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

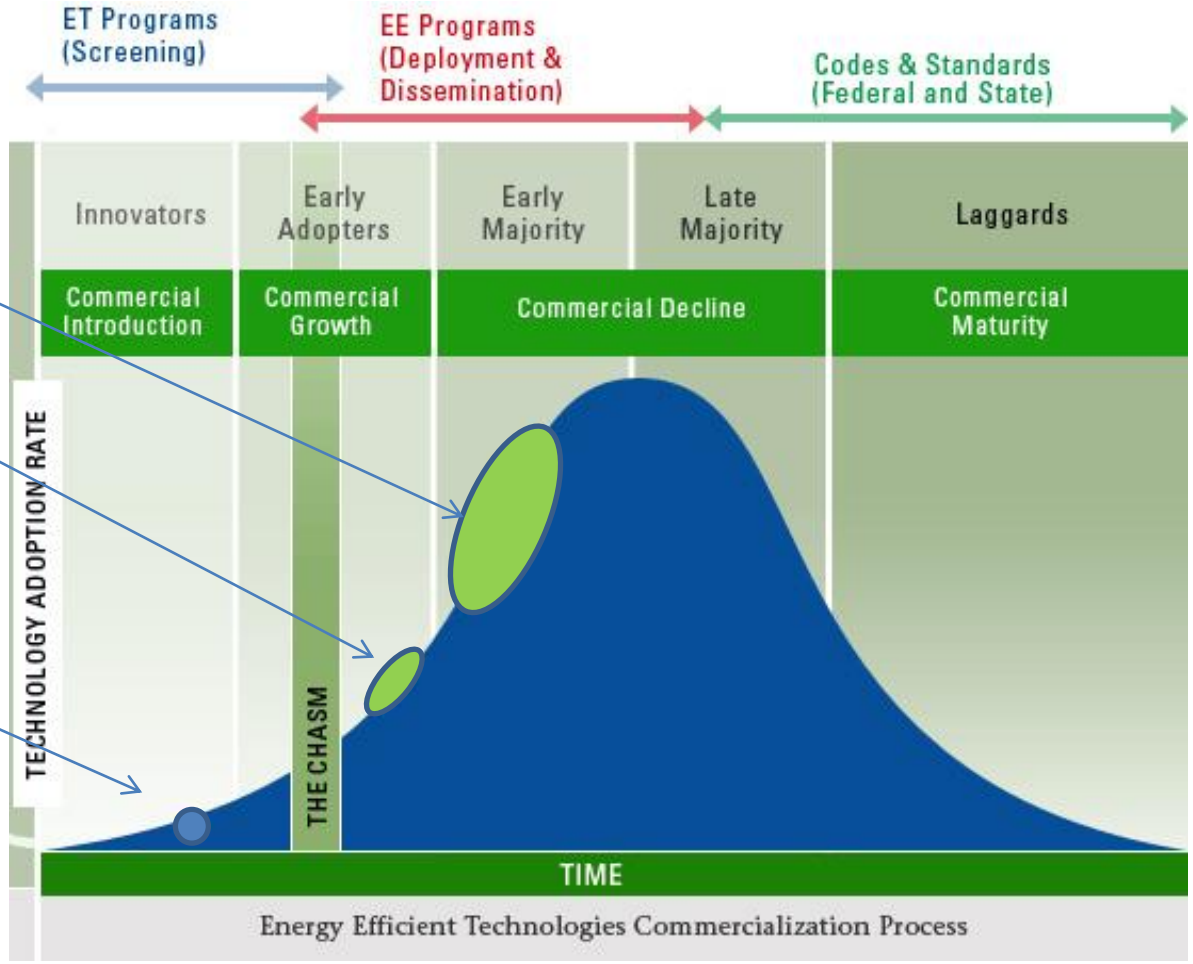
Moderator:
Allison Robinson, Cadmus

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

ENERGY STAR 2014
Emerging Technology Award

- 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.

Criteria	Standard Electric	Compact Ventless 240V	Gas
ENERGY STAR	3.93	2.68	3.48
ENERGY STAR Most Efficient	4.3	3.7	3.8

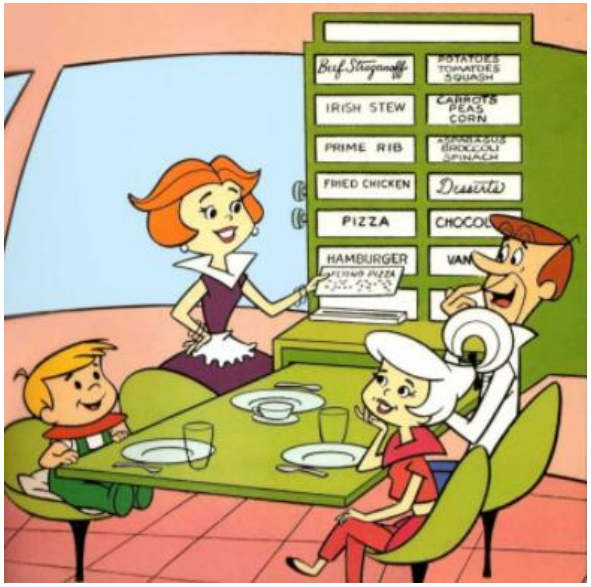
Availability of Advanced Dryers Has Grown

- **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

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