



ENERGY STAR Computer Stakeholder Meeting

US EPA, Washington, DC

March 15, 2005

Meeting Agenda



- 9:30 a.m. **Agenda & Meeting Goals**
- 9:45 a.m. **ENERGY STAR Update**
- 10:00 a.m. **Preliminary Draft Tier I Discussion**
- 12:30 p.m. **Lunch**
- 1:30 p.m. **Tier I Discussion (cont)**
- 2:15 p.m. **Comments from European Commission**
- 2:30 p.m. **Tier II Research Update**
- 3:30 p.m. **Next Steps**
- 3:35 p.m. **Adjourn**

Meeting Goals



Preliminary Draft – early in development process, no final decisions made yet about proposed levels.

Meeting Goals:

- Solicit stakeholder feedback that can help EPA develop a Draft 1 specification
- Provide stakeholders with an update on Tier II research
 - Fixing the networking problem
 - System energy efficiency (performance/prescriptive approaches)
- Harmonize with other international initiatives

ENERGY STAR Update



- Product Specifications in Development
 - Craig Hershberg, US EPA
- Marketing and Promotional Activities
 - Jill Abelson, US EPA
- Program Administration: OPS
 - Robin Shudak, US EPA

PD Update: New Specifications



- New products launched over last year:
 - External Power Supplies: January 2005
 - Room Air Cleaners: July 2004
 - Vending Machines: April 2004
- Specifications under development
 - Battery Chargers
 - Commercial Dishwashers
 - Digital Television Adapters (DTA)
 - Pre-Rinse Spray Valves

PD Update: Product Revisions



- In addition to computers, EPA is revising the following specifications:
 - Dehumidifiers
 - HVAC (Central Air Conditioners/Air Source Heat Pumps)
 - Imaging Equipment
 - Programmable Thermostats
 - Roof Products
 - Telephony
- Suspended specifications
 - Set-top Box

ENERGY STAR Future Direction



1990's



2000's

Standby and Sleep Power → *Active Power*

Reasons to pursue active power in office and consumer electronics



- **Additional savings opportunity**
 - Picked low fruit
 - Focus on most energy intensive mode
 - Challenges associated with enabling / power management
 - Power supplies are viable; high potential savings
- **Product usage patterns and designs changing**
 - Higher active use for longer periods of time, less time in sleep
 - Products trending toward always on, increased networking
 - Identify & promote models that scale total power use closely to workload
- **Holistic approach**
 - Consistent with consumer views of product efficiency
 - Promote products that save \$ and KWh all of the time, not just some of the time

EPA Power Management Outreach - Million Monitor Drive (MMD)



- Launched in late 2001 to address low enabling rates for monitors
- Estimated that office computers and monitors use 1% of the nation's electricity
- Focused on monitors to facilitate success and achieve greatest energy savings
- More than half of electricity used to power monitors is wasted:
 - 60 percent left on at night
 - 45 percent not enabled for power management
- MPM places active monitors (60 to 90 watts) in low-power sleep mode (2 to 10 watts) after a period of inactivity



Million Monitor Drive (cont.)



- Campaign to address power management (activating sleep settings) on at least 1 million computer monitors annually.
- Promotes network tools and technical assistance that make monitor power management quick and easy
- Largest corporations in US have participated:
 - Cisco Systems
 - Ford
 - GE
 - GM
 - Nike
 - Pitney Bowes
 - WalMart
 - Wells Fargo



Million Monitor Drive: Results



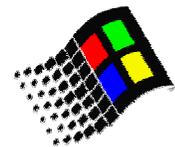
- As of January 2005, 6.4 million monitors have become part of the MMD.
- Estimated savings of 660 million kWhr and \$50 million:
 - Enough electricity to light all the homes in Hawaii
 - Equivalent to preventing 470,000 tons of CO₂ emissions
- Have begun next phase -- computer (hard drive, CPU) power management (CPM) -- through:
 - Pilot implementations at universities and schools
 - New network tool that activates CPM
 - Working with industry to make CPM technical improvements



ENERGY STAR and Microsoft are discussing how to improve Windows CPM



- ES team and Longhorn development managers met in Redmond in March 2005
- Longhorn managers are committed to removing computer power management (CPM) "adoption blockers"
- ES will provide Microsoft with information about CPM utilization in the field
- ES and Microsoft will explore ways to jointly educate organizations and end-users about CPM



Marketing and Promotional Activities

Jill Abelson, US EPA

Growing Influence / Awareness of Label



- Public awareness of ES jumped to 64% of US households in 2004
- 30% of US households knowingly purchased a qualified product in the past year
- 54% of households favorably influenced by label
- More than 70% of households would recommend labeled products to their friends
- 95% of recent purchasers say they are likely to buy a product with the ENERGY STAR label in the future

Strong Consumer demand for Energy Savings, Environmental Production

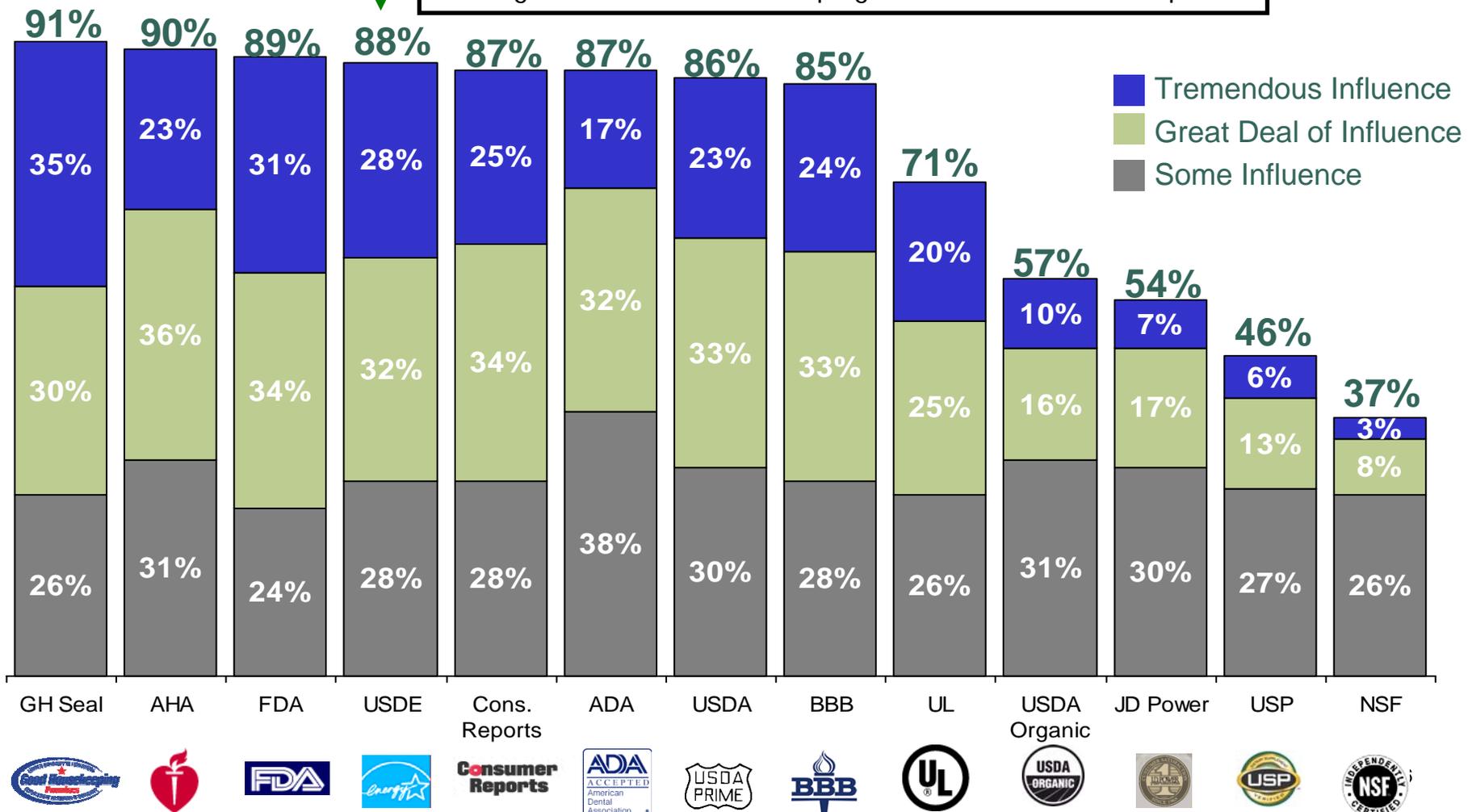


- 79% of US adults believe energy efficiency is important in electronics & appliances
- 56% of adults report purchasing a product because advertising on label said product was energy efficient
- 73% of US consumers believe that a product that is better for the environment is a somewhat to very important consideration when purchasing an appliance or other energy-using product

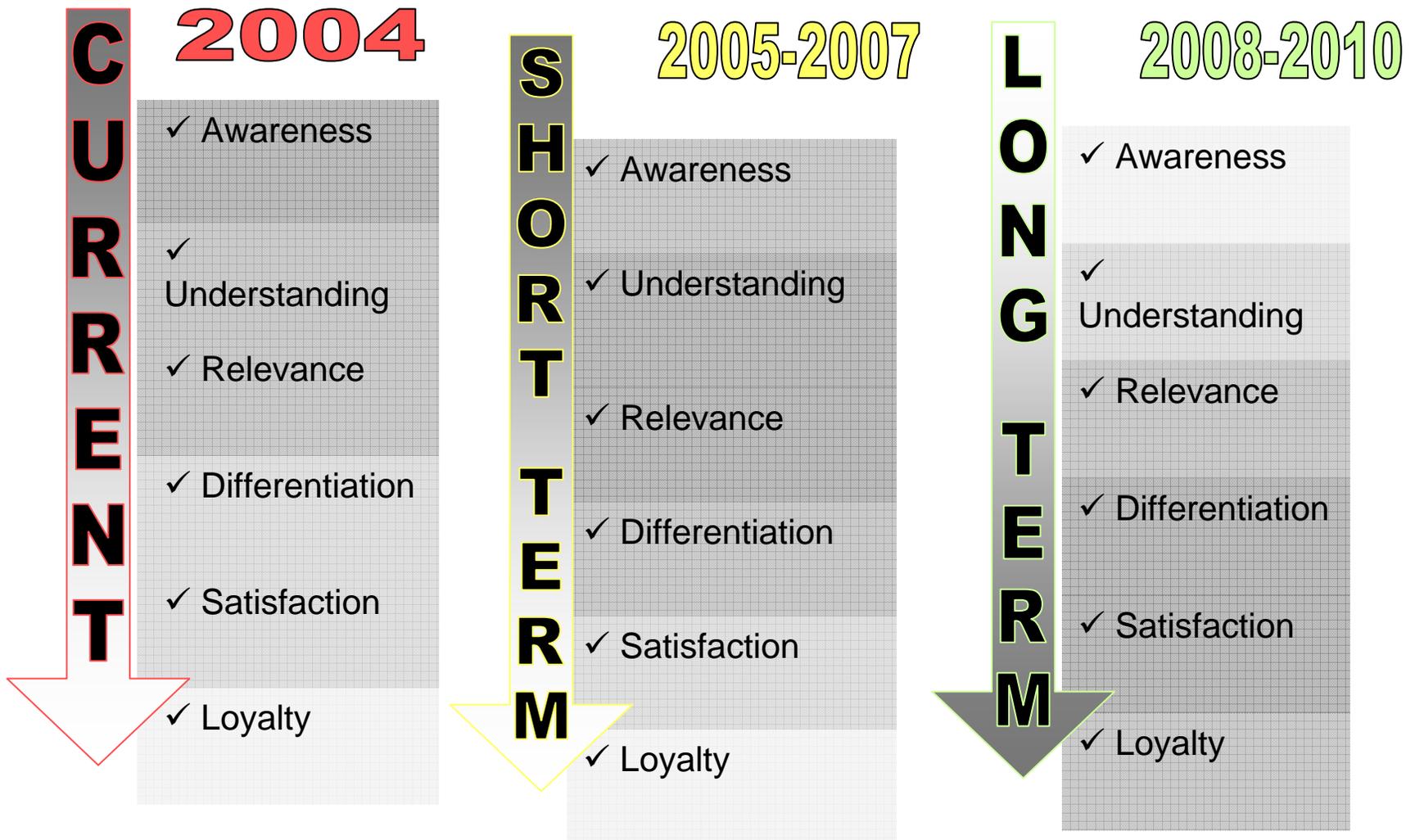
Good Housekeeping Seal Survey



ENERGY STAR label ranks among the highest level of influence on product purchase among all consumer emblems, similar in ranking to the Good Housekeeping Seal and Consumer Reports.



EPA is Evolving Marketing/Comm Tactics to Parallel Growing Maturity of Brand



Aggressive Outreach for IT/Electronics



The screenshot shows the NPR website interface. At the top, there's a navigation bar with "Programs and Schedules" selected, a search box for "Search NPR.org", and links for "ARCHIVES", "TRANSCRIPTS", "DISCUSSIONS", "STATIONS", "NPR SHOP", "ABOUT NPR", and "HELP". On the left side, there's a sidebar with the NPR logo, a "find your local member station" section with a "Call Letters" input field and a "find" button, and a list of categories: News, Politics, Iraq, Health & Science, Books, Music, and Movies. Below these are links for "Morning Edition", "All Things Considered", "Day to Day", "Talk of the Nation", "Fresh Air", "Tavis Smiley Show", "Weekend Edition Saturday", "Weekend Edition Sunday", "Motley Fool Radio", "More Programs", "Hourly Newscast", and "Program Stream 24-Hour schedule". At the bottom of the sidebar are links for "Contact NPR", "Sponsor NPR", "Press Room", "Submit Story Ideas", and "Corrections".

The main content area features the article title "Computer Energy Waste a Major Cause of Pollution" with a sub-header "Morning Edition audio". The article text discusses energy-saving tips for computers and monitors, mentioning that U.S. companies alone waste \$1 billion annually on electricity for monitors that are turned on unnecessarily. It also notes that EPA officials say emissions could be reduced if companies and individual users followed energy-saving guidelines. The article is dated June 17, 2004.

On the right side of the article, there's a "Morning Edition" logo and a list of links: "latest show", "previous shows", "radio expeditions", "talking plants", "about morning edition", "where can i hear it?", and "morning@npr.org". Below these links is a yellow box with the text "Heard it? Read it. Get the Transcript."

Below the article text, there's a "Related NPR Stories" section with links to "Electronics' Final Cost", "EPA Lists Air Pollution Offenders", and "2003 Blackout Led to Drop in Pollution". There's also a "Web Resources" section with links to "Energy-Saving Advice For Your Computer From the EPA" and "'Mass Energy' Energy-Saving Actions".

At the bottom of the article, there's an "E-mail This Page" section with a "Want a transcript?" link and a form for entering a recipient's e-mail address. The form includes a "Recipient's e-mail address:" label and a "Separate addresses with semicolons" instruction.

Aggressive Outreach for IT/Electronics



ConsumerReports.org - AC power supplies / OS:DC power supply, switching power supply. - Microsoft Internet Explorer provided by

File Edit View Favorites Tools Help

Address http://www.consumerreports.org/man/content/display_report.jsp?FOLDER%3C%3EFolder_id=538847&ASSORTMENT%3C%3EAssortment_id=333133&UID=1109176007565

Expert • Independent • Nongovt

ConsumerReports.org

Home Customer service My account SUBSCRIBE LOGIN

Autos Appliances Electronics & computers Home & garden Health & fitness Personal finance Babies & kids Travel Food

A to Z Index Search Consumer protection Donate Recalls Web site e-Ratings Discussions Bookstore

Electronics & computers

You are here: Electronics & computers > AC power supplies 105

In this report

- Overview
- What you can do

January 2005

AC power supplies

Keep them from zapping your wallet and the environment

You may not think much about power supplies, those power cords with a bricklike appendage that converts AC power into the DC needed by cell phones, laptops, and a host of other devices. But touch that brick while any of those devices is on and it will probably feel warm. That's the energy lost during the conversion process. The power supplies hidden within desktop computers, TVs, cable boxes, and other appliances also waste energy.



With typical use, AC power supplies can waste \$20 to \$50 of what you spend annually on electricity. Nationwide, power supplies waste more than 58 billion kilowatt-hours yearly, equal to the annual output of 10 large power plants. That extra energy output translates into 40 million tons of the greenhouse gas carbon dioxide released into the atmosphere each year, according to Eros Consulting, an environmental consulting firm.

A major culprit in this waste is the type of adapter known as a linear power supply, or transformer, which typically has an energy-efficiency rating of 30 percent to 80 percent. That means it loses 40 percent to 70 percent of the energy converted to DC when powering an appliance. A transformer can consume 2 to 5 watts just by being plugged in. Manufacturers

POWER PLAY The switching power supply on the right delivers the same energy output as the linear one next to it, but with greater efficiency. It's also much lighter: 6 oz. vs. 1 lb., 9 oz.

Related information

- Desktops and laptops 1204
- Conventional tube TVs
- Recalls
- Manufacturers

http://www.consumerreports.org/man/home.jsp?FOLDER%3C%3EFolder_id=538847&ASSORTMENT%3C%3EAssortment_id=333133&UID=1109176007565

name the ubiquitous device that, according to Environmental Energy estimates, wastes the \$11 billion worth it consumes each year? It's something big and it's the refrigerator or you're wrong.

Andrew Fanara of the power pack that er to cordless tools, cellphones, many appli- st electronic products in power packs are twice each year and fillion are in use in the With existing power gany, more than half of used to power most ics products is con- the products are not n standby, he said.

anara says, consumer d small appliances sible for more than 40 household electricity compared with about 4

direct the agency's AR program, which development and murgy-efficient products. if think a new design ower packs could help

cut the waste in half, and are working to achieve one; Fanara recently returned from a negotiating session in China, where most of the world's power packs are manufactured. He says that with input from manufacturers worldwide, new energy-efficiency standards could emerge by fall, with some power packs sporting an ENERGY STAR designation as early as the end of the year.

Fanara concedes the more efficient products could be "marginally more expensive" than power packs available today but should save consumers money over the long run. Another possibility, he said, is that the industry may choose to offer higher-grade, more-efficient power packs that can work with more than one kind of consumer product, potentially further reducing energy use and reducing clutter around the home and office.

Another EPA program is seeking to squeeze greater efficiency from another, similarly invisible energy consumer - television sets. As of July 1, the ENERGY STAR specification for TVs changed to lower the standby power requirements for analog TVs from 3 watts to 1 watt. Non-ENERGY STAR-qualified TVs use about 6 watts. Again, according to EPA estimates, if half of all US households replaced their existing TV with an ENERGY STAR model, the change would be like shutting down a large

Figuring real cost of power adapters - Microsoft Internet Explorer provided by ICF Consulting Group, Inc.

File Edit View Favorites Tools Help

Address http://www.latimes.com/classified/realstate/or-homesenergy20022005fkd20_1_1121161_story?ci=ad=2&ci=1

latimes.com MARKETPLACE classifieds and more latimes.com | Jobs | Cars | Homes | Rentals | Newspaper Ads | Personal | Place an Ad

STANDARD PACIFIC HOMES

HOMES by latimes.com. Buyers or Sellers | Rentals | Commercial | Place an Ad

February 20, 2005

From Orlando Sentinel

ENERGY CHECK

Figuring real cost of power adapters

By Ken Sheinkopf, Special to the Sentinel

Considered individually, efficient light bulbs and small household appliances may save little more than pocket change during the year. But when we add up the savings from all those items, they can make a big difference in our power bill.

Now becoming more common in the typical household are the power packs that come with electronics and appliances, particularly with cell phones, PDAs, digital cameras, MP3 players and camcorders.

Odds are good that you have one or more of these products in your home. In fact, the Environmental Protection Agency estimates

Real Estate News

Why now? Why not?

Remodeler picks his poison

Rules change if state takes property

Lawsuits challenge guarantee fees

A slice of heaven for bungalow fans

Home Buyers' Toolkit

HOME SALE PRICES

Select county

Los Angeles

and enter zip code

RE/MAX

http://www.latimes.com/classified/7?ad=topnav-classified

Growing Influence / Awareness of Label



- Comparing Nov 01 to Nov 04
 - volume of media articles about ENERGY STAR increased 86%
 - advertising equivalency increased 146%
 - Circulation increased 117%
- *Monthly* volume of media articles about ENERGY STAR has reached 1,400 articles, or a circulation of 140,000,000
 - November 2004 (example)
 - 1,125 articles
 - total circulation of 81,796,264
 - \$415,055 in earned media value

Green/LOHAS Consumers



- Receptive audience
- ~33%+ adult population
- Explosion of green consumerism/merchandising and media coverage of ENERGY STAR
- Expanding market share, profits for sustainable businesses

Major Retailers Now Marketing ENERGY STAR



**Save up to \$150 a year
on your energy bill**

with these ENERGY STAR® qualified products.



Protecting our environment
starts at home.

ENERGY STAR® is sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy.



PROTECTING OUR ENVIRONMENT STARTS
AT HOME.

5 STEPS YOU CAN TAKE TO REDUCE AIR POLLUTION.

ENERGY STAR Action Guide



Global Warming is a Business Issue



SOARING OIL IS THERE DANGER OF A SHORTAGE? (P. 38)
BONUS FEATURE LIVING THE EXECUTIVE LIFESTYLE (P. 56)



Online Product Information

Robin Shudak, US EPA

Why Online Product Information (OPI)?



- Better information accuracy
- Allows partners direct access to modify their own data
- Paperless
- More cost-effective
- A single data entry point for multiple international interests
- More consumer-oriented information

Timeline



- Home Electronics
 - Initiated September 2003
 - 941 products submitted, 725 approved
- Office Equipment
 - Initiated May 2004
 - 1,692 products submitted, 1,354 approved
- International Coordination
 - Started in 2003 with EU
 - Beginning work with New Zealand

OPI: How it All Works



- **Partners** enter, manage, and track information into temporary data tables.
- **Energy Star (ICF)** reviews it using the Data Review Application (DRA) tool. Qualified products are then shifted into our database.
- **Consumers** view information about qualified products sold in the US using the Find A Product (FAP) feature of the ENERGY STAR Web site.
- **International Partners** can develop their own web-based tools for their own markets using a subset of the same data, if desired.

OPS Plans for 2005



- Trial stabilization to interface
 - No changes for 3 months
 - Beginning with monitors
- Continue working on OPS/FAP for other products
 - EPS
 - Lighting