What is Energy Star?

ENERGY STAR® qualified products and practices help you save money and can reduce greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy. You can help reduce electricity usage and its environmental impact by power managing or turning off your product when it is not in use for extended periods of time, particularly at night and on weekends.[1]

What are the potential benefits of the new Energy Star® specification?

Desktops, Notebooks, and Workstations manufactured after July 20, 2007 that bear the ENERGY STAR® label meet the more stringent 4.0 requirements. Because of these requirements, your computer has a highly efficient power supply and other hardware specific features that, based on EPA estimates, could annually:

- Save you up to 130 kWh of electricity.
- Prevent up to 200 lbs of green house gas emissions (enough to fill a large room).

Moreover, Energy Star compliant computers can save even more energy by using ENERGY STAR® power management features, which allow the computer to enter a very low power mode when not in use for a specified period of time. The EPA estimates that these power management features, when enabled on ENERGY STAR® qualified computers, could save you up to 500kWh of electricity annually, equivalent to:

- Saving greenhouse gas emissions by taking your car off the road for 3 weeks.
- Planting a grove of trees 70ft. by 70ft..

**Energy Star® compliant systems combined with power management settings
can provide Dell customers the greatest TCO savings[2]!**

How is Dell partnering with the EPA?

Dell has been an ENERGY STAR® Partner for over a decade, demonstrating an on-going commitment to energy efficiency.

For the past several years Dell worked with the EPA directly and through the Information Technology Industry Council (ITI) to help the agency develop effective, new ENERGY STAR® standards for computers. Our shared goal was to create an industry standard that cost-effectively promotes significant energy savings without sacrificing performance. In addition Dell has been an active participant and proponent of the ENERGY STAR® power management programs that help enterprises reduce their computing electricity use.

Dell's unique build-to-order model can increase efficiency and eliminate waste while allowing systems to be built to the customer's specifications that still maintain ENERGY STAR® qualifications.

**The new ENERGY STAR® Version 4.0 specification for computers
takes effect on July 20, 2007.**

Energy Star 3.0 History	What is Changing with Energy Star 4.0?
- Energy Star computer guidelines unchanged since July 2000. - Lenient requirements to meet Energy Star 3.0, virtually all computers shipped today meet these criteria: - Enter sleep mode (S3) after 30 minutes of inactivity - If shipped with network capability, shall sleep on networks and respond to wake events:	- EPA mandating more stringent requirements. No grandfathering of current products. - Intent is to make Energy Star prestigious (20-25% attainment) and drive innovation. - Focus areas are being addressed: **Power supply efficiency** (more efficient conversion from the wall plug) **Off-mode**, **Sleep-mode**, and **Idle-mode** wattages - ENERGY STAR 4.0 idle-mode power budget varies by configuration; richer configurations have a greater energy allowance - Desktops - Category A, B, C - Notebooks - Category A, B - Workstation – TEC & Desktop Category C

Guideline A Power Supply Rating	Watts (W) in Sleep Mode
< 200W	< 15W
200W - 300W	< 20W
300W - 350W	< 25W
350W - 400W	< 30W
> 400W	< 10% of power supply's maximum continuous output rating

ENERGY STAR 4.0
Effective July 20th, 2007

Idle mode	Desktops	Category A Category B Category C	< or =50 Watts < or =65 Watts < or =95 Watts
	Notebooks	Category A Category B	< or =14 Watts < or =22 Watts
Sleep mode	Desktops		< or =4.7W w/WOL
	Notebooks		< or =2.4W w/WOL
Off/Standby mode	Desktops		< or =2.00W w/o WOL **or** 2.7W w/WOL
	Notebooks		< or =1.00W w/o WOL **or** 1.7W w/WOL
Workstations TEC Formula	TEC Power (PTEC): $\leq$ 0.35 * [PMax + (# HDDs * 5)] W		
Desktop & Workstation Internal PSU	Meet 80% efficiency at specified loads (20%, 50%, 100%) Power Factor 0.9 @ 100% Load		
External PSU & Notebooks	$\geq$84% Averaged Efficiency, $\leq$0.75W No-Load		

DESKTOPS
<u>Category A</u> – those not meeting B or C
<u>Category B</u> – Minimum of 1 GB memory and Dual core CPU or > 1 discrete processor

<u>Category C</u> – Dual core CPU or > 1 discrete processor & 128MB dedicated, non-shared graphic memory & two the following:
- Min 2 GB system memory
- Min 2 hard drives
- TV tuner/video capture w/HD support

NOTEBOOKS
<u>Category A</u> – those not meeting B

<u>Category B</u> – Notebooks with at least 128MB of dedicated, non-shared video memory

WORKSTATIONS
<u>Desktop Category C</u> – (see above)   Some basic Dell Precision workstations will qualify using Desktop category C requirements, but most fall under the following specification:
<u>Workstation TEC</u> –
- Must be marketed as workstation, have a MTBF > 15,000 hours, support ECC memory and include 3 or more advanced features listed in the specification.