ENERGY STAR Consumer Electronics Program Highlights

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EPA

Learn more at **energystar.gov**

ENERGY STAR Products Partner Meeting

- Goals
  - Sharing
    - New program initiatives
    - Product specifications updates
    - Outreach activities
  - Relationship building
    - Facilitate partner networking
    - Collaborate to promote ENERGY STAR

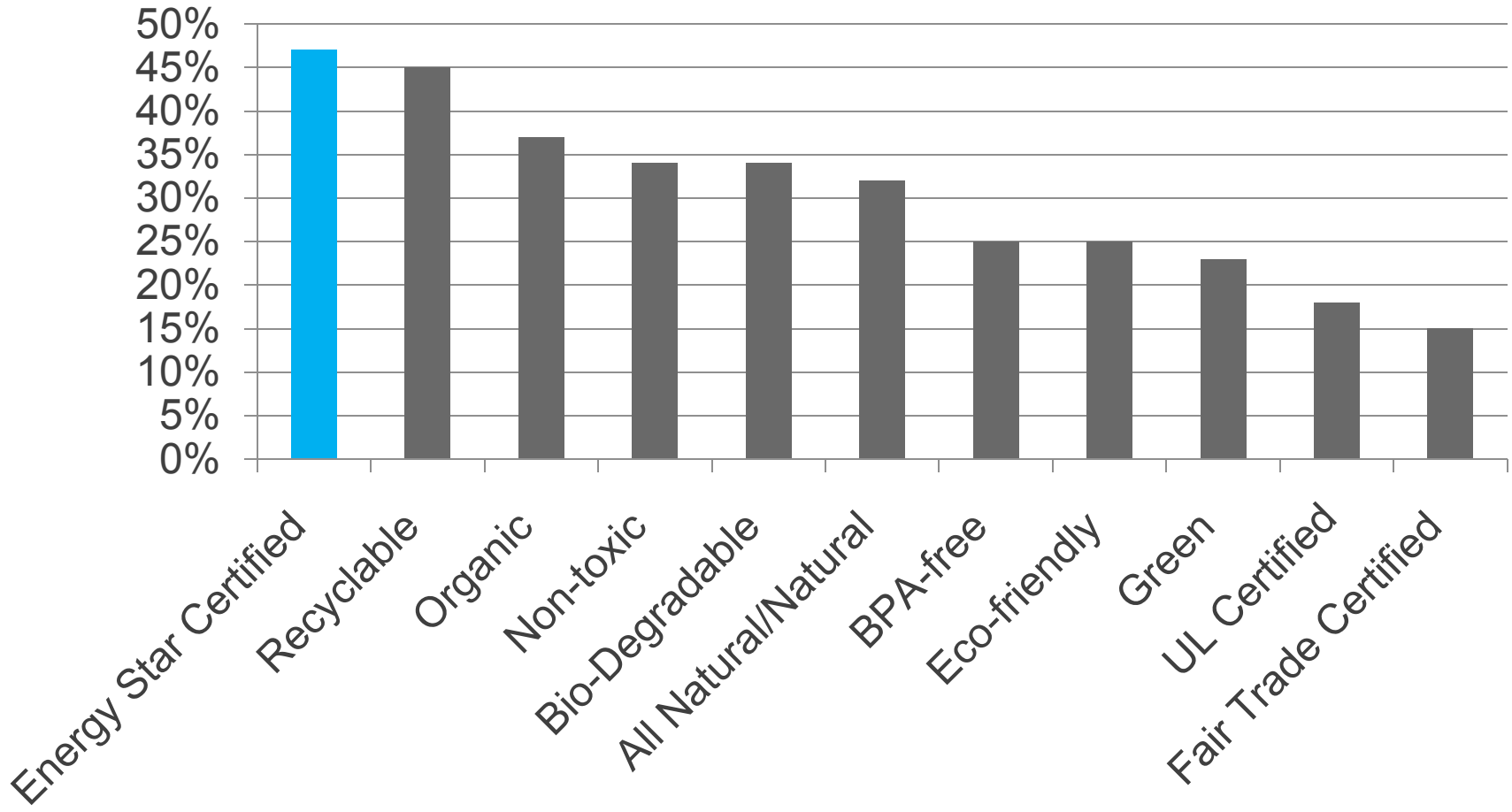
ENERGY STAR Products Partner Meeting – Consumer Electronics Track

- How to Collaborate to Develop Successful CE Promotions
- Sleek, Streaming & Smart: The Future of the CE Industry
- Digital Strategies for the Digital Age

Energy & Environment: Key Issues

- Growing concern about rising energy costs and the environment
- Consumers are increasingly looking for information on how to save money and make a difference
- Subsequently, the value of ENERGY STAR is increasing:
  - Growing product categories
  - Increased partnerships
  - Higher levels of understanding, awareness, and loyalty

ENERGY STAR Has Impact



Purchased Product because of Label or Claim (% of 18+ online population/base: heard of any description)

Source: GfK Roper Green Gauge ® Survey 2012

ENERGY STAR 20th Anniversary

- Together with help from ENERGY STAR, American families and businesses have saved a total of nearly **$230 billion** on utility bills & prevented more than **1.7 billion metric tons** of greenhouse gas emissions over the past 20 years.

CELEBRATING 20 YEARS OF ENERGY STAR

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Major Milestones for ENERGY STAR Products

1992 EPA introduces the ENERGY STAR label for office products, starting with personal computers and monitors.

1993 President Clinton signs Executive Order 12845 requiring federal agencies to purchase ENERGY STAR qualified products when buying new office equipment.

1995 EPA expands the program to include heating and cooling equipment.

First international agreement established with Japan regarding ENERGY STAR qualified office products.

1996 DOE partners with EPA and establishes the first ENERGY STAR specifications for residential appliances.

1997 ENERGY STAR program expands into lighting.

1998 DOE adds windows, doors and skylights to the program.

First ENERGY STAR requirements set for consumer electronics, addressing standby power in TVs and VCRs.

2000 EPA establishes ENERGY STAR partnership with the European Union.

ENERGY STAR TV public service announcement appeared more than 25,000 times, reaching an audience of more than one billion.

2001 First commercial food service specification introduced: solid door refrigerators and freezers.

2002 ENERGY STAR label redesigned.

2003 ENERGY STAR program covers 40 product categories.

2005 First ENERGY STAR Change a Light Day: October 5.

2006 More than two billion ENERGY STAR qualified products purchased since 2000.

Brand awareness jumps to over 50 percent.

2007 8th annual ENERGY STAR *Change a Light* campaign features first National Bus Tour.

2010 More than one million Americans participate in the *Change the World, Start with ENERGY STAR* campaign and take the ENERGY STAR pledge.

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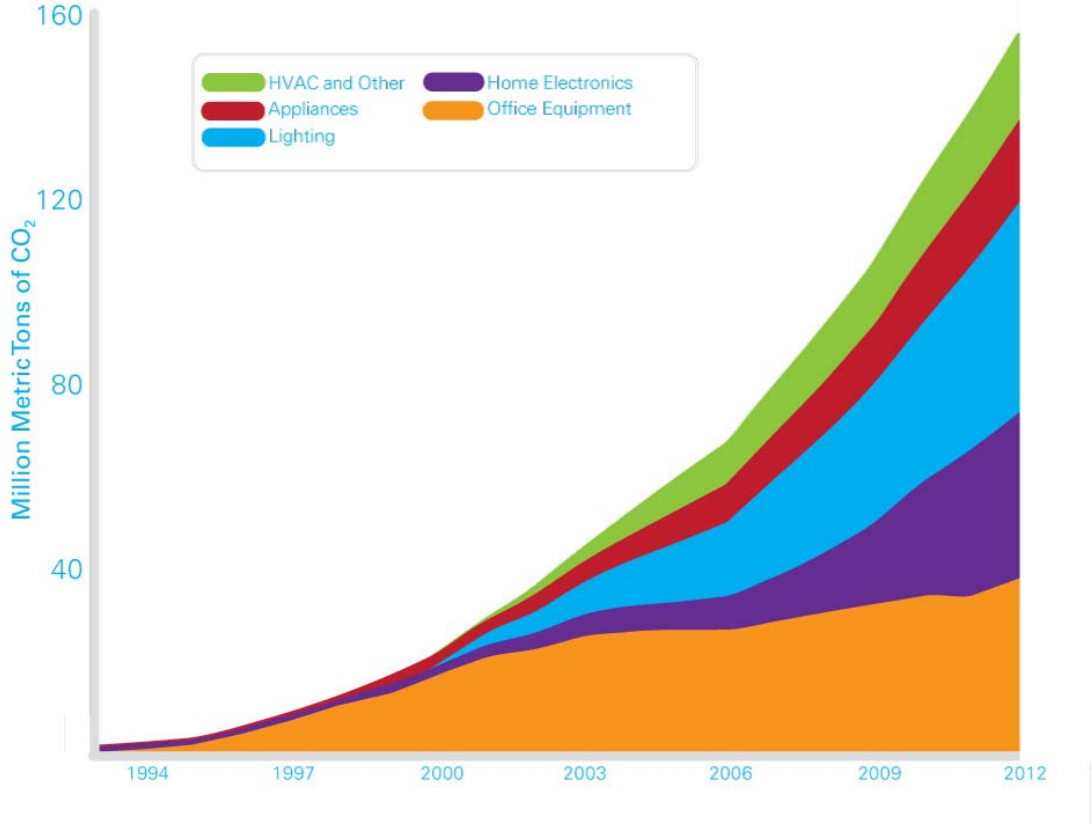
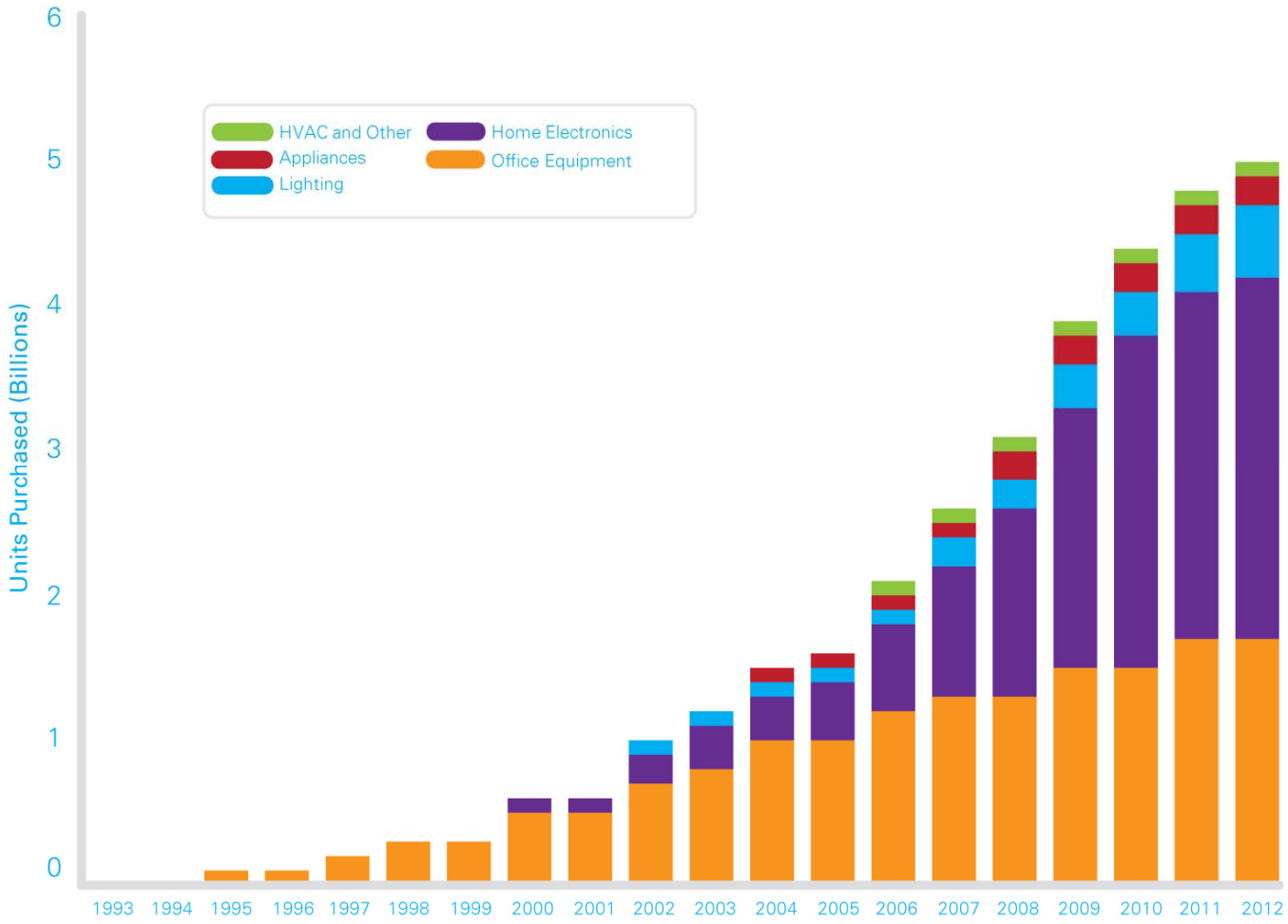
Annual Greenhouse Gas Emissions Avoided



As of 2012, EPA estimates that ENERGY STAR products prevent more than 150 million metric tons of greenhouse gas emissions annually. More than 200 billion kilowatt hours (kWh) of electricity is saved per year, which represents 15 percent of U.S. residential electricity use. These savings have offset the need for more than 185 additional power plants.

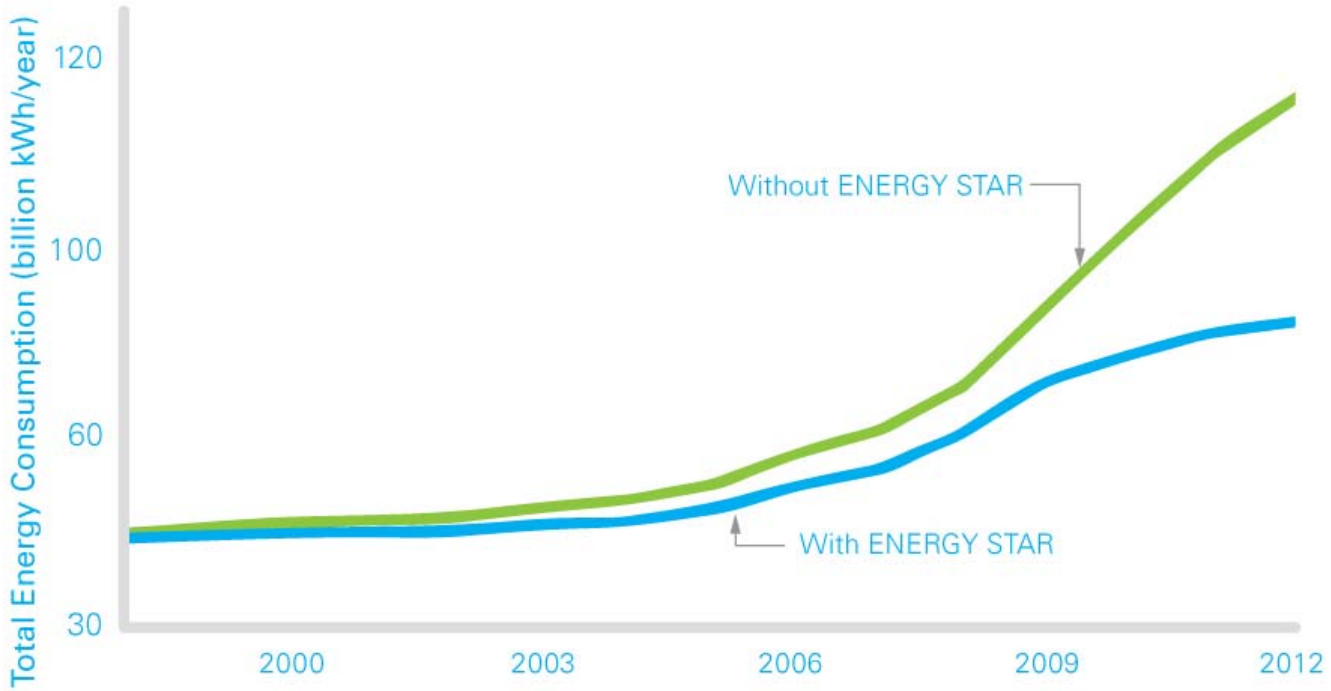
ENERGY STAR Products Sold (Cumulative)*



Since the program's inception, thousands of individuals from more than 2,200 manufacturing companies, 1,600 retailers, 800 energy efficiency programs and the federal government have worked under the ENERGY STAR banner to define, build and create both supply and demand for energy-efficient products. Over the past 20 years, Americans have purchased a total of more than five billion ENERGY STAR products.

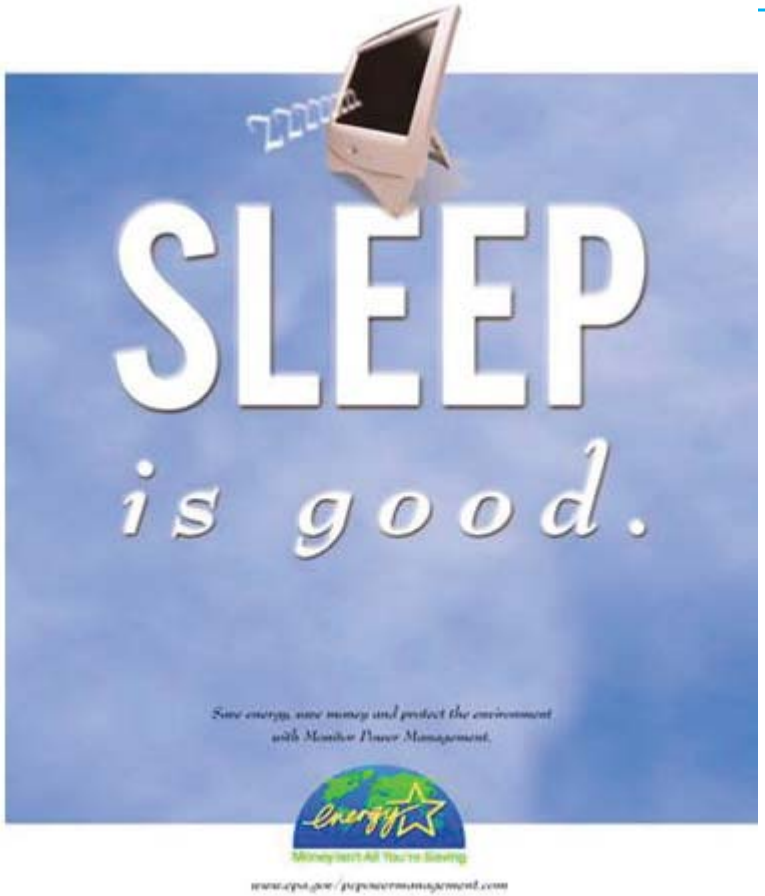
**The lighting data do not include CFL sales. Product sales may not appear in every year a category was included in the program due to scale.*

The ENERGY STAR Difference: Televisions



TV sales and sizes have increased dramatically in the U.S. over the past 20 years—40 million are projected to ship in 2012, with an average screen size of 50 inches. With ENERGY STAR, electricity use for TVs in the U.S. is 36 billion kWh per year less than it might have been.

The ENERGY STAR Difference: Power Management



Today, approximately 95 percent of office monitor and 25 percent of office desktop computers have power management features enabled, saving more than 10 billion kWh per year and preventing greenhouse gas emissions equivalent to those from 15 million vehicles.

2012 Accomplishments: New and Revised Specifications

New Specifications Completed

Uninterruptible Power Supplies

Revisions Completed

Televisions
Displays
Audio Video
Imaging *(planned for completion in 2012)*
Computers *(planned for completion in 2012)*
Servers *(planned for completion in 2012)*
EPA recognition program for Game Consoles *(planned for completion in 2012)*

Roofs

Room Air Conditioners
Residential Refrigerators *(planned for completion in 2012)*

Automatic Commercial Ice Machines
Commercial Dishwasher
Commercial Clothes Washers
Commercial Ovens *(planned for completion in 2012)*
Refrigerated Beverage Vending Machines

ENERGY STAR Revisions/Development by Product Category

ENERGY STAR Product Category	Revisions Underway	New Developments Underway
Electronics	3	3-4
Heating and Cooling	6	2
Residential Appliances	3	1
Home Envelope and Lighting	3	
Medical		2
Commercial Food Service	4	1
Other	1	2

ENERGY STAR Product Development 2013 Consumer Electronics Plans

- Taking Effect in 2013:
  - Televisions V6 (June 2013)
  - Displays V6 (June 2013)
  - Audio Video Equipment V3 (May 2013)
  - Computers V6 (anticipated Q3 2013)
  - New-Small Network Equipment: covers routers, modems (anticipated Q1 2013)
  - New-Climate Controls: emphasis on communication, usability (anticipated Q2 2013)
  - New-IP Phones: expansion of ENERGY STAR Telephony scope (anticipated Q1 2013)
  - New-Game Consoles: ***EPA recognition program*** for efficient low power and media modes (anticipated Q1 2013)

Revisions Planned 2013

- Set Top Boxes V4.1
- Battery Charging Systems V2
- Televisions V7
- Plus: Evaluation of Touch and Voice Activation Functionality
  - Increase understanding of approaches and market uptake
  - Assess any energy implications of functionality so that ENERGY STAR product specifications can consider functionality appropriately

Most Efficient Goal and Audience

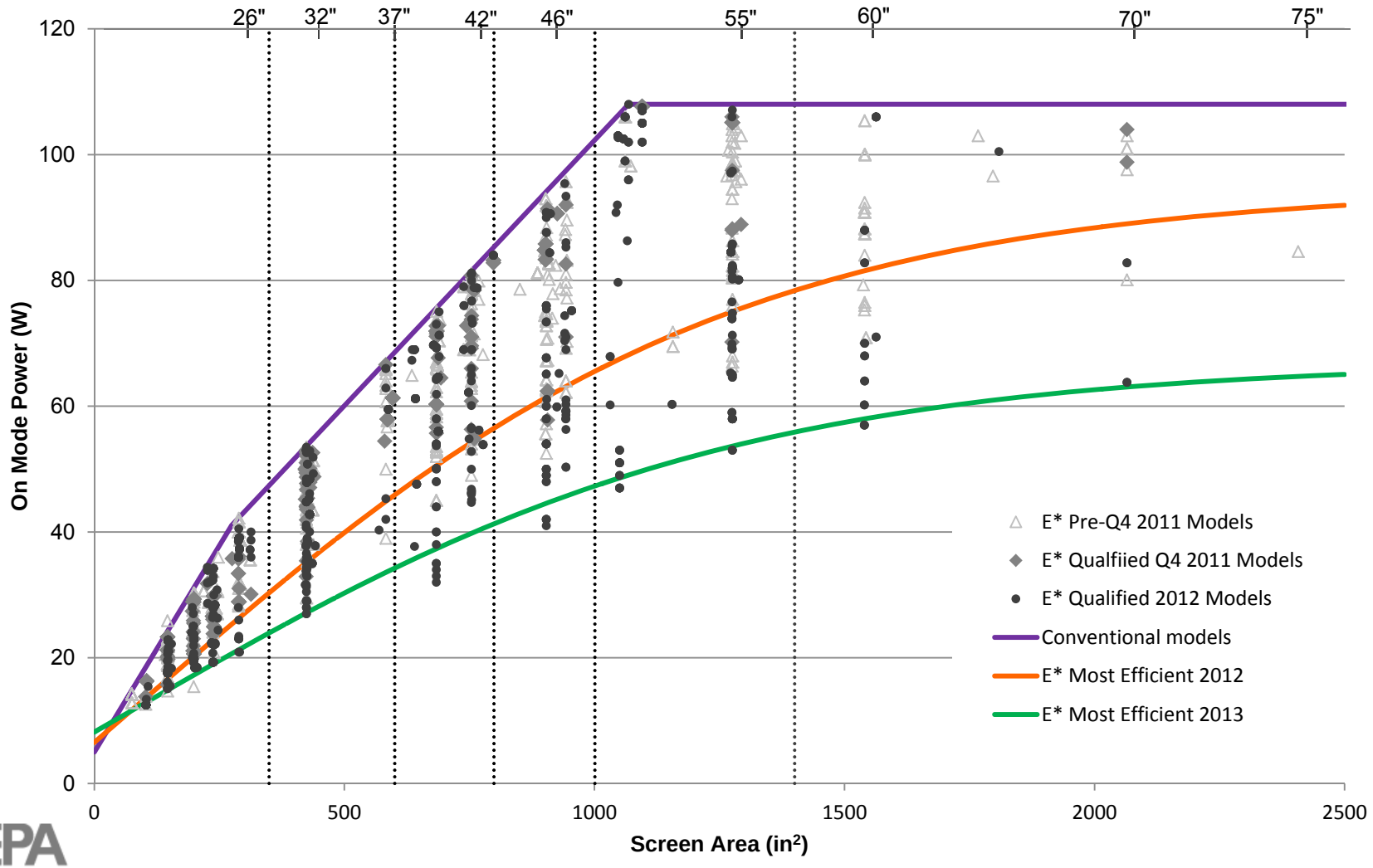
- Goal: Drive more energy efficient products into the market more quickly
  - Identify the top, few, most energy efficient products
  - Avoid confusing consumers or harming the ENERGY STAR brand
  - Align with ENERGY STAR program goal of reducing GHGs
- Audience: Early adopters, environmental interest
- Launched pilot in 2011; continuing through 2012
  - TVs, clothes washers, refrigerators, CAC, heat pumps, boilers, furnaces, geothermal heat pumps

Update on 2012 Pilot

As of September 4, 2012, more than 1400 models from over 70 manufacturers are recognized as ENERGY STAR Most Efficient 2012.

ENERGY STAR Most Efficient 2012 Recognized Models **As of 9/4/2012**		
Product Categories	*Models (#)*	*Manufacturers with Recognized Models*
Air-Source Heat Pumps	60	4
Boilers	74	11
Central Air Conditioners	72	6
Clothes Washer	66	8
Furnaces	131	5
Geothermal Heat Pumps	609	5
Refrigerators-Freezers	80	8
Televisions	337	27
Total	**1,429**	**74**

New Televisions Criteria Proposed for 2013



Proposed ENERGY STAR Most Efficient 2013 TVs-Lifetime Savings

Lifetime Energy Savings Per Model

Size Bin (diag in)	Percentage of Models in Size Bin	Average Lifetime Savings Per Model (Assuming 6-year Lifetime, kWh)			
		Av. Lifetime Consumption per Model NOT Meeting 2013 ME	Av. Lifetime Consumption per Model Meeting 2013 ME	Av. Lifetime kWh Savings per Model Meeting 2013 ME	Av. Lifetime Percentage Savings per Model Meeting 2013 ME
20	22%	290	202	88	30%
32	21%	471	297	174	37%
40	22%	778	375	403	52%
46	15%	880	465	416	47%
50	15%	978	555	423	43%
60	5%	968	627	341	35%
Model Weighted Average:		662	374	287	41%

Propose New Categories in 2013: All Fit ENERGY STAR Most Efficient Principles

- Truly exceptional, high quality performance, more than 1 manufacturer, may not be cost effective
- Windows
  - High performance triple pane windows offer huge leap in energy performance. Currently relatively high cost and low availability
- ***Computer Monitors***
  - ***Wide range of energy performance among ENERGY STAR in a category of interest to early adopters***
- Ceiling Fans / Ventilation Fans
  - DC motors can offer dramatic savings (use 1/3-1/2 power of fan with conventional motor). Also, among quietest. Currently high cost and low availability

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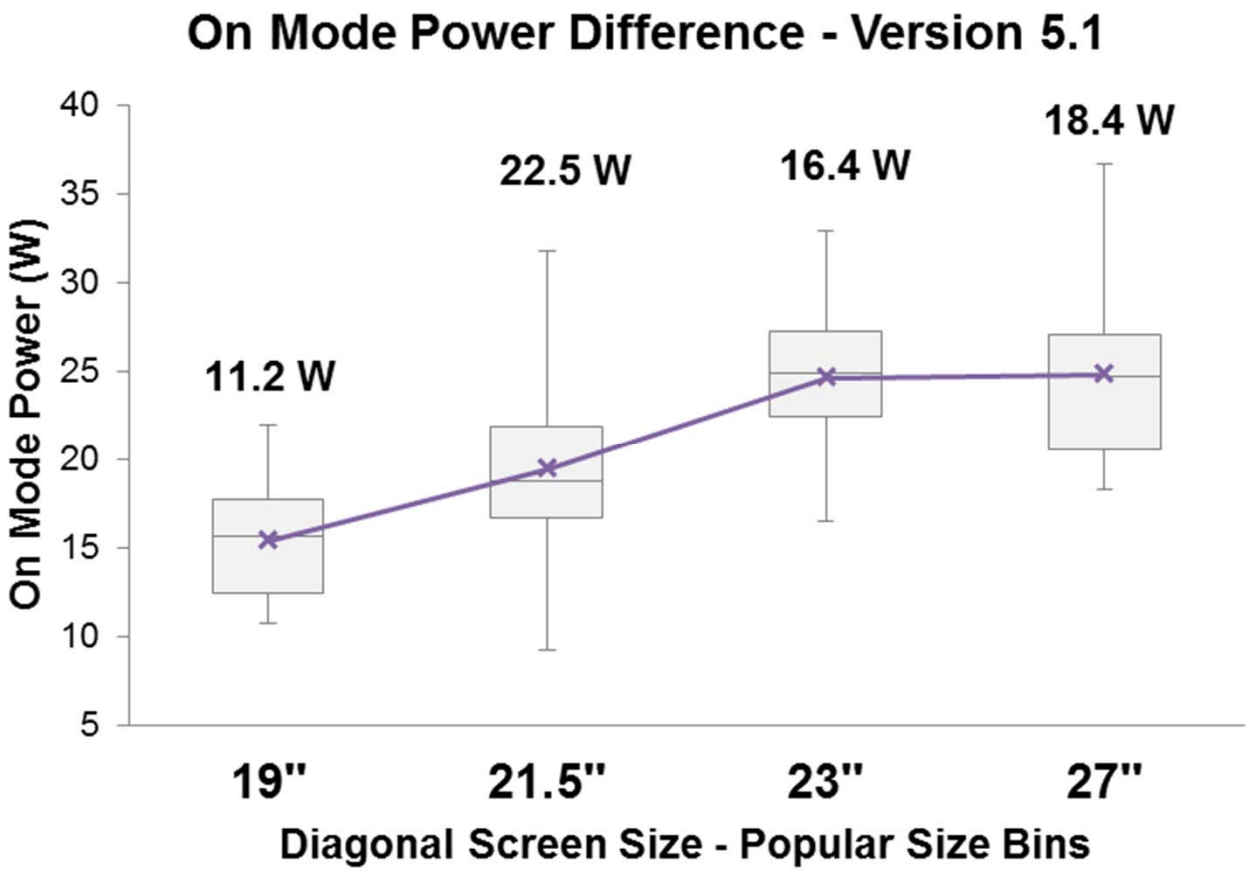
On Mode Power Variation – Models Meeting V5



Large power range - opportunity for ENERGY STAR ME to distinguish the very top performers among these models

Proposed ENERGY STAR Most Efficient 2013 Computer Monitors-Lifetime Savings

Lifetime Energy Savings Per Model

Size Bin (diag in)		Percentage of Models in Size Bin	Average Lifetime Energy Savings (Assuming 4-year Lifetime)			
			Av. Lifetime Consumption per Model NOT Meeting 2013 ME	Av. Lifetime Consumption per Model Meeting 2013 ME	Av. Lifetime kWh Savings per Model Meeting 2013 ME	Av. Lifetime Percentage Savings per Model Meeting 2013 ME
12.0 ≤ d < 17.0	17	2%	56	42	13	31%
17.0 ≤ d < 23.0	23	57%	105	85	20	23%
23.0 ≤ d < 25.0	25	30%	144	95	49	52%
d ≥ 25.0, Less than 2.3 MP	Large	9%	156	N/A	N/A	N/A
d ≥ 25.0, Greater than or Equal to 2.3 MP	Large	1%	211	173	38	22%
Model Weighted Average:			121	88	29	33%

Next Steps for ENERGY STAR Most Efficient 2013

- Late October finalize 2013 criteria and begin distributing ENERGY STAR Most Efficient 2013 graphic
- Update list of recognized products January 1, 2013
- Enhance communication efforts
  - Develop key, targeted consumer messaging
  - Expand outreach/education
  - Develop sales staff training
- Maintain focus on highlighting recognized products on line, Point of Sale, and collateral materials vs ENERGY STAR product label
- Maintain auto nomination using ENERGY STAR certified product lists

ICT-enabled Connected and ENERGY STAR

- Consumer value is longstanding brand promise.
  - EPA has long encouraged “intelligence” in products
- ICT-enabled connectivity allows products to interface with the external apps/devices/systems, enabling new opportunities:
  - Consumer control, convenience and energy i.e.,
    - Enhanced energy awareness – personalized and actionable info
    - Diagnostics and alerts to minimize periods of reduced efficiency (and added convenience – e.g.,1 repair trip instead of 2)
  - Enable consumers to take advantage of future appliance demand response programs and rate designs that help them to tailor their energy use to periods when its cheaper or cleaner.

ENERGY STAR Spec Efforts and ICT-enabled Connected

- "Connected" functionality is being considered in a number of product specifications under development or revision:
  - Refrigerators-freezers (revision)
  - Room air conditioners (revision)
  - Climate controls (new spec)
  - Pool pumps (new spec)
  - Clothes washers (revision)
  - Clothes dryers (just launched, new spec)

Usability, Cleanability, Rinseability

- To ensure savings without sacrifice and to increase the chance of savings being realized
- EPA is considering the following quality parameters in ENERGY STAR specifications:
  - Usability: to unlock the enormous energy savings potential of climate controls, ENERGY STAR Climate Controls specification will include a usability metric
  - Cleanability and Rinseability-to guard against poor performance associated with reduced water use, EPA is considering cleanability and rinseability criteria for ENERGY STAR Residential Dishwashers and Residential Clothes Washers, respectively

A Business Case for ENERGY STAR Consumer Electronics

EPA

Learn more at **energystar.gov**

Eligible ENERGY STAR Qualified CE

Audio/Visual

Battery Chargers

Computers

Displays

Imaging Equipment

Telephony

Televisions

Set Top Boxes

Why ENERGY STAR CE?

- Consumer electronic products are responsible for 15 percent of household electricity use
  - 24 consumer electronics products per home
- Consumer preference
  - Factors including energy consumption (85%), and the ability to recycle a device (70%) were highly rated on the decision tree
  - Nearly two in three consumers (64%) look for energy efficient consumer electronics products while shopping
  - In addition, 84% of consumers believe that the ENERGY STAR label means the product will save them money over its lifetime, even if it costs more up front.
- Being a good corporate citizen is good for business.
  - 69% of American consumers routinely or sometimes consider the environment when making a purchasing decision.

Benefits of ENERGY STAR CE

- Often offer the latest in technology and design for consumers
- Perform the same function but use less energy
- Save energy in all usage modes: sleep, idle, and on

ENERGY STAR CE Marketing Goals

- Qualification
  - Increase number a certified products
- In Store
  - Increase stocking and visibility
  - Increase education of sales associates and consumers
- Online
  - Increase visibility of ENERGY STAR during consumer search

Increase Visibility Online

- Online shopping
  - Include ENERGY STAR as a search option
  - Display ENERGY STAR in search results
  - Ensure ENERGY STAR included in product descriptions
- Websites – partner and ENERGY STAR
- Social media
- Influential sites/blogs

Consumer Electronics Retail In-Store Review

In-Store Retail Analysis	TVs	HTiaB	Docking Stations	Sound Bars	DPF
Average number of models stocked in store	60	< 10	< 20	< 10	< 5
Percentage of ENERGY STAR certified models displayed in store	70%	5%	5%	10%	10%
Percentage of ENERGY STAR certified models labeled with ENERGY STAR POP in store	55%	5%	5%	<5%	10%

Source: Independent research was conducted during Q3 2012. Representatives visited select retail stores and web sites to determine the level of ENERGY STAR consumer electronics penetration, and information relevant to how these products are being positioned towards consumers.

Consumer Electronics Retail Online Review

Online Retail Analysis	TVs	HTiaB	Docking Stations	Sound Bars	DPF
Percentage of retailers with ENERGY STAR search options	60%	30%	15%	30%	30%
Percentage of certified models displayed on a retailers web page	55%	5%	1%	10%	5%
Percentage of models that include ENERGY STAR copy included in Product Description	40%	5%	0%	10%	5%
Percentage of models that include ENERGY STAR copy included in Specifications	70%	20%	0%	30%	15%

Source: Independent research was conducted during Q3 2012. Representatives visited select retail stores and web sites to determine the level of ENERGY STAR consumer electronics penetration, and information relevant to how these products are being positioned towards consumers.

Consumer Electronics Manufacturer Online Review

Online Manufacturer Analysis	TVs	HT/SB	Docking Stations
Percentage of manufacturers with ENERGY STAR search options	30%	15%	20%
Percentage of manufacturers with ENERGY STAR on first page of search	100%	30%	60%
Percentage of manufacturers with ENERGY STAR in product detail or overview	80%	0%	40%

Source: Independent research was conducted during Q3 2012. Representatives visited select manufacturer web sites to determine the level of ENERGY STAR consumer electronics penetration, and information relevant to how these products are being positioned towards consumers.

2012 Program Goals: What you can do!

- The ENERGY STAR program makes it easy for consumers to find the most energy-efficient products available

- You can help your customers find ENERGY STAR certified consumer electronics by:
  - Labeling certified products in-store with POP
  - Adding ENERGY STAR search functionality to your website
  - Incorporating the ENERGY STAR logo on certified products on your website
  - Including ENERGY STAR certification status to product descriptions in-store and on your website

Working with ENERGY STAR

- The ENERGY STAR program has resources you can use to increase your understanding of energy-efficiency and consumer electronics:
  - Point-of-Purchase materials and messaging points
  - Sales Tools
  - Retail Training information
  - Partnership Opportunities

Thank You!

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