

*Beyond Energy Efficiency:
Behavior Change Tactics for the
Pollution Prevention Community*

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The American Council for an Energy-Efficient Economy (ACEEE)

- ACEEE is a nonprofit 501(c)(3) that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments & behaviors.
- Nearly 50 staff based in Washington, D.C.
- Focus on end-use efficiency in industry, buildings, utilities & transportation
- Other research in economic analysis; behavior; national, state & local policy.
- Funding:
 - Foundation Grants (52%)
 - Contract Work & Gov. Grants (20%)
 - Conferences and Publications (20%)
 - Contributions and Other (8%)



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"What does the Behavior and Human Dimensions Program at ACEEE work on?"

- Behavior and Human Dimensions is a laboratory where we make and test tools for programs ('making crayons')
 - measuring and validating impacts of particular social science derived insights and techniques.
- We strive to help policy-makers understand the impact of their decision-making and actions (or inactions)
 - exploring the interaction effects of policies, programs, and human activity.
- Our goal is to encourage and support the development and deployment of Behavior-based energy efficiency programs and policies.
 - promote the use of usability testing, user centered design, and close attention to the technology/behavior nexus.

Research areas

- Our work is concerned with aspects of energy consumption and behavior change.
 - Questions of interest include the synergistic effects from combined treatments, and how small individual effects may add up to large collective impacts.
 - We focus on 'engagement' in a variety of contexts (e.g., commercial, residential, institutional)
 - All sectors (i.e., transportation, buildings, industry, and agriculture).

We define Behavior as 'action or activity in the world'

We conduct direct, empirical, observation and data collection, preferably in a naturalistic setting.

Our findings are comparable, applicable, and practical.

Our values

We seek to be locally/regionally oriented, to respect diversity of cultures and histories, to pay attention to issues of social equity and justice, and to be inclusive in our outreach efforts. We believe that grounded methodologies 'let people speak.'

Why we do it – Ultimately, we seek to influence policy in favor of holistic solutions to energy problems. We believe that 'policy is people' and it constrains behavior (for good or ill).

Our goal is to give people multiple, positive, pathways towards and energy-efficient future.

Good policy should respect individual choice, while encouraging optimal outcomes.

Why focus on behavior?

Everything comes back to human behavior, even installed technology

If people do not choose to purchase, use, or abide by it, then it will not do the job

We are all convinced that, with the right medium and data visualization and presentation, people will just 'get it'

In fact, we need to make our issues concrete and visible to people in real-time, rather than abstract and after the fact.

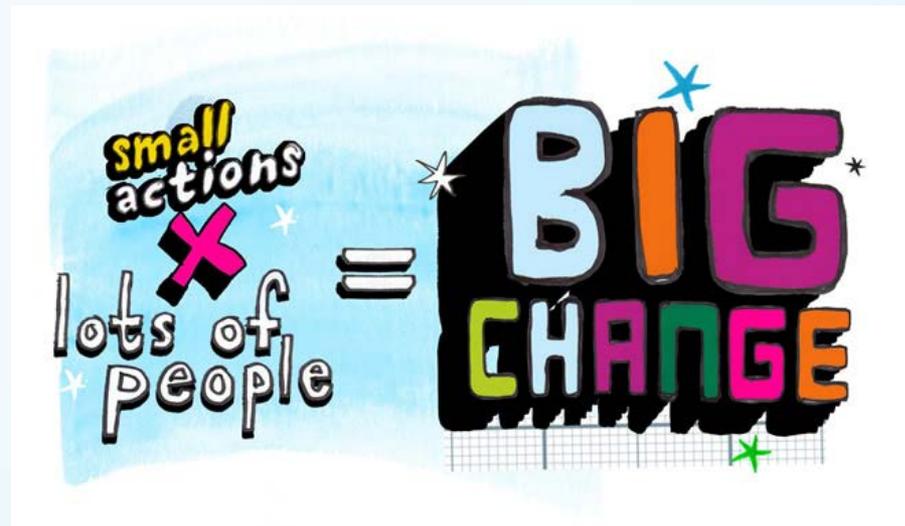
Goals today...

- Describe growing interest and work on behavior approaches for sustainability
- Summarize behavior tools or strategies
- Provide examples of pollution prevention programs using behavior strategies

What not to do

- Consumers/water-users/energy-users do not need to have their cognitive load increased
 - Being educated, made aware, or taught to think about resource use isn't **sufficient** to affect change
 - People don't use *resources*, they use products and services
- Ironically, right this minute I am violating this rule by educating you 😊

We need to stop relying on an outmoded model – foisting education upon people in hopes they become ‘better’ consumers, and instead look to ways that we can foster better outcomes through changes to people’s social, natural, and built environments.



Community-based social marketing

Is not marketing!

- Community-based social marketing is an accessible way to apply a behavioral perspective in sustainability and energy efficiency programs.
- The research-based approach, and focus on addressing specific barriers to a targeted action improves program design efficacy.
- As mentioned above, programs must consider local and regional issues during their planning stages for the deepest savings possible.
- CBSM gives a set of steps for achieving this strategy.
- The following slides offer some tools and examples

For those interested in more, our recent white paper on CBSM, titled *Reaching the “high hanging fruit” through behavior change: How Community-Based Social Marketing puts energy savings within reach* is available on the ACEEE website for download:

<http://aceee.org/white-paper/high-hanging-fruit>

Tool: Commitment

- Spoken, written, and public statements reinforce self-image
 - Example: SMUD found that people who made a pledge goal achieved 3X savings as the average (Schick and Goodwin 2011).
- We want to bring our behavior into alignment with public statements
 - Grant McCracken, an anthropologist from MIT, calls these ‘unities’ in his theory *Diderot’s Bathrobe*.
- Misapplication: PEPCO put up print ads at DC Metro Stations and bus shelters with random actors and a textual script that read, “I pledge to set my thermostat at 68.”
 - Pledging, PEPCO, U R doin’ it rong.
 - How to fix? PEPCO could have a welcome kit for new accounts that includes a mail-in pledge.

Tool: Social Norming

- No one wants to be weird!
- Offer demonstration of ‘the norm’
- Make behavior impacts visible and comparable
 - Many utilities across the United States are working with third-party providers, such as C3, OPOWER, and Tendril, to send their customers personalized reports
- I made fun of PEPCO last slide, so let me give them credit for a good website:
 - <http://www.pepco.com/home/billing/myaccount.aspx>
- With ‘norms’ NUMBERS MATTER. Show people that other people are doing it too.
- When to use it: If there is a lack of motivation due to uncertainty about social acceptance (*Compost toilets, anyone?*)

Tool: Prompts

- Prompts are VISIBLE calls to a specific action, “Did you turn out the lights?”
- Prompts are NOT slogans
- Prompts can be delivered through signage, feedback devices, or reminders (like a door hanger)
- Prompts need to be placed in physical proximity to the targeted action
- Prompts need to be deployed as close to the timing of the action as possible
- Prompts also require placement within a natural sequence of actions:
 - For example, it is recommended that you check the batteries in your smoke alarm when you turn the clocks forward and back in Spring and Fall, thus appending a new and ‘voluntary’ action to an established and permanent habit.
- When to use it: If a major barrier to completing an action is forgetfulness or a lack of instant cues, providing a prompt can be an effective intervention.
 - E.g. turning off the lights when leaving empty rooms. A prompt, in the form of a light switch sticker, can direct occupants to turn off the lights and remind them just as they are leaving the room to do so (Temple University Office of Sustainability 2009; UCF Today 2012).

Tool: Convenience

- Many barriers to behavior change are rooted in inconvenience that limits ability or incentive to take action
- These barriers can be found in the **built environment**:
 - Example, you may want to encourage taking the stairs, but the stairs are located at the opposite end of the building
- Barriers can also appear **in the processes** we encounter as we navigate our day:
 - Example, you want employees to bike to work more often, but have an 8:00AM all-hands staff meeting every morning.
- There are barriers to be found in our shared infrastructure:
 - People cannot walk to lunch due to pedestrian unfriendly roadway design
- When to use it: If there is a structural or procedural barrier that causes significant inconvenience to completing an action, a convenience-altering intervention should be implemented.
 - Example: The University of Minnesota's Power Police does a standard installation at each workstation to address the inconvenience of reaching under the desk to turn off a power strip at the end of the work day. They install an intermediary switch between the power strip and the outlet, which is laid on the desk, easily within reach (University of Minnesota 2012).

Save the Crabs

- “Save the Crabs” campaign in the Chesapeake Bay/Washington, D.C. area.
- Run-off was impacting the water quality in the Chesapeake Bay
- In the CBSM campaign, homeowners were asked to complete *one* specific action: to **fertilize in the fall instead of the spring** to reduce runoff into the bay.
- The campaign was framed around the blue crab, a seafood with local cultural resonance
 - Blue crabs also symbolized a crucial regional industry (Paolisso 2007).
- The slogan “*Save the crabs...then eat them later*” representing the request to save fertilizing till the fall was promoted by **local** chefs and **local** newspapers
- The program was promoted in restaurants and by homeowners who displayed signs reading, “*No appetizers were harmed in the making of this lawn.*”
- The campaign also used a print and TV media campaign.
- Post-campaign survey results showed that those who were exposed to the campaign were significantly more likely not to fertilize their lawn in the spring (Landers et al. 2006).

Scoop the Poop

- Austin has a reputation for being quite a dog-friendly town
 - Many off-leash dog parks, warm weather, and public events that welcome canines.
- Downside: Austin has to deal with over 60,000 pounds of dog waste every day 😞
- This impacts the local waterways, leading to bacterial contamination, algal blooms, and fish kills.
- As a deterrent, the city of Austin implemented a \$500 fine for dog owners who do not clean up after their dogs.
 - No officer, no citation, no compliance.
- Surveys and interviews identified several barriers to actually cleaning up dog poop. These barriers included:
 - No convenient access to plastic baggies
 - Trash cans not close by
 - The task is messy and dirty
 - “One little pile” is not a problem
 - The belief that it is natural/beneficial fertilizer!!!



Scoop the Poop

- To combat these barriers, “Mutt Mitt” stations were installed in city parks.
 - In 2000, 25 stations were installed, by 2010 over 150 stations were available in 90 parks.
 - The stations are stocked with plastic bags that “protect the hand like a glove.”
 - The stations are accompanied by with a phone number for people to call to report violations or empty dispensers
- Problems with water quality remained, so in 2009 **messaging** was added to the Scoop the Poop program in Austin:
 - These included a 30-second television spot, a public event featuring a dirt-pile sculpture representing 60,000 pounds of dog poop and an original song by a local singer-songwriter, a program mascot, and a Facebook page. Additional signage was added to the Mutt Mitt stations.
- In 2001, 75,000 Mutt Mitts were distributed to dispose of about 37,500 pounds of dog waste. By 2009, about 2.4 million Mitts were distributed to dispose of 1.2 million pounds of dog waste.
- ***Bacteria levels in local streams near off-leash dog parks have improved.***

Behavior change campaigns

Must become multi-modal, multi-channel, multi-message, multi-messenger.

Must meet people on their own ground, using language they understand, and peer-champions they relate to.

Must use methods that are appropriate for different learning styles, not just the visual-verbal.

Must move past pilot projects organizations need to step up to deploying the types of programs we have shown to work, at scale.

Behavior programs are often misperceived as 'cheap'

A well-designed, properly implemented program will not be cheap, but *it will be cost-effective.*

Keys to success

The key to success is 'stacking' a variety of means for reaching consumers of energy to get at the deep savings that are possible.

There are a variety of ways to reach people, and we need to use them to get the savings we want.



Takeaway

- There is no one single program that will magically turn people environmentally conscious
- However, behavior change programs in combination with one another, with attention being paid to local, specific conditions and on-the-ground social realities, can boost program success significantly.

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One theme to bind them

If there is one message that comes through consistently for those of use working in other areas it is that *there is no universal solution.*

Any program or policy must:

- Keep it local and respect the culture
- Practice segmentation of target audience
- Use emerging technologies to reinforce good habits
- Parse your data to understand consumer behavior
- Focus on outcomes

Final thoughts

Is your method working for you, or should you adapt it?

Small changes can have large impacts.

Piggyback culture change onto technological innovations.

Empower local and indigenous solutions.

Use ritual and lore to encode information. Invent traditions.

Pace your lessons.

Manage your expectations – are you trying to get people to do something for the outcome?

Further resources

Email me @ smazur@aceee.org

Call me @ 202.507.4026

Go to our website, www.aceee.org, register to be able to log-in, when it asks you your sector of interest, click 'Behavior' to get updates and invites from our program and to follow my posts on our blog.