



**Presenters:**

**Alice Rosenberg (CEE)**

**Chris Granda (ASAP)**

**Brian Booher (D&R International)**

**Moderator: Josh Butzbaugh (PNNL)**

March 12, 2019: 1:30 to 3 pm

2019 ACEEE Hot Water Forum



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A background image showing a sunset sky with orange and yellow hues, transitioning to purple and blue at the bottom. Several high-voltage power lines and towers are silhouetted against the sky.

# Session 2D Innovative Programs: Where Are We Today?

# Agenda

- Minimum energy efficiency and labeling of more energy efficient equipment
- Going Above and Beyond
  - Alice Rosenberg (CEE)  
*Efficiency Programs: From Good to Great*
  - Chris Granda (ASAP)  
*The Heat Pump Water Heater Market: What is Working?*
  - Brian Booher (D&R International)  
*Mystery Shopping for Water Heaters: Market Mechanics Revealed*
- Discussion

# Standards for Consumer Water Heaters & Commercial Water Heating Equipment

- DOE energy conservation standards serve as ground zero
  - Technologically-feasible and lifecycle cost effective
  - Technology & fuel neutral
  - Standards are set using energy-specific metrics or measurements (e.g., Uniform Energy Factor, Thermal Efficiency, Standby Loss Rate)
- Consumer Water Heaters
  - DOE published Final Rule in April 2010, became effective in April 2015  
[https://www1.eere.energy.gov/buildings/appliance\\_standards/standards.aspx?productid=32](https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=32)
- Commercial Water Heating Equipment
  - DOE published Final Rule in January 2001, currently covers majority of commercial water heating equipment types  
[https://www1.eere.energy.gov/buildings/appliance\\_standards/standards.aspx?productid=36&action=viewlive](https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36&action=viewlive)

# ENERGY STAR Specifications

- ENERGY STAR is a voluntary labeling program
  - Helps consumers identify energy efficient products
  - Common for energy efficiency programs to leverage ENERGY STAR certification
- Residential water heater program launched in January 2009
  - Version 3.2 is the current specification (as of April 2015)  
[https://www.energystar.gov/products/water\\_heaters\\_partners/partners](https://www.energystar.gov/products/water_heaters_partners/partners)
  - Consideration for optional criteria for connectivity for grid response
- Commercial water heater program launched in March 2013
  - Version 2.0 is the current specification (as of October 2018)  
[https://www.energystar.gov/products/water\\_heaters/commercial\\_water\\_heaters/partners](https://www.energystar.gov/products/water_heaters/commercial_water_heaters/partners)



# Energy Efficiency & Grid-Response Programs

- Programs promote energy efficient and grid responsive equipment above and beyond DOE mandatory standards.
- Themes for the Innovative Programs track
  - Midstream engagement strategies
  - Connectivity
- Session Topics:
  - Alice Rosenberg (CEE)  
*Efficiency Programs: From Good to Great*
  - Chris Granda (ASAP)  
*The Heat Pump Water Heater Market: What is Working?*
  - Brian Booher (D&R International)  
*Mystery Shopping for Water Heaters: Market Mechanics Revealed*



# Discussion



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