



ENERGY STAR® Program Update

AESP Technology Symposium
Long Beach, CA
September 19, 2008

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Overview



- DOE ENERGY STAR Priorities:
 - Promote current ENERGY STAR products
 - Criteria updates
 - New advanced technologies
 - Integrate energy efficiency and clean power
 - Both needed to meet savings potential
 - ENERGY STAR brand can support both

DOE Product Portfolio



- Residential Appliances
 - Clothes Washers
 - Dishwasher
 - Refrigerators/Freezers
 - Room Air conditioners
- CFLs
- Windows/Doors
- Solid State Lighting (NEW!)
- Residential Water Heaters (NEW!)



Existing Programs

Appliances



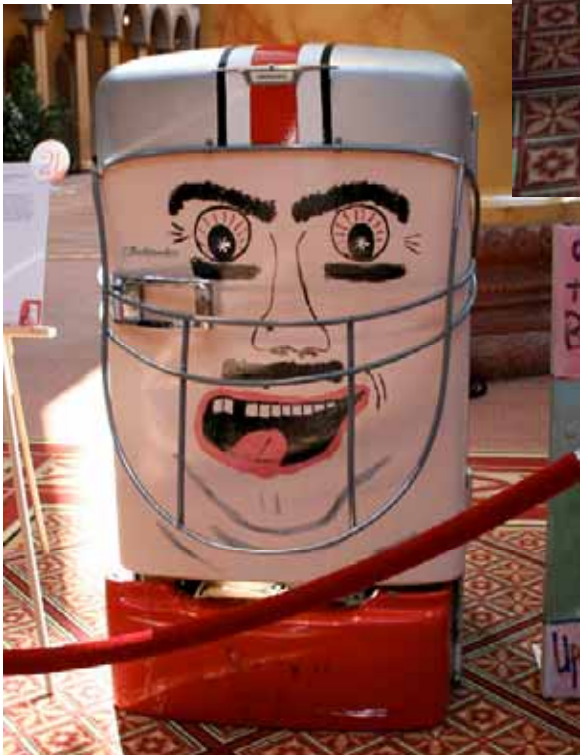
- Market share continues to grow
- Dishwasher criteria
- Consumer Reports??
- Annual Appliance Partner Meeting is next week!

Recycle my Old Fridge



- “Recycle my old Fridge” Campaign to encourage consumers to retire old inefficient refrigerators
 - www.recyclemyoldfridge.com
 - Coordination with EEPS, Retailers, Manufacturers, and Recyclers
- Event at National Building Museum in Washington, DC (August 28 – Sept 2)

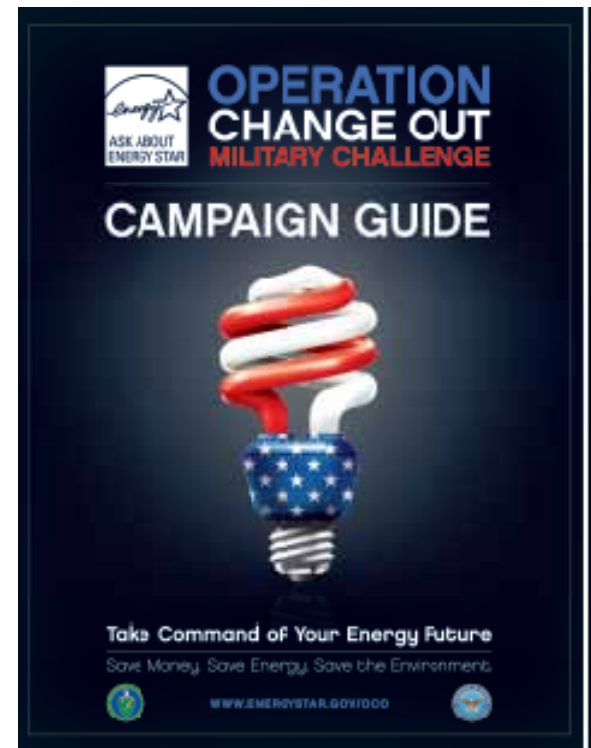




Lighting



- ENERGY STAR CFL sales continue to grow
 - We estimate **300 million bulbs in 2007** – about **20% of light bulb sales**
- New Criteria (version 4.0) take effect December 2008.
 - High-heat testing for reflector lamps
 - 3rd Party Testing Program
 - Tighter color requirements
 - Candelabra base
- Operation Change Out Campaign
 - 61 Military Bases have pledged
 - Coordinating with base housing providers & PX's



Sample Tools & Resources



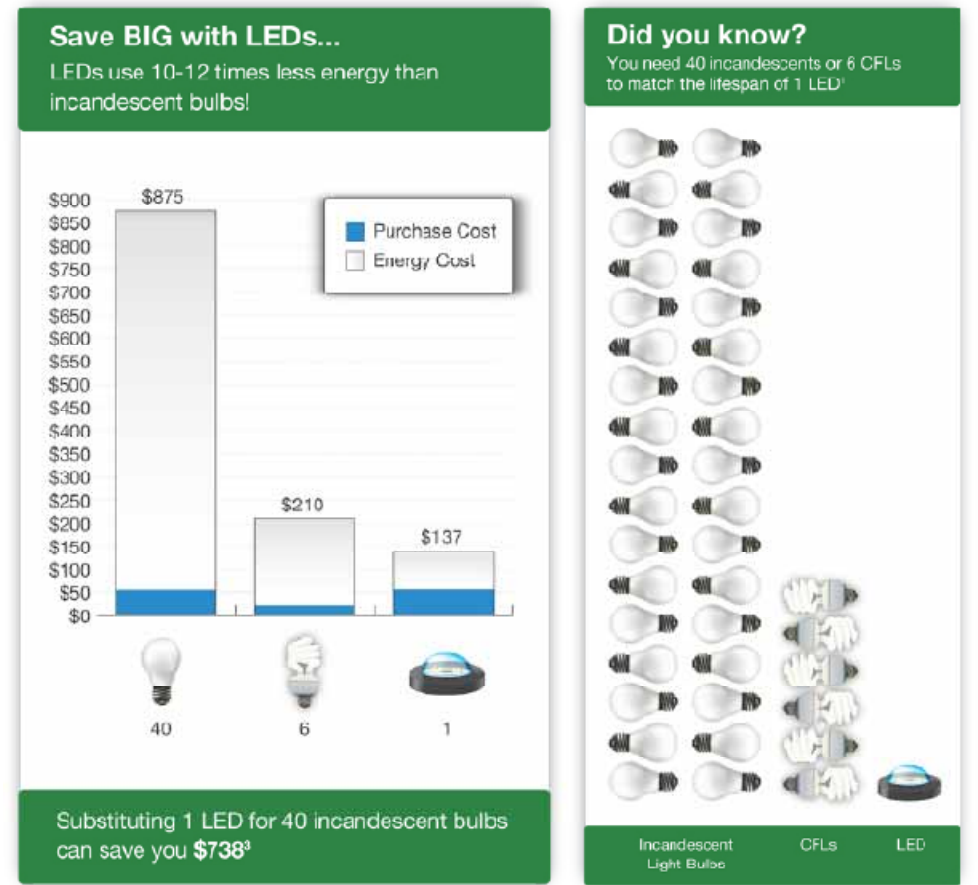
Web tool



Brochure



Info-graphic



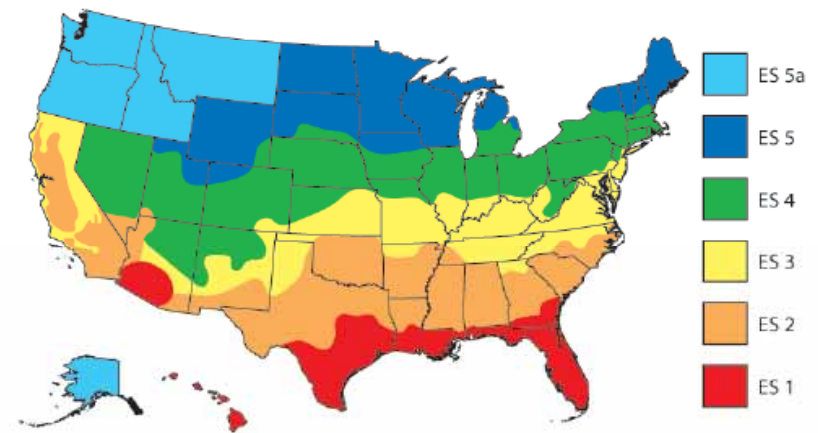
www.energystar.gov/CFLs

Windows



- ENERGY STAR market share is almost 60% - and is even higher in retrofit market
- Criteria being revised now – comments due October 17th 2008
 - Increase efficiency requirements
 - Refine climate zones
 - New criteria just for doors (before they were held to same criteria as windows)
- Looking to work more with EEPS on incentive programs for windows

ENERGY STAR (ES) Proposed Climate Zone Map - Phase 1





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New Programs

Solid-State Lighting (SSL)



- Planned Effective Date **September 30, 2008**
- Commercial and Residential Products
- Program Strategy
 - Criteria will track technology advancements - expand program over time
 - Stringent quality and performance criteria to ensure purchaser satisfaction

Initial “Category A” Applications



Under-cabinet kitchen



Recessed downlights



Portable Desk Lamps

Initial “Category A” Applications



Outdoor wall-mounted porch lights



Outdoor pathway lights



Outdoor step lights

Category A Expansion



- DOE proposed expanding the program to include the following applications in Category A
 - Ceiling mounted down lights
 - Arm mounted area and roadway lighting
 - Outdoor pole-mounted decorative
 - Outdoor wall packs
 - Cove lighting
 - Parking Garage Luminaires
 - Bollards
 - Wall wash luminaires
 - Ceiling Mounted Luminaires with Diffusers
 - Ceiling Mounted Luminaires with Directional Heads

Outdoor Area Lighting



GE Lighting Systems



Beta LED



Philips Lighting

Ceiling Mounted Downlights



Application Requirements

Minimum Light Output	$\leq 4.5''$ Aperture: 345 lumens > 4.5'' Aperture: 575 lumens
Zonal Lumen Density	Minimum of 75% of total lumens within the 0-60° zone
Luminaire Efficacy	35 lm/W
Allowable CCTs	2700 K, 3000 K and 3500 K for Residential products

Area and Roadway Lighting



Application Requirements	
Minimum Light Output	Minimum of 2,300 lumens
Zonal Lumen Density Requirement	100% of total lumens within the 0°- 90° zone
Luminaire Efficacy	50 lm/W

Outdoor Decorative



Application Requirements

Minimum Light Output	Minimum of 2,300 lumens
Zonal Lumen Density Requirement	Minimum of 85% of total lumens within the 0°-90° zone (bilaterally symmetrical).
Luminaire Efficacy	40 lm/W

Outdoor Wall Packs



Application Requirements	
Minimum Light Output	Minimum of 1,300 lumens
Zonal Lumen Density Requirement	Luminaire shall deliver 100% of total lumens within the 0°- 90° zone
Luminaire Efficacy	40 lm/W



Cove Lighting



Application Requirements	
Minimum Light Output	400 Lumens/lineal foot
Zonal Lumen Density Requirement	Minimum of 60% of total lumens within the 100°-150° zone
Luminaire Efficacy	56 lm/W
Allowable CCTs	2700 K, 3000 K, 3500 K, 4000 K, 4500 K, 5000 K



Parking Garage Luminaires



Application Requirements	
Minimum Light Output	Minimum of 4,000 lumens
Zonal Lumen Density Requirement	Luminaire shall deliver a minimum 20% of total lumens in the 60°- 70° zone, with the majority of remaining lumens (minimum 15% of total) delivered in the 70°- 80° zone (bilaterally symmetrical).
Luminaire Efficacy	56 lm/W



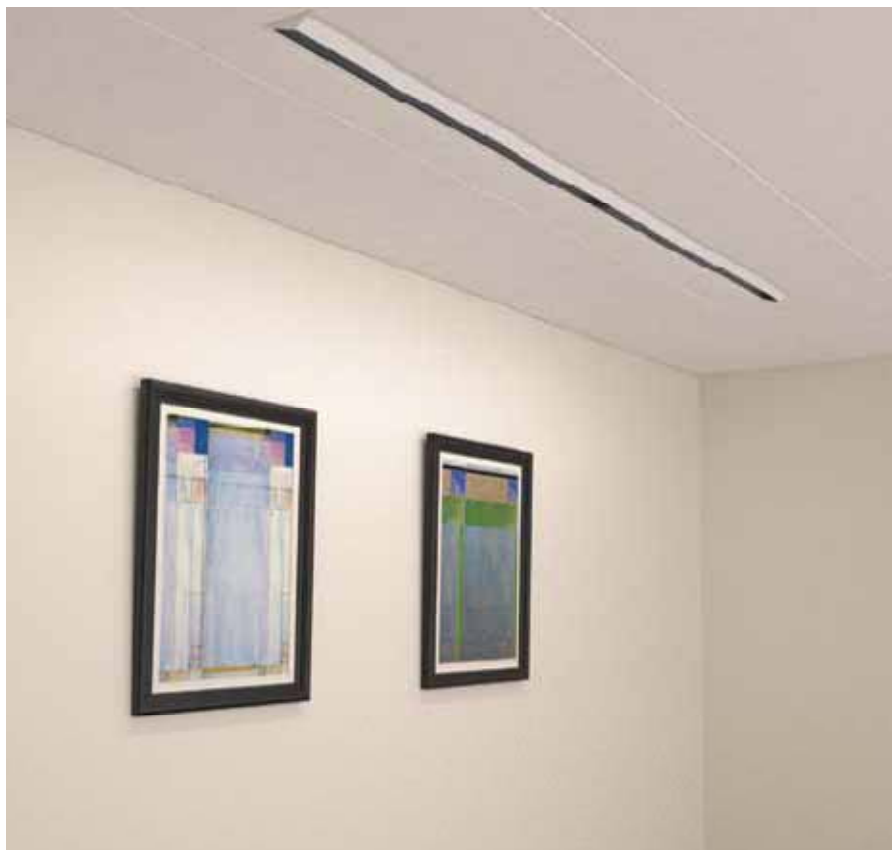
Bollards



Application Requirements	
Minimum Light Output	Minimum of 500 lumens
Zonal Lumen Density Requirement	> 40% of total lumens within the 50°- 70° zone; < 10% of total lumens within the 80°- 90° zone; < 15% of total lumens in the 90°- 110° zone; no light emitted over 110°
Luminaire Efficacy	26 lm/W



Wall-Wash Luminaires



Application Requirements

Minimum Light Output	Minimum of 575 lumens (initial).
Zonal Lumen Density Requirement	Minimum of 50% of total lumens within the 20°- 40° zone
Luminaire Efficacy	30 lm/W
Allowable CCTs	2700 K, 3000 K, 3500 K, 4000 K

Ceiling Mounted Luminaires with Diffusers



Application Requirements	
Minimum Light Output	Minimum of 750 lumens
Luminaire Efficacy	30 lm/W
Allowable CCTs	2700 K, 3000 K and 3500 K for Residential products



Ceiling Mounted Luminaires with Directional Heads



Application Requirements	
Minimum Light Output	Minimum of 250 lumens per head.
Zonal Lumen Density Requirement	Minimum of 85% within the 0-90° zone
Minimum Luminaire Efficacy	30 lm/W
Allowable CCTs	2700 K, 3000 K and 3500 K for Residential products



Residential Water Heaters



DOE's newest ENERGY STAR program

- Takes effect January 1, 2009
- 5 Technologies are included
 - High-Efficiency Gas Storage
 - Heat Pump
 - Whole-Home Tankless
 - Gas Condensing
 - Solar
- Criteria address energy efficiency, performance, safety, and reliability

Clean Power



- **PV and Small Wind**
 - DOE investigating for possible inclusion in the ENERGY STAR program.
- **Combined Heat and Power (CHP) and Fuel Cells**
 - Interesting potential for future on-site power generation
 - Preliminary analysis indicates neither is ready for inclusion in the ENERGY STAR program



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Questions?

More Information



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