



Maximizing Office Equipment Energy Savings with ENERGY STAR

Overview



- Monitor Power Management
- Computer Power Management
- New ENERGY STAR Monitor Specification
- External Power Supplies

What is Power Management?



- Monitor power management (MPM) places active monitors into a low power sleep mode after a period of inactivity
- Computer power management (CPM) places the computer itself (CPU, hard drive, etc.) into a low power sleep mode
- Both CPM and MPM are existing Windows functions

Why Power Management?



- **Easy Money:** A \$10 to \$100 annual cost savings opportunity may be sitting on nearly every desk in your organization
- Roughly 100 million office computers and monitors use more than 1% of the nation's electricity
- More than half of this electricity is wasted

Power Management Barriers and EPA Tools

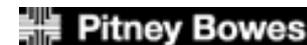


- IT Manager
 - Barrier: Time consuming task with no bearing on his performance
- End User
 - Barrier: Education Hurdle
- Upper Management
 - Barrier: Indifference

MPM – A No Brainer



- MPM is stable -- problems associated are exceptionally rare
- Fortune 500 IT departments need less than a day to implement MPM features
 - GE activated MPM by using ENERGY STAR EZ Save tool on 100,000 to save \$3 million annually



MPM – Large and Small Federal Agency Involvement



- Navy confirmed that MPM will be set to 15 minutes on 410,000 PCs to save over \$4 million/year*
- DOD Office of the Secretary of Defense activated MPM on 700 computers to save \$7000/year*

CPM - On the Upswing



- Originally designed to conserve battery life on laptops
- Activation in networked environments is not as straightforward as MPM
- EPA can determine if your network setup is suitable for CPM and help you activate CPM

Educational Material: Mouse Pad and Poster in Spanish



PR Tool - Million Monitor Drive Campaign



- Organizations pledge to “contribute” to the goal of addressing a million monitors annually
- Helps secure high priority for MPM within organization
- Honored Top Contributors to Million Monitor Drive at ENERGY STAR Awards ceremony in April 2003 and April 2004

New ENERGY STAR Monitor Specification



- Tier I went into effect January 1, 2005 and Tier 2 goes into effect January 1, 2006
- Requires maximum active power based upon screen resolution
- Lowers power draw required in sleep mode and off mode

Highlights of Version 4.0 Specification



- Performance-based specification
- Test data submitted by many manufacturers
- Maximum allowable power consumption for On, Sleep, and Off modes; incorporates two tiers
- On Mode measured in pixels/watt, so concentrates on display quality rather than display size
- Detailed test methodology for all three modes
- Allows various screen sizes, technologies, and brands of computer monitors to qualify under the Tier 1 requirements

Version 4.0 Market Effects



- Tier 1
 - Some CRTs and wide-screen LCDs will be able to qualify
- Tier 2
 - Primarily LCDs will qualify

New Specification Savings Estimates



- Tier 1 per unit energy savings
 - E* LCD vs. a non-qualified CRT = 425 kWh/yr
 - E* CRT vs. a non-qualified CRT = 282 kWh/yr
 - E* LCD vs. an E* CRT = 123 kWh/yr

New Specification Savings Estimates



- Tier 2 per unit energy savings
 - E* LCD vs. a non-qualified LCD = 109 kWh/yr
- In the year 2010, estimated carbon savings will be 4.82 MtC/yr

Big Picture: Potential Savings



- Projected Savings by 2010
 - Energy: approximately 290 billion kWh
 - Dollars: approximately \$21 billion
 - CO₂: approximately 55 MtC, or equivalent to taking approximately 39 million cars off the road.

External Power Supplies (Adapters)

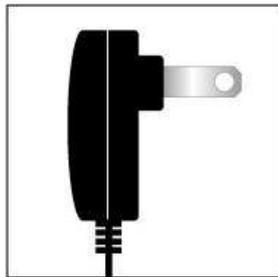


- Program started in January 2005
- Five EPSs for every person in the U.S.
- More efficient EPSs have the potential to save more than 5 billion kWh of electricity This is equivalent to:
 - Enough electricity to light 40 percent of the homes in California

How the EPS Program Will Work



- In the next year or so, consumer electronics makers will offer products using ENERGY STAR qualified EPSs (i.e., cell phones, PDAs, digital cameras, etc.)



Powered by an ENERGY STAR[®] qualified adapter for a better environment

- Learn more, go to:
www.energystar.gov/powersupplies

Key Take-Away Messages



- Monitor/Computer Power Management
- New ENERGY STAR Monitor Specification
 - On-mode levels
 - Two tiers





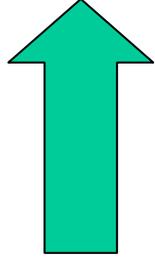
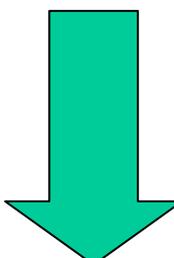
Questions from Day 1

Federal Electronics Stewardship
Educational Conference
February 8, 2005

- How will the RoHS and WEEE directives impact the cost of CRTs / LCDs and their market penetration

LCD and CRT Monitor Shipment Data

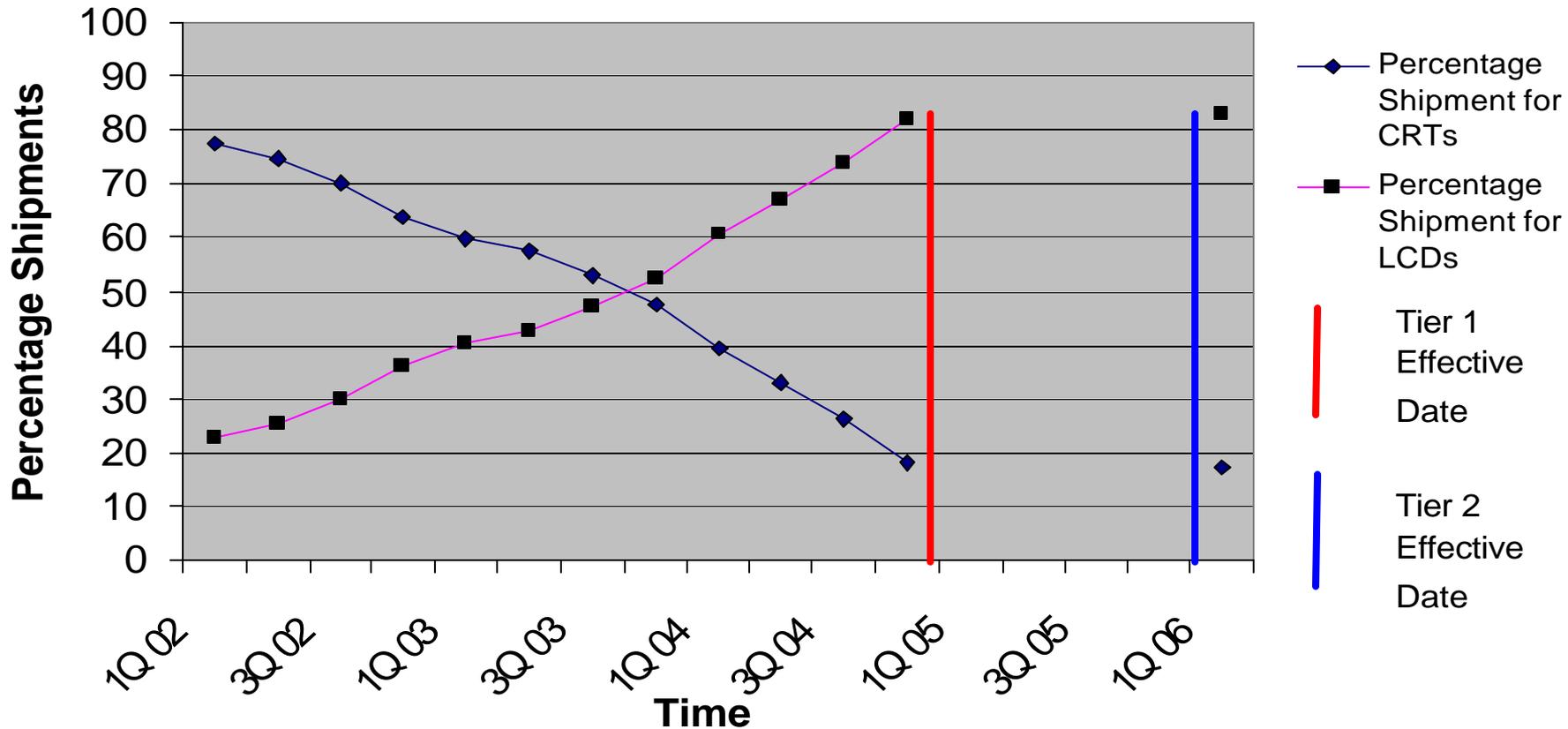


- 2003
 - **49,129,000** LCD monitors shipped
 - Growth of **53%** over 2002  +53%
- 2003  -20%
 - **66,880,000** CRT monitors shipped
 - Decrease of **20%** from 2002

Shipment Cross Over Chart for LCDs and CRTs



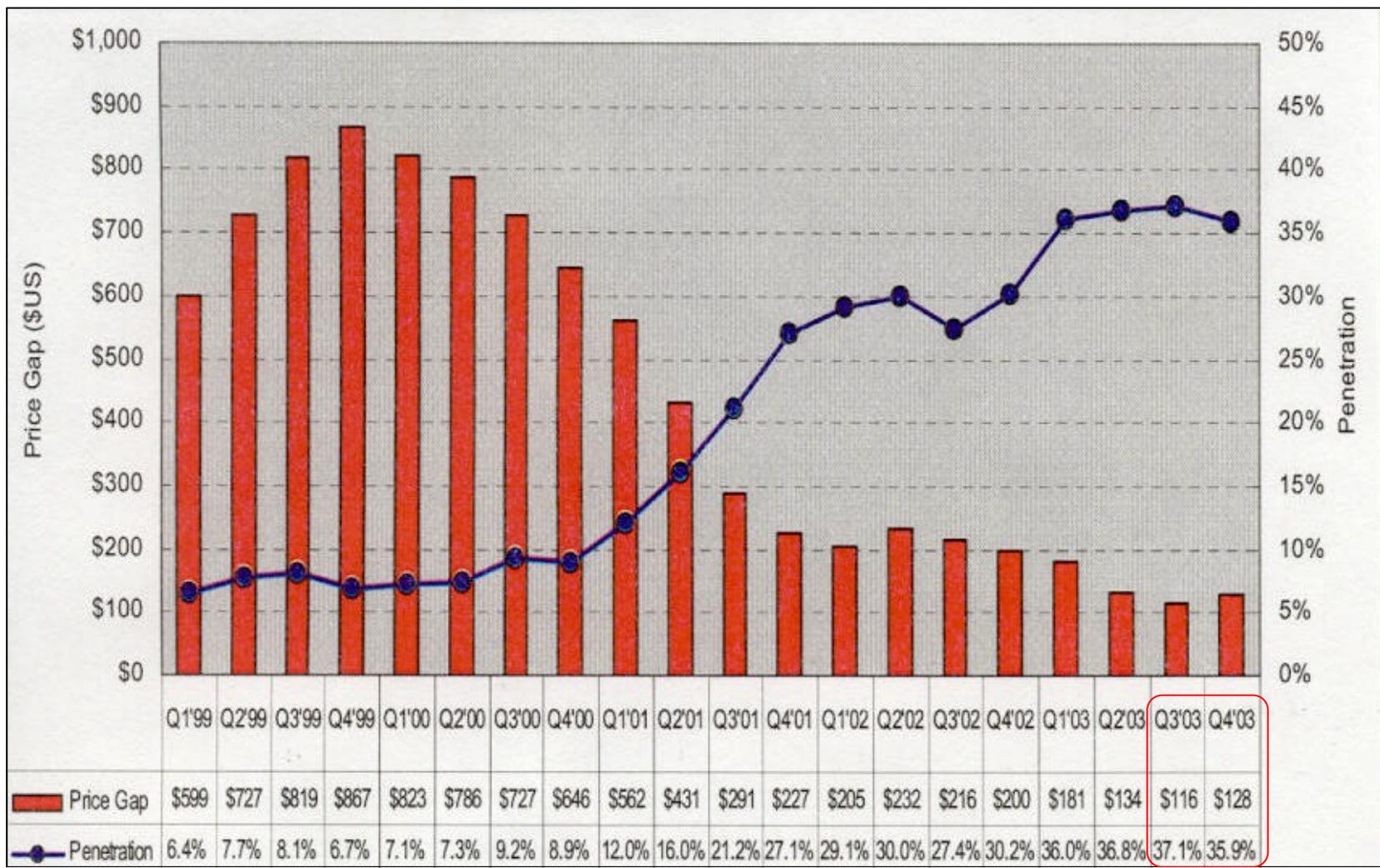
Predicted Growth of LCDs and Decline of CRTs in the North American Market - 1Q 02 Through 3Q 04 and Estimates for 1Q 06



Product Pricing and Penetration {1}



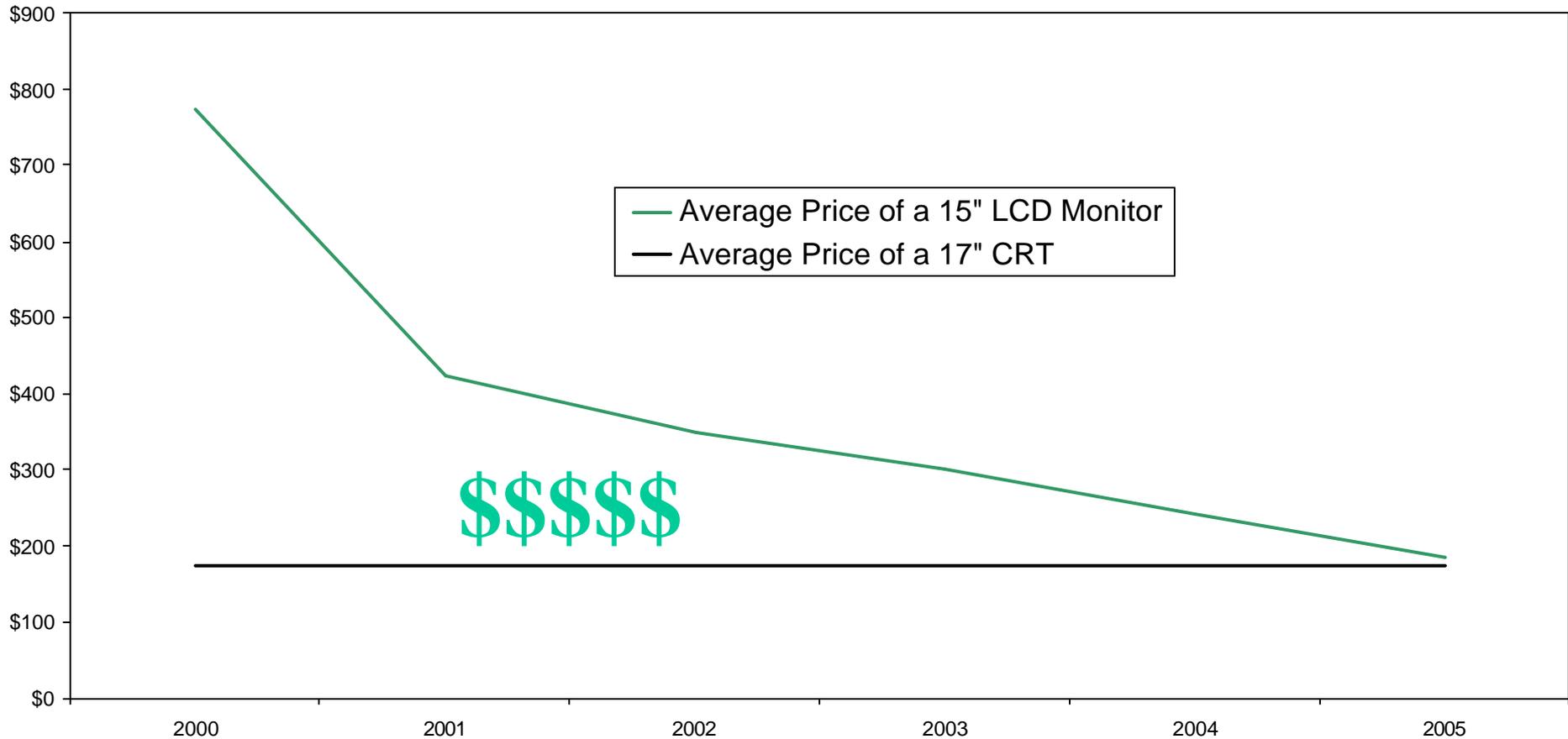
15" LCD Monitor Vs. 17" CRT Monitor Price Gap and Penetration



Forecasted Price of a 15" LCD Monitor



Recent History and Forecast of 15" LCD and 17" CRT Monitor Prices



- Are consumers willing to pay more for environmentally friendly or energy efficient products?

- 70% of US adults agree with the statement that, “when given a choice to buy I will choose those products and services that are environmentally friendly.”
 - NMI, LOHAS Consumer Report, 2004

- On average, consumers are willing to pay 5% more for computers, scanners and printers that require one-third less energy to use
 - Roper Green Gauge 2003 Report