ENERGY STAR Appliance & Water Heater Highlights

ENERGY STAR Products Partner Meeting
October 23, 2012
Today’s Agenda

• Program Milestones & Updates
  – Water Heaters
  – Appliances

• Speakers
  – Southern California Edison
  – LG Appliances

• Q&A
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.
Water Heater Program Updates

Steve Ryan, U.S. EPA
## Water Heater 2011 Market Penetration

<table>
<thead>
<tr>
<th>Type</th>
<th>ENERGY STAR Shipments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Storage (EF 0.67)</td>
<td>107,423</td>
</tr>
<tr>
<td>Gas Tankless</td>
<td>337,186</td>
</tr>
<tr>
<td><strong>COMBINED GAS</strong></td>
<td>444,609 (11% market share)</td>
</tr>
<tr>
<td>Heat Pump</td>
<td>22,967</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td>9,590</td>
</tr>
<tr>
<td><strong>COMBINED ELECTRIC</strong></td>
<td>32,527 (1% market share)</td>
</tr>
</tbody>
</table>

2012 ENERGY STAR Summary of Residential Water Heater Programs

- 125 energy efficiency program sponsors across the United States
  - Increase of 29 compared to the 2011 Summary
- 268 individual incentive and promotion programs for ENERGY STAR water heater product
  - Increased by nearly 27% compared to the 2011 Summary.
Promotions by Region

Average and Most Frequent Promotion Amount for ENERGY STAR Residential Water Heaters

Source: ENERGY STAR® Summary of Appliance and Residential Water Heater Programs – August 2012
Promotions by Type

ENERGY STAR Residential Water Heater Promotions by Product Type
(Total 268)

- Gas Storage: 24%
- Heat Pump: 21%
- Gas Tankless: 20%
- Solar: 10%
- Electric: 12%
- Other: 6%

ENERGY STAR Residential Water Heater Promotions by Incentive Type
(Total 268)

- Rebate: 94%
- Interest Loan: 1%
- Other: 3%
- Cooperative Funding: 1%
- Bill Credit: 1%

Source: ENERGY STAR® Summary of Appliance and Residential Water Heater Programs – August 2012
Water Heater Marketing Updates

• **Website**
  – Revised, updated and reorganized Hot Water Heater landing pages on the ENERGY STAR website

• **Retail Partnership**
  – Developing materials for retailers such as ENERGY STAR POP concepts, marketing/fact sheets, and associate training materials

• **Plumber Webinar and Trade Publication Outreach**
  – In association with the Green Plumbers Association, ENERGY STAR developed a plumber training webinar and an article on the benefits of ENERGY STAR HWH
    • Article was published in Green Building Community, PHC News Online, ACHR Tweets, and PHC
    • Resulted in 128,000 + impressions

• **Plumbers Tool Kit**
  – Developing a brochure and customer-facing signage to be distribute to thirty (30) key trade organizations and utility partners

• **Social Media**
  – Developed timely messaging on ENERGY STAR HWH and distributed through ENERGY STAR’s existing social media networks
Residential Water Heaters V2.0

- Version 2.0 under revision
- Finalized October 1, 2012
- Effective date: July 1, 2013
- Changes in the revision:
  - Technology neutrality. Products classified based on fuel type – Gas, Electric and Solar
  - Gas condensing merged with gas storage, thereby lowering its Energy Factor (EF) to the same level as gas storage, 0.67
  - No changes to the minimum EF of other products
Residential Water Heaters V2.0

- Changes in the revision (contd.,):
  - New product type added: Light duty EPACT covered water heaters
    - Input rate: $>75,000 \text{ Btu} \leq 100,000 \text{ Btu}$, Storage volume: $>20 \text{ gal} < 100 \text{ gal}$
    - Criteria: 0.90 Thermal Efficiency (TE) and maximum Standby Loss
  - Solar Water Heater metric changed to Solar Energy Factor (SEF) from Solar Fraction (SF)
    - SEF criteria: $\geq 1.8$ for electric backup and $\geq 1.2$ for gas backup
Proposed requirements in Draft 1 V1.0:
- Scope: Intended for sale in the commercial market
  - Commercial solar water heaters excluded due to its custom design and no available test methods
- Product types included:
  - Gas Storage Water Heaters $> 75 \text{ kBTu/h}, < 4,000 \text{ Btu/h per gal}$
  - Gas Instantaneous Water Heaters $\geq 200 \text{ kBTu/h}, \geq 4,000 \text{ Btu/h per gal}$
  - Electric Heat Pump Water Heaters $\geq 1.6 \text{ kW input rate}$
- Criteria:
  - Gas products: 0.94 TE and maximum Standby Loss, which is 16% more stringent than the federal minimum requirement
  - Electric: TBD (DOE considering developing a test method)
Residential Appliance Program Updates

Rosemarie Stephens-Booker, U.S. EPA
Appliances, Sales and Marketing Program Manager
ENERGY STAR: A Valuable Asset

- Refrigerators *
- Freezers
- Clothes Washers *
- Dishwashers
- Dehumidifiers
- Room Air Cleaners/Purifiers
- Room Air Conditioners

*Most Efficient designation available
Success Story: Clothes Washers

- ENERGY STAR clothes washer uses about 70 percent less energy and 75 percent less water than a standard washer used 20 years ago.
Success Story: Clothes Washers

• In 1990s, horizontal-axis clothes washers represented just two percent of the U.S. market
• ENERGY STAR Partners came together to increase adoption:
  – Study to validate performance and consumer acceptability (community of Bern, Kansas)
  – ENERGY STAR leveraged study information to develop specification
  – State and utility partners educated customers, often providing rebates to reduce the initial cost difference
• More than 25 million metric tons of greenhouse gas emissions avoided!
ENdERGY STAR Remains Strong

**ENERGY STAR Shipments***

- Refrigerator: 4,684,000 (2010), 5,008,000 (2011)
- Room Air Conditioners: 4,724,000 (2011), 2,101,000 (2010)

"2011 EPA ENERGY STAR Program"
Highlight ENERGY STAR. Consumers Get it.

Sears Price Sign w/ Most Efficient Designation

Lowe’s Earth Day Promotion - Online

10% Off ENERGY STAR® Qualified Appliances

$299 or more. Offer ends 4/23/2012.

Shop Appliances
Leveraging Rebates: Huge Success

- **Appliances:**
  - 655 incentives and promotion programs
  - Clothes washers 24%
  - Refrigerators and freezers 21%
  - Dishwashers 11%
  - Room air conditioners 10%

- **Water Heaters:**
  - 268 incentives

Source: 2012 ENERGY STAR Summary of Appliance and Water Heater Programs
“If you discount it, they will come.”

The most efficient refrigerators can now dispense water, ice and $100 rebates.

Earn rebates up to $100 on the purchase of an ENERGY STAR® “Most Efficient” refrigerator. Your refrigerator consumes more energy than any other kitchen appliance. New ENERGY STAR qualified refrigerators are at least 20% more efficient than new conventional models and the ENERGY STAR “Most Efficient 2012” models are at least 30% more efficient.

$100 LIPA Rebate for “Most Efficient” models

Right now, LIPA is offering a $100 rebate on “Most Efficient” designated refrigerators. A $75 rebate is also available for select ENERGY STAR qualified refrigerators larger than 16 cubic feet.

For details, visit lipower.org/efficiency or call 1-800-692-2826.
### Rebate Opportunities Continue: Overview of Offerings

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Range of Incentives/Rebates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Dishwashers</td>
<td>$20-$80</td>
</tr>
<tr>
<td>Residential Clothes Washers</td>
<td>$20-$350</td>
</tr>
<tr>
<td>Room A/C</td>
<td>$15-$125</td>
</tr>
<tr>
<td>Room Air Cleaners/Purifiers</td>
<td>$15-$50</td>
</tr>
<tr>
<td>Dehumidifiers</td>
<td>$10-$65</td>
</tr>
<tr>
<td>Refrigerators &amp; Freezers</td>
<td>$15-$150</td>
</tr>
<tr>
<td>Water Heaters</td>
<td>$25-$3,000</td>
</tr>
</tbody>
</table>

Source: 2012 ENERGY STAR Summary of Appliance and Water Heater Programs
## Specifications Under Revision

<table>
<thead>
<tr>
<th>Products &amp; Specification in Development</th>
<th>New Proposed Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Dishwashers (Version 6.0)</td>
<td>Jan. 2014 (tentative)</td>
</tr>
<tr>
<td>Residential Clothes Washers (Version 6.0)</td>
<td>Feb. 2013 (tentative)</td>
</tr>
<tr>
<td>Room AC (Version 3.0)</td>
<td>Oct. 2013 (final)</td>
</tr>
<tr>
<td>Refrigerators &amp; Freezers (Version 5.0)</td>
<td>March 2014 (proposed)</td>
</tr>
<tr>
<td>Water Heaters (Version 2.0)</td>
<td>July 1st, 2013 (final)</td>
</tr>
</tbody>
</table>
What’s New?

Did you know?
– Dehumidifier Version 3.0 took effect October 1, 2012

What’s Next!
• Intelligent Products
  – EPA is proposing optional connected functionality for room air conditioners and residential refrigerators.
• Increased Efficiency Without Sacrificed Performance
  • EPA is considering a cleanability measure for dishwashers and clothes washers in an upcoming specification revision.
New Specification

Clothes Dryer Specification in Development!!

1. Dryers meeting the version 1.0 specification are expected to use 13% less energy than a standard dryer.

2. Contact appliances@energystar.gov to receive stakeholder updates.

3. Be sure to attend the Appliance Specification & Emerging Tech Update Session on Wednesday at 8AM.
Most Efficient

• **We are moving forward, looking forward to Most Efficient 2013:**
  – an extension of the ENERGY STAR brand that recognizes the most efficient products among those that qualify for the ENERGY STAR
  – Is intended to drive more energy efficient products into the market more quickly
  – Represents **the leading edge** in energy efficient products

• More than 1,400 qualifying models from over 50 manufacturers have been recognized as ENERGY STAR Most Efficient 2012

  [www.energystar.gov/mostefficient](http://www.energystar.gov/mostefficient)
Manufacturers

Electrolux Booth Sign at Nationwide Marketing Group’s 2012 PrimeTime!

Electrolux.com Product Page
Most Efficient: Key Pilot Findings

- **Participation**: Number of recognized models has increased over pilot period
- **Program uptake**: Growing
  - Marketing and promotion across all three key partner categories (retailers, manufacturers, and energy efficiency program sponsors)
- **Consumer perception**: No indication of adverse impact in terms of consumer perception on the ENERGY STAR label
Most Efficient: Key Pilot Findings

- **Participation:** Number of recognized models has increased over pilot period
  - In 2012, recognized clothes washers grew from 24 models to 66 models (as of 9/4/11)
  - In 2012, recognized televisions grew from 63 models to 337 models (as of 9/4/11)

- **Program uptake:** Growing
  - PRICE IS RIGHT on Most Efficient LG Washer
Pilot Evaluation: We hear you

Partner Feedback:

Nearly all interviewed partners explained that they want to continue promoting Most Efficient and see it as a natural progression of ENERGY STAR. Several manufacturers felt that Most Efficient helped them differentiate their products as the "best of the best" products with brand that consumers know and are comfortable with.

Consumer Feedback:

Among respondents who had seen or heard of ENERGY STAR Most Efficient designation and recognized the Most Efficient graphic, 59 percent agreed somewhat or strongly with the statement that “All other things equal, I would buy a product because it is designated as ENERGY STAR Most Efficient “
Most Efficient: Products Covered

Covered in 2012:

1. Boilers
2. Central Air Conditioners and Air-Source Heat Pumps
3. Geothermal Heat Pumps
4. Clothes Washers
5. Furnaces
6. Refrigerators
7. Televisions

Proposed to be add for 2013:

1. Ceiling Fans
2. Computer Monitors
3. Residential Windows
4. Ventilating Fans
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
• Communications efforts will expand
  – Develop key consumer messages
  – Expanding outreach/education
  – Develop sales staff training
ENERGY STAR Program Resources – Residential Appliances
Consumer Messaging Guide

Resource guide to help promote ENERGY STAR certified appliances:

- Savings Facts
- Consumer Tips
- Graphs/Charts
- [www.energystar.gov/appliances/consumer messaging](http://www.energystar.gov/appliances/consumer messaging)

![Comparison of water usage and cost between standard and ENERGY STAR qualified clothes washers and refrigerators.](image)
Welcome to our Guest Speakers
Southern California Edison (SCE)

- Linda Malek, Southern California Edison
LG

- John Taylor, LG
Q&A
Thank You!
Learn More: Appliance Track Sessions

• “Appliance Specification Updates and Emerging Technology: What’s Next” Session
  – Wednesday 8:00 – 9:00 AM

• “Big Savings Opportunities in Small Market Appliances: Ductless Heating & Cooling, Freezers and Air Purifiers” session
  – Wednesday 10:15 – 11:15 AM

• Water Heaters (Part 1 of 2): Where are We Now?
  – Wednesday 9:00 – 10:00 AM

• Water Heaters (Part 2 of 2): Case Studies on Innovative Marketing Programs
  – Wednesday 11:15 AM – 12:15 PM
Other Program Publications

- www.energystar.gov/20years
- www.energystar.gov/publications
Key Contacts – Appliances

• **Appliance Sales & Marketing**
  – Rosemarie Stephens-Booker, EPA ENERGY STAR
    Stephens-Booker.Rosemarie@epa.gov; (202) 343-9529
  
  – Jason Warner & Natalie Chadwick, ICF International
    Jason.Warner@icfi.com or Natalie.Chadwick@icfi.com
    (704) 237-4332 or (202) 862-1261

• **Appliance Specification Development**
  – Amanda Stevens, EPA ENERGY STAR
    Stevens.Amanda@epamail.epa.gov; (202) 343-9106
Key Contacts – Water Heaters

• Steve Ryan, US EPA
  – Promotion and marketing activities
  – 202-343-9123
  – Ryan.steven@epa.gov

• Abigail Daken, US EPA
  – Product specification and revisions
  – 202-343-9375
  – daken.abigail@epa.gov