



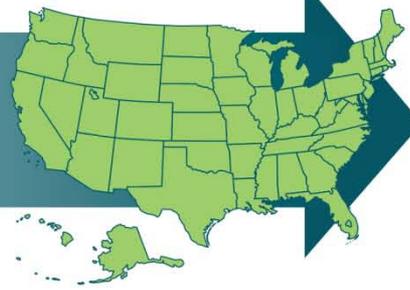
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STATE ENERGY EFFICIENCY ACTION NETWORK

# Customer Information and Behavior (CIB) Working Group: Blueprint Executive Summary

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Executive Group Meeting

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STATE ENERGY EFFICIENCY ACTION NETWORK

The Customer Information and Behavior Working Group of the State Energy Efficiency Action Network is committed to taking action to increase investment in cost-effective energy efficiency. This Blueprint was developed under the guidance of and with input from the Working Group. The document does not necessarily represent an endorsement by the organizations of Customer Information and Behavior Working Group members.

The Customer Information and Behavior Working Group Blueprint is a product of the State Energy Efficiency Action Network and does not reflect the views, policies, or otherwise of the federal government.

If this document is referenced, it should be cited as: State Energy Efficiency Action Network (2011). Customer Information and Behavior Working Group Blueprint. [www.seeaction.energy.gov](http://www.seeaction.energy.gov)

# The Premise

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- The right information, presented in the right way, will lead people to choose behaviors that will reduce their energy consumption.



# Large Potential for Savings

Feedback programs could provide the equivalent of 100 billion kWh of residential electricity savings annually by 2030.

(ACEEE study by *Laitner and Ehrhardt-Martinez, 2009*)

- Equivalent to 6% of total residential consumption by 2030.
- This is in addition to the estimate in the McKinsey study, which estimates residential electricity savings from capital investments of 26% by 2020.

Initial studies show that In-Home Displays providing direct feedback led to an average of 7 percent energy savings.\*

(The Impact of Informational Feedback on Energy Consumption - A Survey of the Experimental Evidence, *Ahmad Faruqi, Sanem Sergici and Ahmed Sharif, 2009*)

\*Further research is needed to validate the magnitude and the persistence of the findings in these initial studies.



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# Working Group Purpose and Scope

Assist state and local governments in advancing the use of energy information and feedback to change residential energy consumption behavior and achieve deeper energy and emissions savings.

## Focus:

- Residential energy efficiency programs that target behavior changes, and data needs and privacy rules to support the programs.
- Incorporating behavioral science research into energy efficiency program design.

## Future issues:

- Commercial and industrial sectors, non-electric sectors.
- Energy efficiency opportunities enabled by dynamic pricing and Smart Grid.

## Related Issues:

- Cyber-security
- Customer Data Standards and Interoperability
  - Though the CIB will not develop standards in these areas, they are integral to the long-term goal of creating an environment of innovation in energy information feedback.



# 2020 Goal

- By 2020, reduce residential electricity consumption by 4% by increasing customer awareness of energy use.
- This would save approximately 5 billion kWh of electricity in 2020.
- This goal is roughly equivalent to:
  - 75% of all U.S. households receive comparative home energy reports (resulting in 2% household-level savings); and
  - 30% of all U.S. households have cost-effective direct feedback on energy consumption, including the use of in-home displays, web portals, smart phone applications, etc.



# CIB Working Group Goals

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## Year One

**Build expertise on the potential energy savings available from programs that target residential consumer behavior changes by:**

- Providing tools and resources for regulators and policymakers about data issues associated with energy efficiency.
- Supporting the development of uniform methods to measure energy savings from energy efficiency programs targeting behavior changes.

## Medium-Term (2-3 years)

- 20 million U.S. residential households participate in an on-going energy use information feedback program (roughly 2-4 million today).



# Key Goals are Identified in 3 Areas

## 1. Data Access

- Utilities/program administrators/third parties share energy information as appropriate to maximize energy efficient behaviors by customers, while maintaining data security and privacy.
- Recognize the role that data has in stimulating innovation and facilitating research while balancing customer privacy and other concerns.

## 2. Program Design

- Consumers reduce energy consumption and pollution by having access to timely, useful, and actionable information.
- EE program administrators and policymakers use energy efficiency programs targeted at behavior changes to supplement traditional energy efficiency programs.

## 3. Evaluation, Measurement & Verification (EM&V)

- Policy makers have access to fact-based, policy neutral information on best practices and policy options for evaluating energy feedback programs.
- Energy feedback savings are evaluated, measured and verified in an accurate, timely, comparable/consistent and affordable way.



# Priority Solutions and Actions to Achieve the Goal

By 2020, reduce residential electricity consumption by 4% by increasing customer awareness of energy use.

## Three Major Work Areas

### Data Access

### Program Design

### Measuring Savings

## Priority Solution Areas

1. Assistance for Regulators and Policymakers
2. Appropriate Access to Utility Data
3. Data Security and Communications Standards
4. Access to Federal Energy Data

1. Scale-Up Pilots
2. Outreach to Improve the Understanding of Programs Targeting Behavior Changes
3. Provide Information to Decision-makers
4. Highlight Model Programs
5. Support Additional Research

1. Smart Grid Consumer Behavior Studies
2. Cost-Effectiveness of Behavior Programs
3. Methods for Measuring Savings
4. Validate Experimental Design and Other Existing Methods
5. Examine Persistence of Savings



# CIB Priority Deliverables

## 2011

- A guide to data access and energy efficiency
- A policy on third party access to DOE energy data
- Webinars on key topics related to customer information and behavior
- A document that examines methods to measure savings from behavior based efficiency program
- A document that examines the use of experimental design methods to measure savings

## 2012

- A report on third party access to utility data
- A report examining the cost-effectiveness of feedback programs
- An analysis of the persistence of savings from behavior-based programs

