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10<sup>th</sup> Annual Appliance Partner Meeting

Hotel Sax, Chicago

September 21-23, 2009



# DOE ENERGY STAR Update

1. ENERGY STAR Technical Update  
(Richard Karney)
  - Program updates
  - Technical Information
2. ENERGY STAR Marketing and Outreach Update (Lani MacRae)
  - Marketing initiatives
  - Consumer outreach

# 2009 Highlights

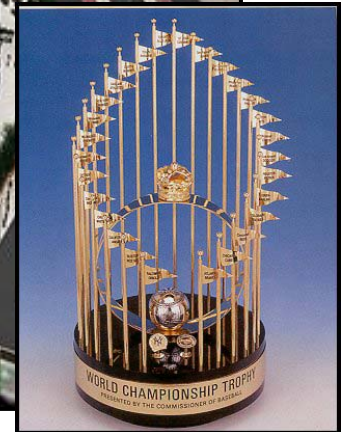
- Exciting Year
  - New product category
  - Implemented 2 appliance criteria changes
  - ARRA rebate program launch
- New Administration / New Era – Change

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# A New Era



*“When it comes to saving money and growing our economy, energy efficiency isn't just low hanging fruit; it's fruit [lying] on the ground.”*

**Steven Chu, U.S. Secretary of Energy  
(June 2009)**

# Agenda

- Federal Standards and Legislation
- ENERGY STAR Criteria
- Sales Data
- Refrigerator Market Profile
- Water Heater Program Update

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# Federal Standards and Legislation Update

# Federal Standards

- DOE is in charge of setting minimum Federal standards on select appliances and other equipment.
- DOE must upgrade Federal standards to the maximum level of energy efficiency that is technically feasible and economically justified. Federal standards intend to maximize consumer benefits and minimize the negative impacts on manufacturers.
- ENERGY STAR uses the Federal standards as the baseline and impetus for ENERGY STAR appliance criteria revisions.



# Relevant Federal Standard Schedule

Product Category	Final Action Date
Packaged Terminal Air Conditioners	September 2008
Commercial Clothes Washers	April 2009
Residential Water Heaters	March 2010
Refrigerators and Freezers	December 2010
Room Air Conditioners	June 2011
Clothes Dryers	June 2011
Residential Clothes Washers	December 2011
Dishwashers	January 2015

# Relevant Federal Test Procedure Schedule

Product Category	Final Action Date
Residential Water Heaters, Standby Mode	March 2010
Room Air Conditioners, Standby Mode	March 2009
Clothes Dryers, Standby Mode	March 2009
Residential Clothes Washers, Standby Mode	June 2009
Dishwashers, Standby Mode	March 2011

# Troubled Asset Relief Program (TARP) Appliance Tax Credits

- Legislation enacted October 3, 2008.
- Appliances must be produced domestically in 2008, 2009, or 2010 and meet certain efficiency benchmarks to qualify.
- Eligible appliances are dishwashers, clothes washers, and refrigerators.
- Credits range from \$45-\$250 depending on the efficiency of the product.

## TARP Appliance Tax Credits

Product:	Credit	Energy Consumption	Water Consumption	Year Manufactured
Dishwashers	\$45.00	Less than 324 kWh per year	Less than 5.8 gallons per cycle	2008, 2009
	\$75.00	Less than 307 kWh per year	Less than 5.0 gallons per cycle	2008, 2009, 2010
	\$75.00	Less than 307 kWh per year	Less than 5.5 gallons per cycle for large models (>12 Place Settings)	2008, 2009, 2010
Clothes Washers	\$75.00	Less than or equal to 1.72 MEF	Less than 8.0 WF	2008
	\$125.00	Less than or equal to 1.80 MEF	Less than 7.5 WF	2008, 2009
	\$150.00	Less than or equal to 2.0 MEF	Less than 6.0 WF	2008, 2009, 2010
	\$250.00	Less than or equal to 2.2 MEF	Less than 4.5 WF	2008, 2009, 2010
Refrigerators	\$50.00	20-22.9% less than 2001 Energy Conservation Standards	Not Applicable	2008
	\$75.00	23-24.9% less than 2001 Energy Conservation Standards	Not Applicable	2008, 2009
	\$100.00	25-29.9% less than 2001 Energy Conservation Standards	Not Applicable	2008, 2009, 2010
	\$200.00	At least 30% less than 2001 Energy Conservation Standards	Not Applicable	2008, 2009, 2010

# American Clean Energy and Security Act (ACES)

- Legislation passed House on June 26, 2009; is awaiting passage in Senate.
- Awards bonus payments to retailers for sales of “Best in Class” high efficiency residential appliance models.
- Contains provisions that would instruct DOE to consider Smart Grid technologies in product criteria development.
- Bounties given to retailers and manufacturers for recycling old, inefficient appliances.
- Calls for DOE and EPA to consider enactment of rating system of ENERGY STAR products so consumers can compare ENERGY STAR products.
- Requires periodic verification of compliance by testing products.
- Mandates review of ENERGY STAR criteria once every 3 years.

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# ENERGY STAR Criteria Update

# Guiding Principles for ENERGY STAR Criteria Development & Revisions

- Significant energy savings
- No impact on product performance
- ENERGY STAR qualified product is cost effective
- Several technology options can achieve criteria setting (one of which is non-proprietary)
- Energy consumption can be quantified
- Label differentiates products and is visible to purchasers

- **2009 Review**

- Launched water heater program
- Revised clothes washer criteria
- Revised dishwasher criteria
- Issued announcement clarifying refrigerator test procedure

- **2010 Activity**

- Transition high efficiency gas storage criteria
- Create PTACs/PTHPs program
- Explore revisions to room air conditioners and refrigerators
- Third Party Independent Testing



# Refrigerator Criteria

- Revised criteria last year to 20% better than Federal standard with an effective date of April 28, 2008.
- DOE issued statement clarifying refrigerator test procedure for bottom-mount products with through-the-door icemakers.
- DOE will consider possible revision with 2011 analysis.

# Clothes Washer Criteria

- Revised the clothes washer criteria by announcing two criteria levels and effective dates.
  - As of July 1, 2009, qualified clothes washers must have a minimum MEF of 1.8 and a maximum water factor of 7.5.
  - As of January 1, 2011, qualified clothes washers must have a minimum MEF of 2.0 and a maximum water factor of 6.0.
- The changes apply to both residential and residential-style commercial clothes washers.

# Dishwasher Criteria

- Revised the dishwasher by announcing two criteria levels and effective dates.
  - As of August 11, 2009, qualified dishwashers must use less than 324 kWh/year and 5.8 gallons/cycle.
  - As of July 1, 2011, qualified dishwashers must use less than 307 kWh/year and 5.0 gallons/cycle.
- New criteria changes the metric to kWh/year from Energy Factor and includes water consumption in gallons per cycle.

# Water Heater Criteria

- Manufacturers could qualify products as of January 1, 2009.
- The criteria covers gas condensing, high efficiency gas storage, electric heat pump, gas tankless and solar water heaters.
- Minimum EF for Gas Storage will transition from **0.62 to 0.67** on September 1, 2010.

# Room AC Criteria

- DOE will be reviewing this product in the coming months.
- As of 2010, all Room ACs must also use a more climate-compatible refrigerant, which will affect efficiency.

# Packaged Terminal Air Conditioners (PTACs) and Packaged Terminal Heat Pumps (PTHPs)

- DOE will begin criteria analysis this year.
- New Federal standard takes effect in 2010 for non-standard size units and in 2012 for standard size units.
- As of 2010, all PTACs and PTHPs must also use a more climate-compatible refrigerant, which will affect efficiency.

# New Categories

- DOE will continue to work with DOE R&D and also industry R&D efforts to determine if there are new categories of product worthy of labeling.
- DOE is very interested in Clothes Dryer opportunities.

# Criteria Revision Process

- DOE will update, and revise as necessary, the criteria setting process to more closely follow market and legislative needs.
- DOE will continue to provide product support via technically oriented information as we have done historically;
  - product market assessment in order to understand market structure, opportunities, trends, and impact of the products over time; and
  - product support to help manufacturers, program sponsors, and retailers understand the product criteria and key market opportunities.



# Third Party Testing

- DOE will design and implement a Third Party Independent Testing Program to be able to test off-the-floor appliances for ENERGY STAR compliance.

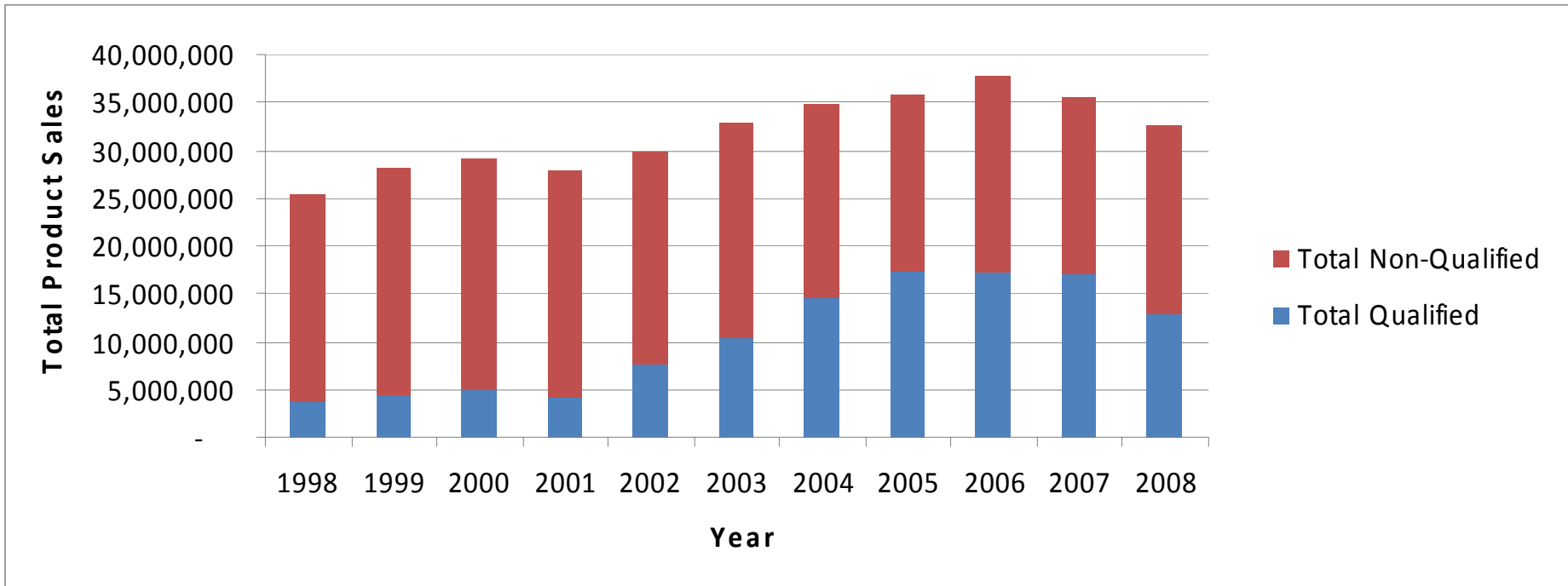
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# Sales Data

# ENERGY STAR Appliance Market Share

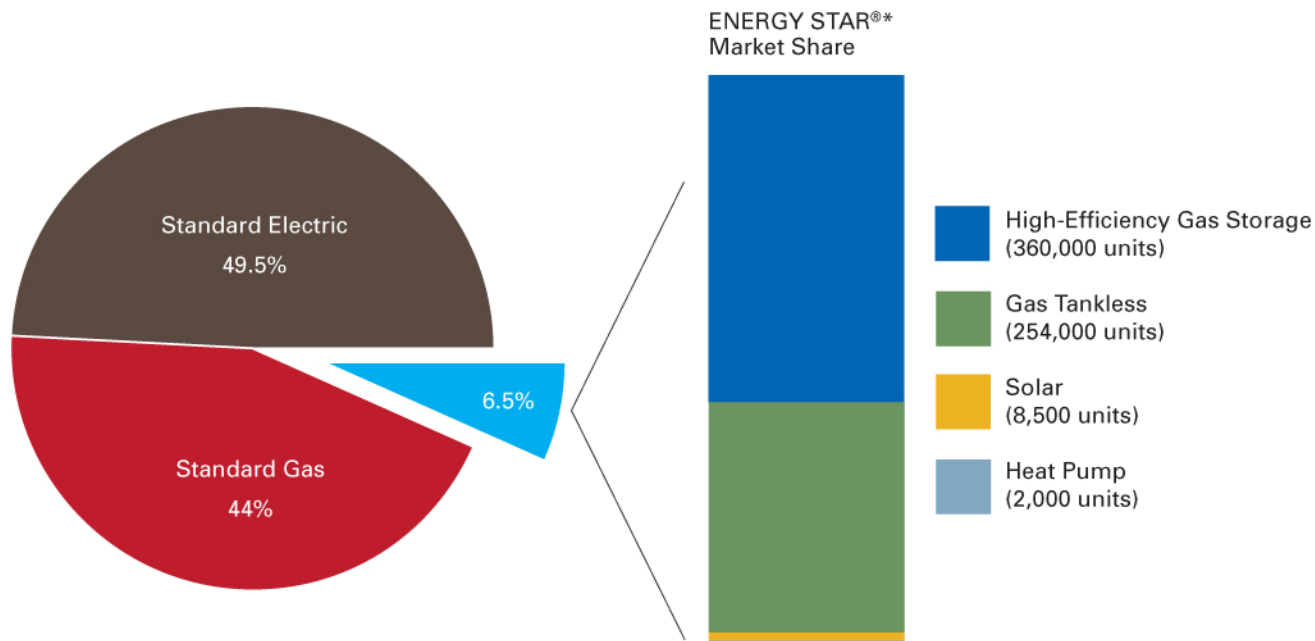


# 2008 National ENERGY STAR Market Share Estimates

- Clothes Washers – 24%
- Dishwashers – 67%
- Room ACs – 43%
- Refrigerators – 31%

# Water Heater Baseline Market Share Estimate

WATER HEATER MARKET SHARE BY TECHNOLOGY, 2006



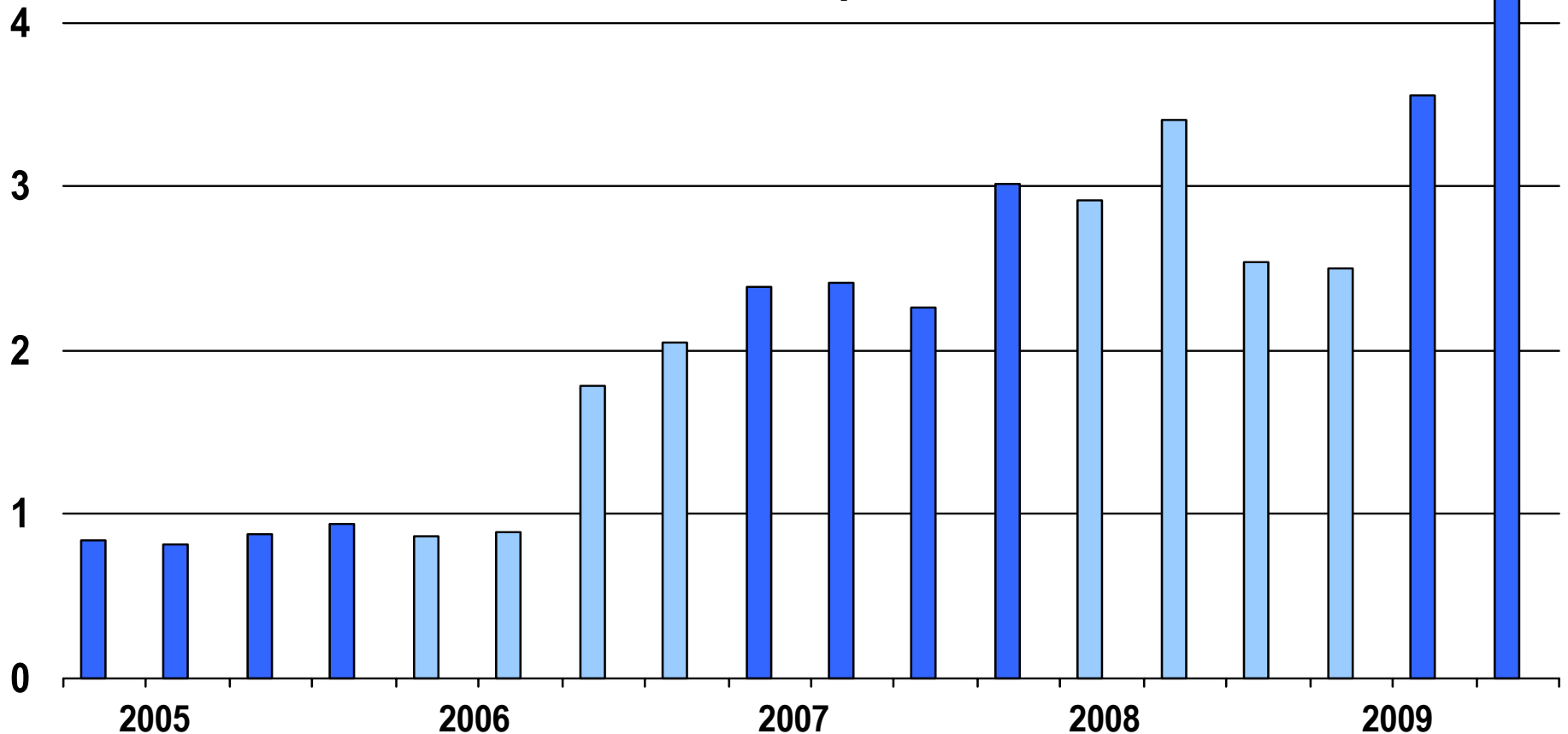
\*\*"ENERGY STAR Market Share" estimates portion of market sales that would have qualified for ENERGY STAR had the program been in place at that time.  
Source: ENERGY STAR Residential Water Heaters: Final Criteria Analysis, April 1, 2008.

# Water Heater Sales Data

- D&R will be collecting water heater manufacturer shipment data to estimate ENERGY STAR market share.
- Manufacturers must submit 2009 data no later than March 31, 2010.

# ENERGY STAR Web Site Traffic

Millions of Visits per Quarter



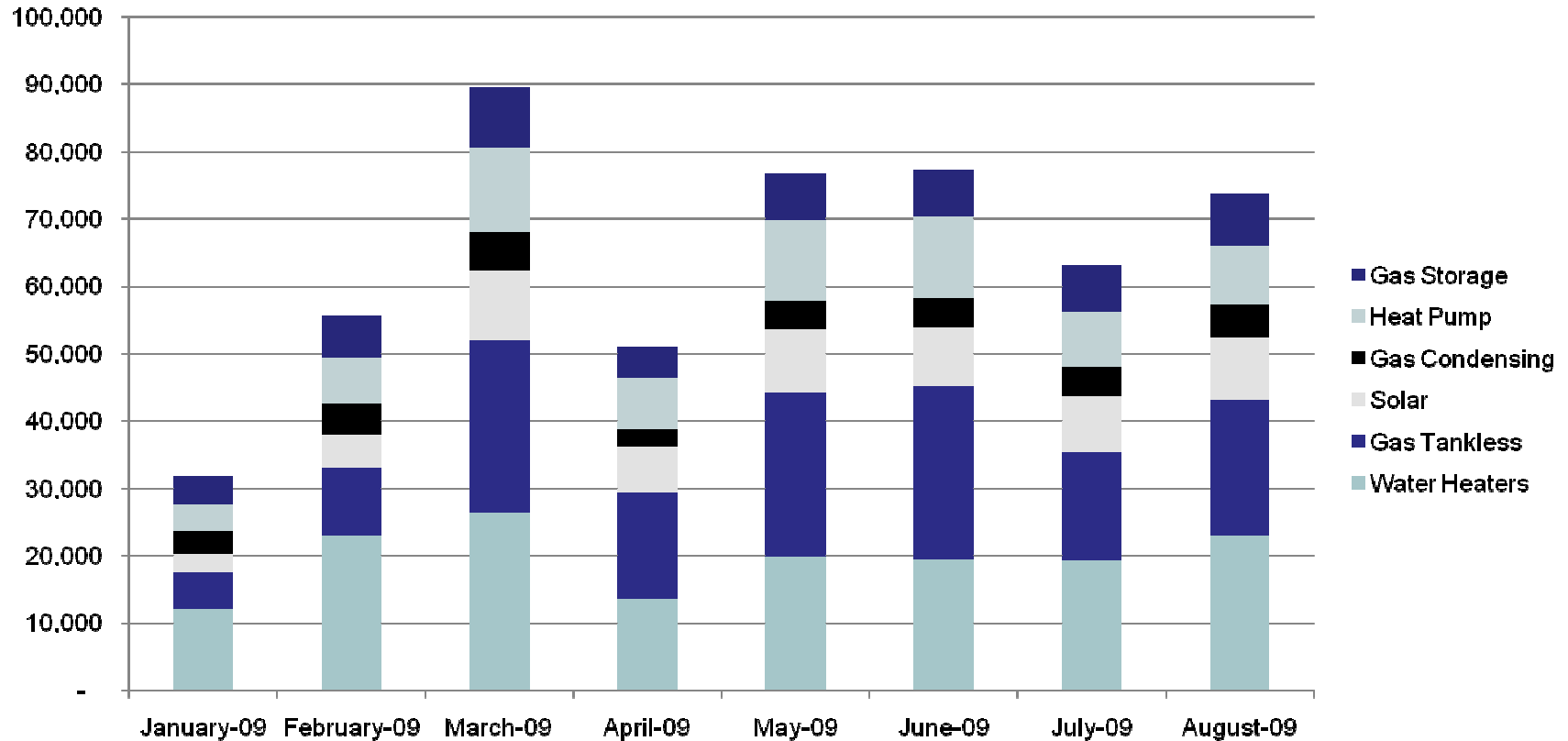
## 20 Most Frequently Viewed Pages 2009

Rank	Page Name	Rank	Page Name
1	Federal Tax Credits for Energy Efficiency	11	Windows, Doors, and Skylights
2	ENERGY STAR Home Page	12	Refrigerators & Freezers
3	Rebate Finder	13	Email this page to a friend
4	Find a Product (Products landing page)	14	ENERGY STAR at Home Pop-Up Tool
5	ENERGY STAR Search Results	15	Tip of the Day
6	Windows Tax Credits and Rebates	16	Portfolio Manager Log-in Page
7	Home Improvement	17	Clothes Washers
8	Heat & Cool Efficiently	18	Central Air Conditioners
9	Appliances	19	Buildings and Plants
10	Compact Fluorescent Light Bulbs	20	Air Seal and Insulate



# Water Heater Traffic

- Over Half a Million Site visits to date:



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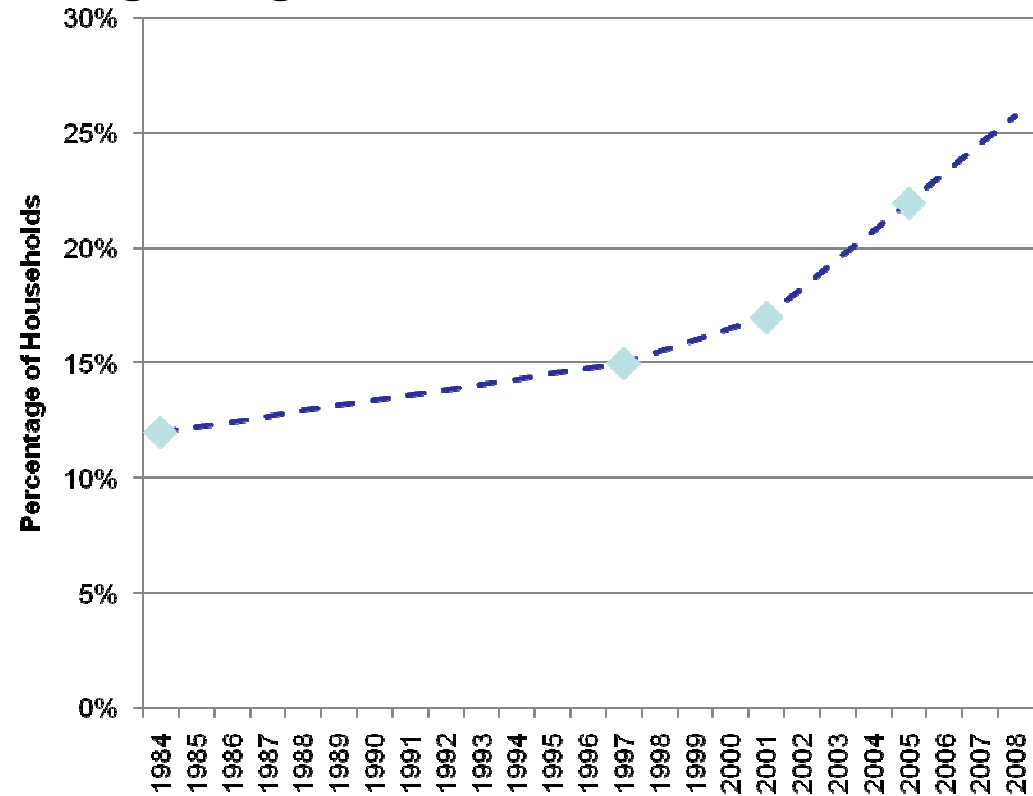
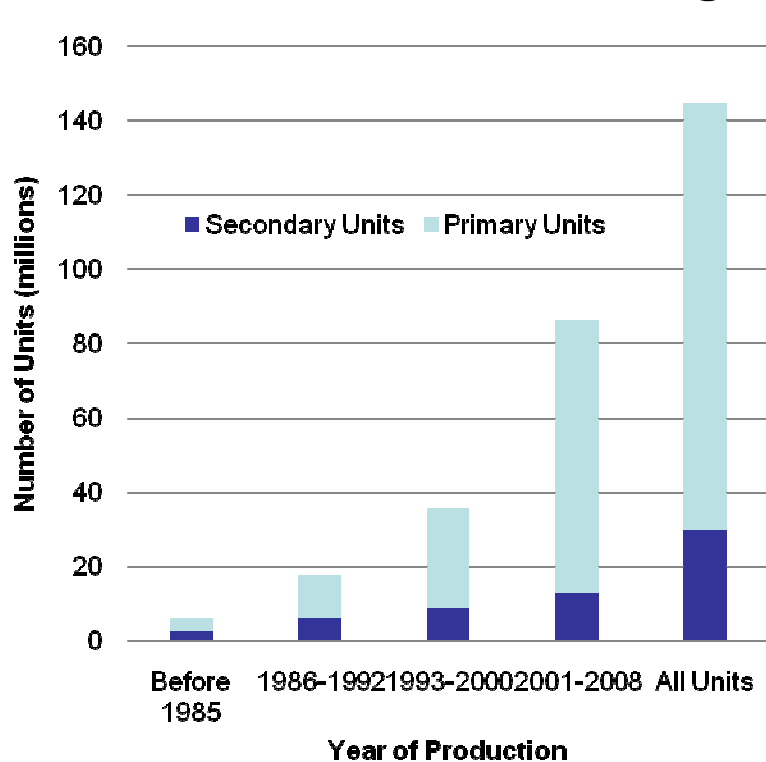


# Refrigerator Market Profile

# Market Profile – Executive Summary

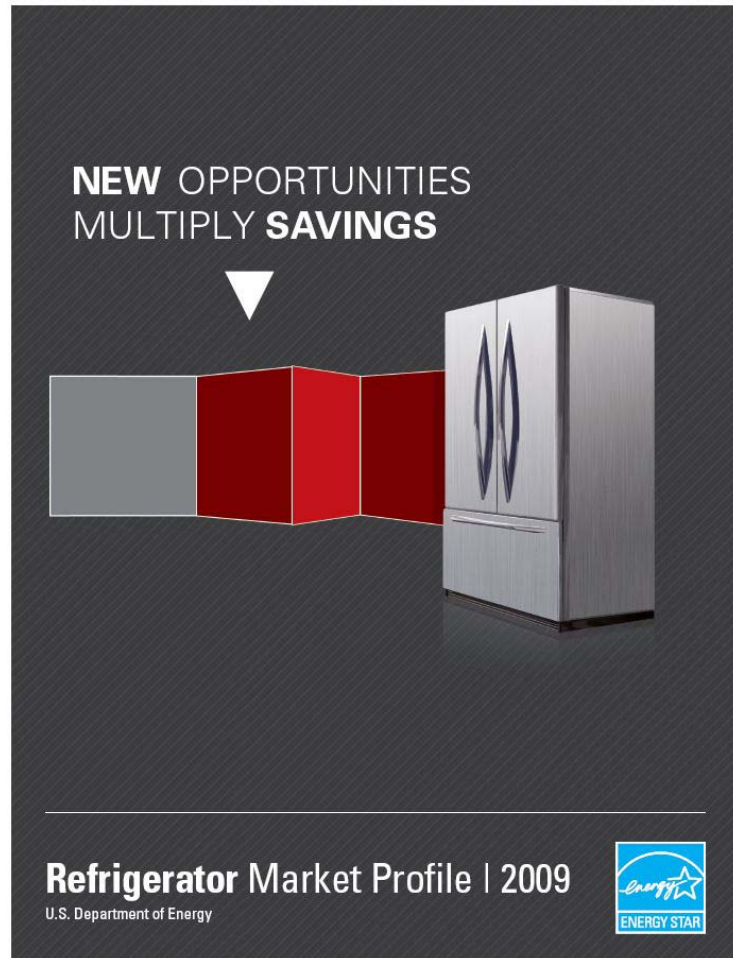
- Four Key Opportunities for Savings
  - Increase ENERGY STAR Market Share.
  - Keep older primary units that are replaced from being reintroduced to the grid.
  - Reduce the number of second refrigerators.
  - Replace older units with new ENERGY STAR units.
- Retailers can offer significant assistance to program sponsors.

## Refrigerators Opportunity 3. Decrease the number of second units in use on the grid through targeted retirement.



- 26 percent of households had a second refrigerator in 2008.
- On average, a second unit uses 840 kWh per year.

# 2009 ENERGY STAR Refrigerator Market Profile



- Will be available at:  
[www.energystar.gov](http://www.energystar.gov)
- Included on USB drives.
- Detailed market information,  
and program design  
recommendations.

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# Water Heater Program Update

# Water Heaters – Current Status

- 955 Total Qualified Products, as of 09/18/09
  - 321 qualified high efficiency gas storage
  - 440 qualified gas tankless
  - 187 qualified solar
  - 7 qualified heat pump
- 2 more manufacturers expected to qualify HP by end of 2009
- In discussions with manufacturers regarding developmental status of gas condensing products

# Water Heaters – Opportunities

- Tax credits available on heat pump, gas tankless, gas condensing, and solar
  - 30% or \$1500 of installed cost for heat pump, tankless, and gas condensing.
  - All qualified tankless and heat pump WH are eligible; gas condensing products may be eligible.
  - 30% (uncapped) for solar; all qualified models are eligible for tax credit.



# Water Heaters – Resources

- Two new resources available for partners:
  - Partner Resource Guide
  - Market Profile



# Contact Information

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