



New ENERGY STAR Office Equipment Specifications

**NPEP and FEC
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Topics



- New ENERGY STAR office equipment specifications
- Federal and State initiatives requiring ENERGY STAR products
- Role federal purchasers can play in saving energy by specifying ENERGY STAR qualified office equipment

Benefits of Reducing Electricity Consumption



- Improve air quality
 - *Less smog, acid rain*
- Help mitigate climate change
 - *Fewer greenhouse gas emissions*
- Improve reliability of electricity grid
 - *Fewer power outages*
- Lower energy bills
 - *Consumers, businesses, and governments save*
- National security
 - *Less dependence on foreign oil*
 - *Reduced price volatility*

New Office Equipment Specs Represent Shift to Active Power



- To date, office equipment specifications have focused on standby power and power management
- New specifications continue to address low power modes but now include efficiency requirements when products are on – result is significantly more savings

New 2007 Office Equipment Specs



- Two new specifications are coming in 2007 that cover all office equipment
 - **Computer Specification – requirements included in EPEAT** – covers desktops, notebooks, workstations, desktop derived servers
 - **Imaging Equipment Specification** covers copiers, fax machines, mailing machines, multifunction devices, printers, scanners
- New specifications shift focus to overall energy use and not only standby power
- Both require that external power adapters are ENERGY STAR qualified as well



New Office Equipment Specifications - Timeline



Product Category	Status	Effective Date
External Power Supplies	Finalized	January 1, 2005
Monitors	Finalized	January 1, 2006
Imaging Equipment	Finalized	April 1, 2007
Computers	Under Development	July 20, 2007

* Tier 1 has been in effect since January 1, 2005. The Tier 2 monitors specification will take effect on January 1, 2006. EPA also may revise the specification in the near future to require ENERGY STAR EPSs on monitors with EPSs.

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Save \$\$/ Office Worker with ENERGY STAR!



- By 2007, an office with new ENERGY STAR qualified products (PCs and imaging equipment) will save roughly \$48 and 680 kWh/ office worker.
- For a 200-person office, this is equivalent to:
 - Saving 136,000kWh annually
 - \$9,700 annually

Meet Federal and State Requirements



- EPA Act requires that the federal government purchase ENERGY STAR qualified and FEMP-designated products.
- Executive Order 13221 asks federal agencies to purchase products that with low standby power levels met by ENERGY STAR qualified products.
- Many states require purchase of ENERGY STAR qualified products.
 - California
 - Hawaii
 - Indiana
 - Maryland
 - Massachusetts
 - Minnesota
 - Nevada
 - New York State
 - North Carolina
 - Utah
 - Vermont
 - Virginia
 - Wisconsin

New Imaging Equipment Spec



- Two Approaches:
 - Typical Electricity Consumption (TEC)
 - Looks at **full duty cycle** for **standard-sized EP copiers, multifunction devices, and printers**
 - Metric is typical weekly electricity a product might use in all modes
 - Operational Mode (OM)
 - Focuses energy consumption in various low-power modes (i.e., sleep and standby) for products such as ink jets and large format devices



New Computer Specification



- Tier I Hardware & Operational Mode Requirements:



- More aggressive sleep modes
- New standby power requirements
- New idle test procedure and power levels
- New external and internal power supply requirements

- Tier II: Performance Benchmark

- Use a software benchmark to measure the performance of the computer while simultaneously measuring the energy required to create that performance



Plug for Datacenters



- Growing sales of servers
 - Worldwide installed base: 20 – 25 million
 - Projected to grow by 5 million by 2009
 - US installed base: approx. 10 million
 - Worldwide 2005 revenue: \$51 billion
 - Worldwide 2005 shipments: 7 million
- Sales of other equipment (routers, network equipment, storage) will grow in tandem

EPA Goal – Create Sustainable Computing from Desktop to Datacenter



Desktop

- Several new ENERGY STAR IT specifications (computers, monitors, imaging)

Datacenter

- Encourage efficiency in datacenters through two complementary activities:
 - Efficient equipment
 - Design & operation best practices
- Support efforts to measure energy efficiency in servers (test protocol)
- Once a server metric is available, EPA may:
 - Develop an ENERGY STAR server specification
 - Include a server efficiency requirement in ENERGY STAR Commercial Building Energy Performance Rating System

What Can Federal Agencies Do Now?



- Current market penetration of ENERGY STAR among office equipment is about 90%. Post the effective dates for the revised imaging and computer specifications, market penetration will be about 35% and 25%, respectively.
- ENERGY STAR set requirements such that a wide range of products with expansive capability can qualify for ENERGY STAR. Check with your suppliers and discuss their plans to meet the new requirements:
http://www.energystar.gov/index.cfm?c=revisions.revisions_specs
- Increase implementation of monitor and computer power management with free tools and consultation. Learn about options at: www.energystar.gov/powermanagement
- Broker a call between your IT manager and EPA about activating power management.

What Can Federal Agencies Do Now?



- Learn more about EPAact at:
http://www.eere.energy.gov/femp/about/legislation_eact_05.cfm
- Engage in work on datacenters.
- Contact EPA for more information:
 - Katharine Kaplan Osdoba, U.S. EPA ENERGY STAR Program, Osdoba.katharine@epa.gov, (202) 343-9120, office equipment
 - Andrew Fanara, U.S. EPA ENERGY STAR Program, fanara.andrew@epa.gov, (202) 343-9019, for servers and datacenters