



2016 ACEEE MT Symposium

Pump Up the Volume - Increasing the
Opportunity for High Performance Heat
Pumps in Residential Space Heating

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Introductions

▶ Peter Mills – CEE

▶ Laura Petrillo-Groh – AHRI

▶ Ron Domitrovic – EPRI

▶ Antonio Bouza - DOE

Agenda

- ▶ Why does Variable Capacity Heat Pump equipment face difficulty getting traction across all N. A. markets?
- ▶ What work is being done to make VCHP for residential structures more universally applicable?
- ▶ What does the future for this equipment (and some other innovative other HVAC tech) look like?

Presentations & Discussion

- ▶ Examine how equipment performance is represented today, and how that might change in the future
- ▶ Look at how EPRI is working to identify new values for both customers and utilities – Level 2 RFP
- ▶ Learn about some of the latest residential HVAC research and technologies being supported at DOE

CEE members develop market initiatives and explorations with impact in America and Canada



Residential

Whole House

HVAC

Gas Space Heating

Appliances

Swimming Pools

Gas Water Heating

Lighting

Consumer
Electronics



Commercial

Building Performance

Unitary Air-conditioning
and Heat Pumps

Gas Boiler Systems

Clothes Washers

Kitchens

*Demand Control
Ventilation*

Gas Water Heating

Lighting Systems

Data Centers
and Servers



Industrial

Strategic Energy
Management

Premium Efficiency Motors

Motor Systems

Distribution Transformers

Municipal Water and
Wastewater

Work plans: cee1.org/committee-work

Initiative documents: cee1.org/content/cee-program-resources

CEE convenes energy efficiency program administrators to:

- ▶ Assess markets for promising energy efficient technologies and services
- ▶ Examine how opportunities meet program needs
- ▶ Listen to and engage with industry
- ▶ Consider all ramifications of promotion

Shared Objectives for Res HVAC

- ▶ Increase the percentage of sales of high efficiency equipment
- ▶ Reduce the cost to consumers of choosing high efficiency equipment
- ▶ Increase the number of contractors promoting high efficiency equipment & quality installations and pursuing proper system maintenance

Success in Residential HVAC Market

Identify CEE performance specifications

Engage manufacturers

Leverage relationships with trade groups to open channels

Expand opportunity to Quality Installation

With trades, broaden to HVAC systems

Raise performance tiers over time

Outstanding Barrier – Heating Perf.

- ▶ Challenges remain regarding availability of heating performance information
- ▶ Information can be a key barrier to market transformation
- ▶ To achieve true binational scale, more and better heating performance information is needed

Outstanding Barrier – Heating Perf.

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CEE Goals for VCHPs

- ▶ Fair and accurate rating (and comparison) of heating and cooling performance based on confidence in a testing standard
- ▶ Accurate representation of energy use profile of any unit (by programs and others) based on performance capabilities
- ▶ Ability to enable system designers /specifiers to accurately size equipment
- ▶ Installation considerations (QI)



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Pump Up the Volume - Presenters



Contacts

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