 w	2 w	1 w	18 w	Power Save 12 w
Hibernate	6 w	4 w	0 w	-	-	-
Shut off	6 w	4 w	1 w	-	-	-



# The Results

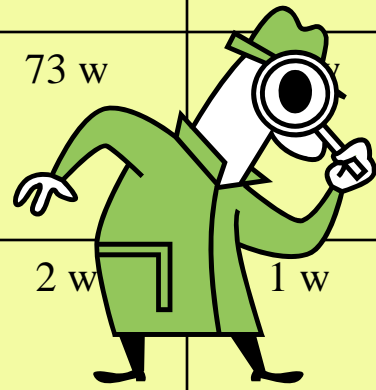


State	Dell Optiplex GX620 Pent 4	Gateway NLX Pent 3	Dell Optiplex GX270 Pent 4	Dell Flat Panel Monitor	HP LaserJet 5 Printer	HP LaserJet 4000 Printer
On <b>NOT GOING TO SLEEP?</b>	69 w	44 w	73 w	41 w	Idle 18 w Printing 775 w/ 40 w	Idle 12 w Printing 607 w 280 to 315 w
Standby	69 w	31 w	2 w	1 w	18 w	Power Save 12 w
Hibernate	6 w	4 w	0 w	-	-	-
Shut off	6 w	4 w	1 w	-	-	-

# The Results



State	Dell Optiplex GX620 Pent 4	Gateway NLX Pent 3	Dell Optiplex GX270 Pent 4	Dell Flat Panel Monitor	HP LaserJet 5 Printer	HP LaserJet 4000 Printer
On	69 w	44 w	73 w		Idle 18 w Printing 175 w/ 40 w	Idle 12 w Printing 607 w 280 to 315 w
Standby	69 w	31 w	2 w	1 w	18 w	Power Save 12 w
Hibernate	6 w	4 w	0 w			
Shut off	6 w	4 w	1 w			

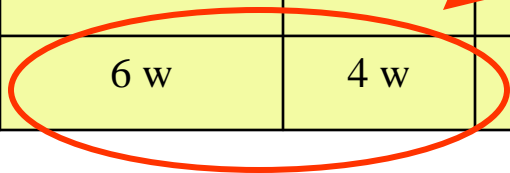


**“POWER SAVE” DID NOT REDUCE WATTAGE**

# The Results



State	Dell Optiplex GX620 Pent 4	Gateway NLX Pent 3	Dell Optiplex GX270 Pent 4	Dell Flat Panel Monitor	HP LaserJet 5 Printer	HP LaserJet 4000 Printer
On	69 w <b>VAMPIRES</b>	44 w	73 w	41 w	Idle 18 w Printing 775 w/ 40 w	Idle 12 w Printing 607 w 280 to 315 w
Standby	69 w	31 w	2 w	1 w	18 w	Power Save 12 w
Hibernate	6 w	4 w	0 w	-	-	-
Shut off	6 w	4 w	1 w	-	-	-



# Computer Power States

**S0 – On** - Working state, everything turned on

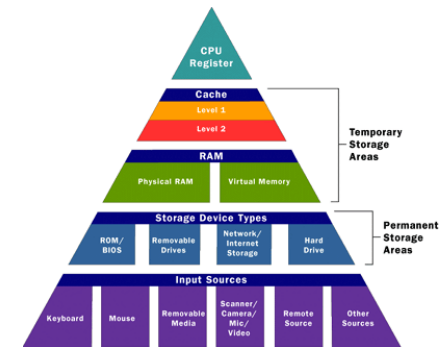
**S1** – CPU stopped but powered. No memory lost.

**S2** – CPU powered off. Cache and register memory lost.

**S3 – Standby** - Suspend to RAM. Fans, hard drives, and other devices are powered down.

**S4 – Hibernate** - Suspend to Hard Disk, almost everything off, rebooting not required

**S5 – Shut down** state, rebooting required





# Cost to Leave PCs On During After-Work Hours

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Electricity consumed by each computer (Dell GX620)

69 (CPU) + 1 (Monitor) + 18 (Printer) = 88 watts

Number of after-work hours/yr = 6,760 hrs

Assume there are 2,000 computers left on 24/7  
and you pay \$0.12 per KWH for electricity.

You waste up to:

$6,760 \times 88/1,000 \times 0.12 \times 2,000 = \mathbf{\$142,771/yr}$

## What Can We Do?

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- ☑ Turn off computers and peripherals when not in use
- ☑ Select energy efficient electronics products
- ☑ Enable energy saving features
- ☑ Configure, operate and maintain servers, networks, workstations, and computer room HVAC to be energy efficient while optimizing computer system performance
- ☑ Train users on how to save energy



# Thank You

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