Green Computing: Converting Best Practices into SOPs

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Overview

- Green Computing Basics
- Converting Best Practices into SOPs
- DOE Gets Results
- DOE Wins Recognition
- Next Steps and New Challenges in Green Computing

Green Computing Basics

Drivers: DOE O 450.1A and Executive Order 13423 require lifecycle management of electronic assets:

- Green procurement by Electronics Product Environmental Assessment Tool (EPEAT)
- Power management
- Extend lifespan to 48 months or more
- Reuse/Recycle end-of-life electronics
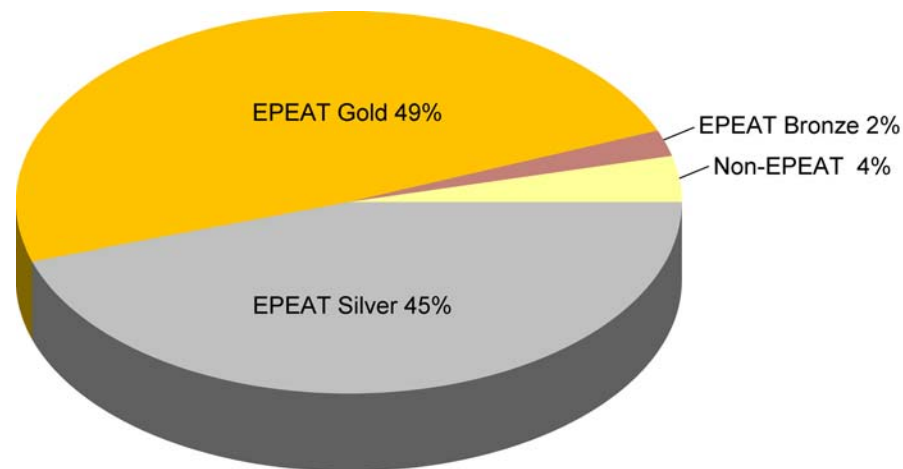- Participate in Federal Electronics Challenge or equivalent program

Converting Best Practices into SOPs: **Procurement**

96%+ of 52,000 computers and monitors purchased and leased by DOE in FY08 were EPEAT registered

- *Almost All Silver or Gold*

EPEAT Gold 49%
EPEAT Bronze 2%
Non-EPEAT 4%
EPEAT Silver 45%

Converting Best Practices into SOPs: **Operations**

Lifespan Extension: More than 95% of DOE sites extend lifespans of computers and monitors to at least 48 Months.

Power Management: More than 90% of DOE sites employ power management, implementing Energy Star® or other energy saving programs.

Converting Best Practices into SOPs: **End-of-Life**

Environmentally Safe Disposition

More than 98% of DOE end-of-life or surplus electronics were reused or recycled in FY 08.

Converting Best Practices into SOPs: **Partnerships**

Twenty-seven DOE sites are now Federal Electronics Challenge Facility Partners.

Twenty-three DOE sites participated in the 2008 White House Electronics Reuse and Recycling Challenge.

DOE Gets Results

DOE was first Federal agency to achieve EO 13423 objectives, and did so three years early.

DOE saved money, energy, and environmental impact through Green Computing in FY08:

- Saved **$40,000,000** in utility costs.

- Saved **4,200,000,000 KwH** of electricity.

- Prevented **47,250,000 Kg of carbon emissions**.

DOE Green Computing Reduces Greenhouse Gases

Total Metric Tons Carbon Emissions (CE)		Equivalent Volumes
47,250 (47,250,000 Kg)		**31,731** passenger vehicle annual emissions
		19,665,153 gallons of gasoline
		402,134 barrels of oil
		39,375 acres of pine forest needed to uptake this much CE

DOE Wins Recognition

- First Federal agency to achieve "Green Status" on OMB Environmental Scorecard.

- First agency to win White House "Closing the Circle" Award for Electronics Stewardship.

- Received 2008 Federal Electronics Challenge Agency Partner Award for Exemplary Leadership.

- Won three consecutive White House Electronics Reuse and Recycling Challenges, 2006-08.

- 20 DOE Sites won 31 national awards for electronics stewardship, 2005-09.

Next Steps In Green Computing

1. All DOE sites implement sustainable practices to achieve electronic stewardship goal in DOE O 450.1A.

2. Power management implemented at all sites.

3. More sites sign up for Electronics Reuse and Recycling Campaign FY09 Competition.

4. Sites build cross-cutting Green Computing Teams: IT, environmental, energy, property, and procurement staffs.

5. More sites seek national recognition for energy efficiency and environmental best practices.

Looking Ahead
to New Challenges

- Thin client computing

- Improved DOE enterprise and research Data Centers with energy efficiency and environmental best practices

- Implementing new technologies

- DOE becoming the first Federal agency to enroll all sites as Federal Electronics Challenge Facility Partners

For Assistance and Information

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