



# Behavioral Insights to Promote More Efficient Residential Water Heating

Kira Ashby, Program Manager  
Evaluation, Research & Behavior  
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# Presentation Overview

Behavioral science research → more effective residential water heating efficiency programs

- ▶ Behavior Change Insights
- ▶ Application to residential water heating
  - Consumers
  - Installers
- ▶ Discussion: how to apply behavioral insights to residential water heating?
- ▶ Resources

# Behavior Change Insights

Knowledge/Awareness



Attitudes & Intent



Action

# Achieving Behavior Change:

## *Knowledge & Awareness*

◀ Education

◀ Framing

- Messenger
- Existing values/preferences



# Achieving Behavior Change: *Attitudes & Intent*

- ▶ Perceived benefits/drawbacks
  - Target behavior: ↑ benefits, ↓ drawbacks
  - Competing behavior: ↓ benefits, ↑ drawbacks
- ▶ Loss aversion
- ▶ Discounting future
  - What are the immediate benefits?

## ▶ Norms

- *Descriptive*: What's everyone else doing?
- *Injunctive*: What do others approve of?



# Achieving Behavior Change: *Action*

- ▼ Status Quo Bias
- ▼ Self efficacy
  - Can perform behavior
  - Leads to desired outcome
- ▼ Cognitive dissonance
- ▼ External barriers
  - Access
  - Expense



# Applying Behavior Change: Consumers

## ▶ Choice of product

- Existing preferences: comfort (endless hot water), space saving, longer lasting
- Discounting future & loss aversion
- Self efficacy

## ▶ Pre-shower water use

## ▶ Length of shower

*Watch out for rebound!*



# Applying Behavior Change: Installers

## ▼ Sell efficient water heaters

- Existing barriers: \$, larger gas pipes, availability
- Discount future: higher upfront profit
- Social norms of being a plumber
- Cognitive dissonance
  - Image of what it means to be a plumber

## ▼ Installation of efficient water heaters

- Self efficacy
  - Ability to install new technology
  - Extra effort → energy savings
- Design of plumbing systems
- Favor existing, less-efficient piping design (Status Quo Bias)




# Behavior Resources

- ▶ CEE's Evaluation, Research & Behavior Website: [www.cee1.org/eval/eval-main.php3](http://www.cee1.org/eval/eval-main.php3)
- ▶ CEE's Evaluation & Behavior Committees [Website](#): email [jkrouk@cee1.org](mailto:jkrouk@cee1.org) for access

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### Evaluation & Research at CEE

Among CEE's goals is the promotion of effective evaluation research. CEE's Evaluation Program is designed to help members use their resources more efficiently and effectively in the pursuit of energy efficiency.

The responsibilities of the Evaluation Program Manager include:

- Leveraging members' resources by identifying and coordinating opportunities for members to coordinate and collaborate on a wide variety of evaluation-related activities
- Conducting research on energy-efficiency program evaluation, disseminating the research, and engaging membership in dialogues and coordinated efforts designed to further energy-efficiency program evaluation, especially Market Transformation evaluation
- Identifying research and training needs for members and other audiences, and arranging for these needs to be met in ways identified as appropriate by members and CEE management
- Maintaining a database of evaluation research reports

## CEE Behavior & Evaluation Committees

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### Behavior Committee

[Behavior Subcommittees](#)  
[Subcommittee Co-Chairs](#)  
[2009 Committee Meeting Minutes](#)  
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[Opportunities to Collaborate](#)  
[Behavior Change in the News](#)

### Evaluation Committee

[Evaluation Committee Status Update](#)  
[2009 Committee Meeting Minutes](#)  
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[Evaluation Resources](#)

### Resources

[Calendar of Trainings](#)  
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### Behavior Committee

The Behavior Committee was created as a place for members and CEE staff to identify, prioritize, and develop behavior change-focused work products such as:

- summaries of approaches to behavior change and evaluation from various disciplines as they relate to energy efficiency
- descriptions of programs
- summaries of research results
- position papers and peer-reviewed papers
- other behavior-focused resources and information.

Please take a moment to learn about how this work has been divided across our [subcommittees](#), get in touch with the committee [co-chairs](#), or contact relevant [CEE staff](#).

### Evaluation Committee

The aim of CEE's evaluation program is to promote effective evaluation research. To this end, we support the evaluation efforts of our members by:

- maintaining a clearinghouse of evaluation studies, market assessments and other reports of interest to evaluators
- providing the infrastructure to support a network for practitioners and facilitate joint research and evaluations

# Contact

Kira Ashby  
Program Manager  
Evaluation, Research & Behavior  
(617) 337- 9281  
kashby@cee1.org