

*Enabling Energy Star
Settings
@ USDA*

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Office of Procurement & Property
Management
USDA
19 June 2008

Overview

- Where USDA stands
- Energy Star Demos
- Policy & Guidance
- Where we're going

USDA Mission

Mission Statement

The United States Department of Agriculture provides leadership on food, agriculture, natural resources, quality of life in rural America and related issues based on sound public policy, the best-available science and efficient management.

Lead Agency for Biobased Program

Federal Biobased Products Pro

Click on picture to enter Modules



**Module 1:
Biobased Products & BioPreferred
What are they?**



**Module 2:
Why Purchase Biobased Products?**

Goals of Electronics Stewardship

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



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

Survey by OCIO

- 100% of monitors enabled
- 18,000 (out of 105,000) CPU's enabled
- Office of CIO already compliant

USDA

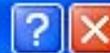
- Pop: 105,000

- Forest Service: 28,000
- NRCS: 11,000
- FSIS: 9,000
- ARS: 7,000
- APHIS: 5,500

2. Operations & Maintenance

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

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

Exam Prep
Supplies...



RealPlayer



Microsoft
Office P...

 *start*

Control Panel

Switch to Classic View

See Also

- Windows Update
- Help and Support
- Other Control Panel Options

Pick a category



Appearance and Themes



Printers and Other Hardware



Network and Internet Connections



User Accounts



Add or Remove Programs



Date, Time, Language, and Regional Options



Sounds, Speech, and Audio Devices



Accessibility Options



Performance and Maintenance



Security Center

Performance and Maintenance

File Edit View Favorites Tools Help

Back Search Folders

Address Performance and Maintenance

See Also

- File Types
- System Restore

Troubleshooters

- Startup and Shutdown

Performance and Maintenance

Pick a task...

- See basic information about your computer
- Adjust visual effects
- Free up space on your hard disk
- Back up your data
- Rearrange items on your hard disk to make programs run faster

or pick a Control Panel icon

- Administrative Tools
- Remote Control
- System
- Power Options
- Scheduled Tasks
- Systems Management

Control Panel

File Edit View Favorites Tools Help

Back Forward Refresh Search Folders

Address Control Panel

Go



Control Panel



Switch to Category View

See Also



Windows Update



Help and Support



Accessibility Options



Add Hardware



Add or Remov...



Administrative Tools



Automatic Updates



BDE Administrator



Date and Time



Display



Folder Options



Fonts



Game Controllers



Intel PROSet



Intel(R) Extrem...



Internet Options



Java



Keyboard



Mouse



Network Connections



Phone and Modem ...



Power Options



Printers and Faxes



Program Downlo...



Regional and Language ...



Remote Control



Run Advertis...



Scanners and Cameras



Scheduled Tasks



Security Center

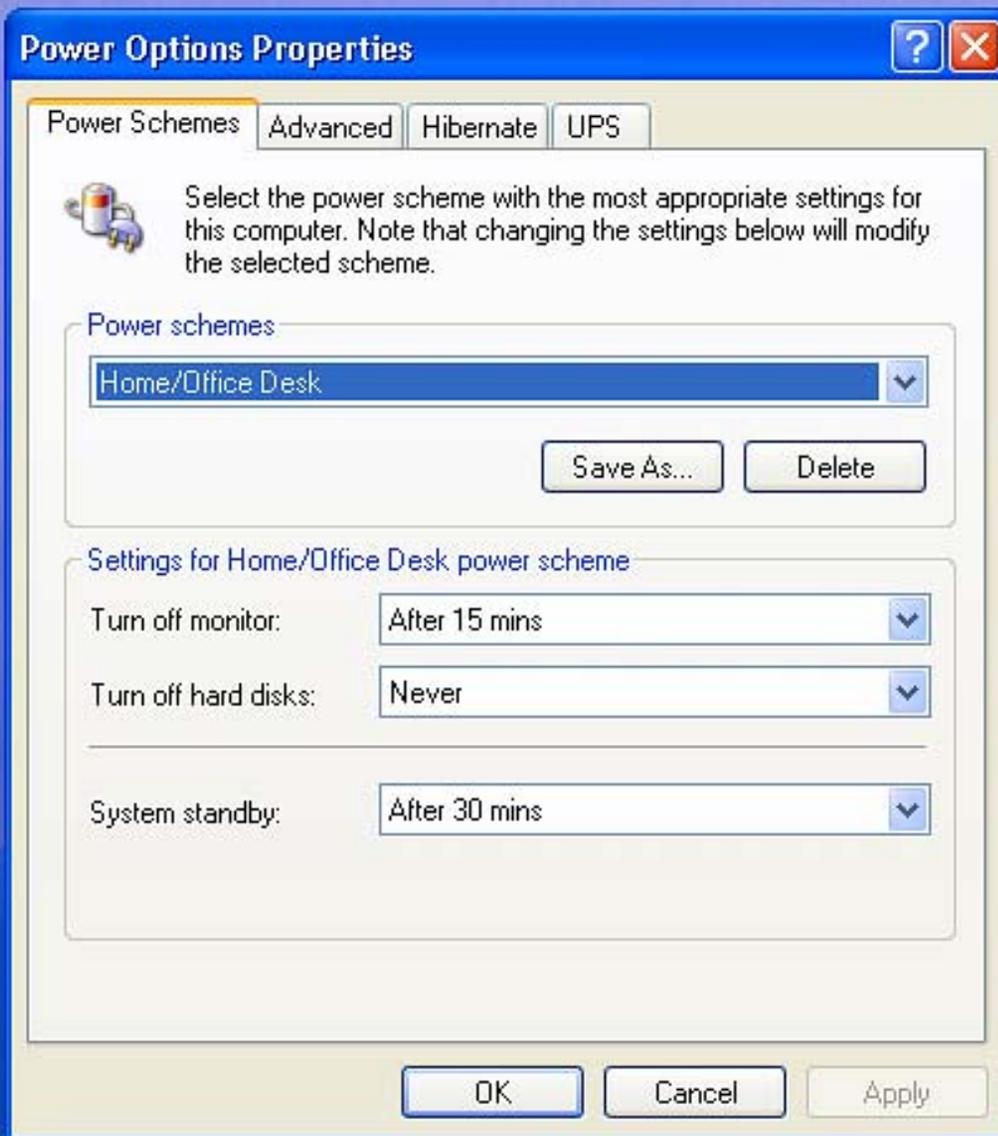


Sounds and Audio Devices

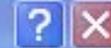


Speech





Power Options Properties



Power Schemes Advanced **Hibernate** UPS



When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.

Hibernate

Enable hibernation

Disk space for hibernation

Free disk space: 58,544 MB

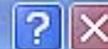
Disk space required to hibernate: 254 MB

OK

Cancel

Apply

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



System hibernates: After 45 mins



OK

Cancel

Apply

Energy Consumption Demonstrations



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

Computer Power Mgmt Demo



Watt Meters



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

State	Mike's PowerPoint	Pentium 3 (2000)	Pentium 4 (2005)	Monitor
On (S0)	65 watts	44 w	74 w	41 w
Standby (S3)	3 w	31 w	3 w	-
Hibernate (S4)	-	4 w	0 w	-
Shut off (S5)	-	4 w	1 w	1 w

- Findings:**
- Awakened instantaneously from standby with keyboard stroke or mouse movement
 - Awakened from hibernation within 10 seconds by pushing the power button
 - Hibernation used less power than shutoff

Kilowatt Hour

- Watt = Amount used in any instant (rate)
- Kilowatt = 1,000 watts
- Watt Hour = Amount of watts used in an hour
- Kilowatt Hour (kWh) = 1000 watt hours
- 100-watt light bulb burning for one hour =
100 watt hours = .1 kWh

Annual Energy Savings

(=800 LB CO₂)

\$56 per computer per year

X 2000 computers = \$112,000/yr

8760 hrs /yr (total use if no standby)

2200 hrs used

6560 hrs on standby

$(71W \times 12\text{¢} \times 6560 \text{ h}) / 1000 = \56

Obstacles

- Telework
- Encryption (WOL doesn't work)
- Shortage of IT staff

Other Steps USDA Pursued

- Presented requirement to USDA CIO Council in October 2007
- Enlisted Energy Star expert for conference call w/ one CIO in Oct 2007
- Conf call with CIO Council in November
- CIO Memo

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

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Office of the Chief Information Officer

Workstation Type	Refreshment Period	Average Annual Refreshment Rate Per Agency	Maximum Life
Standard Office Workstation	4 Years	20%	5 Years
Standard Office Workstation By 2010 (Thin Client Workstation)	5 Years	20%	5 Years
Enhanced Office Workstation	4 Years	25%	5 Years
Specialized Office Workstation	4 Years	25%	5 Years

Standard Office Workstation By 2010

Thin clients are not as vulnerable to security breaches, have a longer life cycle, **use less power**, and require less on-site maintenance support.

Next Step for USDA

- **Full Implementation**

2. Operations & Maintenance Websites

- Energy Star® - http://www.energystar.gov/index.cfm?c=fed_agencies.fed_ag_index
- Federal Management Regulation – www.gsa.gov/fmr
- FEC - <http://www.federalelectronicschallenge.net/resources/opmain.htm>
- Excess Property - <http://gsaccess.gov/>



Thank You

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