ENERGY STAR Products Partner Meeting

Keeping Up with Emerging Technology: Next Level Advances in Appliances and Electronics

Wednesday October 25th, 2017
Chicago, IL
Agenda

1) Melissa Fiffer, U.S. EPA
   • Overview of how ENERGY STAR keeps pace with evolving technology

2) Stephanie Baker, NEEA
   • Audience poll
   • Quick intro to the utility perspective on advancing innovation

3) Brand Owner Panel:
   • Technology highlights
   • Q&A
     – Slido.com
     – Code: ESPPM

Panelists:
Salih Zeki (Sazi) Bugay, Beko U.S.
Dochul Choi, Samsung
John Taylor, LG Electronics

Moderator:
Allison Robinson, Cadmus
Advancing Adoption of Efficient Technologies

ENERGY STAR

ENERGY STAR Most Efficient

ENERGY STAR Emerging Technology Award
Emerging Technology Award Categories

• **2016-2017 Innovative Refrigerant Systems**
  – Energy efficiency gain of 5% or greater
  – Efficiency gains are isolated to the refrigerant or components needed to support the refrigerant system
  – Refrigerant with Global Warming Potential (GWP) <15
  – Refrigerant has been approved for use in the U.S. market, listed as acceptable by EPA’s Significant New Alternatives Policy (SNAP) program

• **2017 Solid-State Refrigeration**
  – Solid-state cooling as an alternative to a compressor
  – Lab Refrigeration –15% beyond the new ENERGY STAR V 1.0 criteria

• **NEW: 2018 Room Air Conditioners with Inverter Technology**
The Story of Advanced Dryers
2012-2014: Emerging Technology Award for Advanced Clothes Dryers

- Barriers – first cost, perception re: dry time, uncertainty about U.S. market acceptance
- Key Activities:
  - Meetings with key retailers to identify and carry product in-store
  - Coordination with SEDI to generate utility interest, create incentives around Award
  - Coordination with manufacturers on early product development
- Modulating technology, extended dry time (met 2012 criteria):
  - Samsung DV457/A1
- Heat pump technologies (met 2014 criteria):
  - LG EcoHybrid HP
  - Whirlpool Hybridcare HP
  - Kenmore Hybrid Dryer HP
2015-2017: Two Firsts - ENERGY STAR Dryers V 1.0 and ENERGY STAR Most Efficient

- 2015: New ENERGY STAR specification for Dryers took effect
- 2017: New ENERGY STAR Most Efficient criteria added for Dryers
- 2018: ENERGY STAR Most Efficient criteria expanded to include separate criteria for compact models

- ENERGY STAR Most Efficient standard electric dryers are 28% more efficient than a dryer meeting the federal standard.
- All meet ENERGY STAR’s criteria of max dry time of 80 minutes.

<table>
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<th>Criteria</th>
<th>Standard Electric</th>
<th>Compact Ventless 240V</th>
<th>Gas</th>
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<td>ENERGY STAR</td>
<td>3.93</td>
<td>2.68</td>
<td>3.48</td>
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<td>ENERGY STAR Most Efficient</td>
<td>4.3</td>
<td>3.7</td>
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Availability of Advanced Dryers Has Grown

- **2015**: ~100 ENERGY STAR certified dryers from 11 brands
- **Today**: 200 ENERGY STAR certified dryers from 14 brands
  - Gas and Electric Models
  - Compact and Standard Size
  - Vented and Ventless
  - *NEW*: field to indicate Heat Pump Technology

- **9** dryers on the U.S. market meet ENERGY STAR Most Efficient 2017 criteria
  - **5** Brands – LG, Beko, Blomberg, Whirlpool & Asko
  - All tested to meet ENERGY STAR minimum efficiency criteria in a Max Dry setting
  - Hybrid and Full Heat Pumps
  - Compact and Standard Size
  - Vented and Ventless
Audience Poll – What technology advances in appliances and consumer electronics would you like to see in the future, and why?

• Discuss at your table
• Write your response on the paper provided
• ENERGY STAR team will be coming around to answer any questions
Brand Owner Panel

- Salih Zeki (Sazi) Bugay, Director of Product Management Beko U.S.
- Dochul Choi, Senior Vice President of Global Business and Technology Strategy Samsung
- John Taylor, Senior Vice President of Public Affairs & Communications LG Electronics
Share Your Questions with the Panelists Now

• Submit your questions in two easy steps:
  – Enter “Slido.com” into your phone web browser
  – Code: ESPPM
ENERGY STAR Team Contacts for Appliances & Consumer Electronics

**Product Development**
- Melissa Fiffer, U.S. EPA ENERGY STAR Appliances  
  Fiffer.Melissa@epa.gov
- Steve Leybourn, ICF - Appliances  
  Steve.Leybourn@icf.com
- Matt Malinowski, ICF – Electronics  
  Matt.Malinowski@icf.com

**Sales & Marketing**
- Rosemarie Stephens-Booker, U.S. EPA ENERGY STAR Appliances & Electronics  
  Stephens-Booker.Rosemarie@epa.gov
- Peter Banwell, U.S. EPA ENERGY STAR Emerging Technology Award  
  Banwell.Peter@epa.gov
- Allison Robinson, Cadmus - Electronics  
  Allison.Robinson@cadmusgroup.com
- Sarah Duffy, Cadmus – Appliances  
  Sarah.Duffy@cadmusgroup.com