

CADMUS

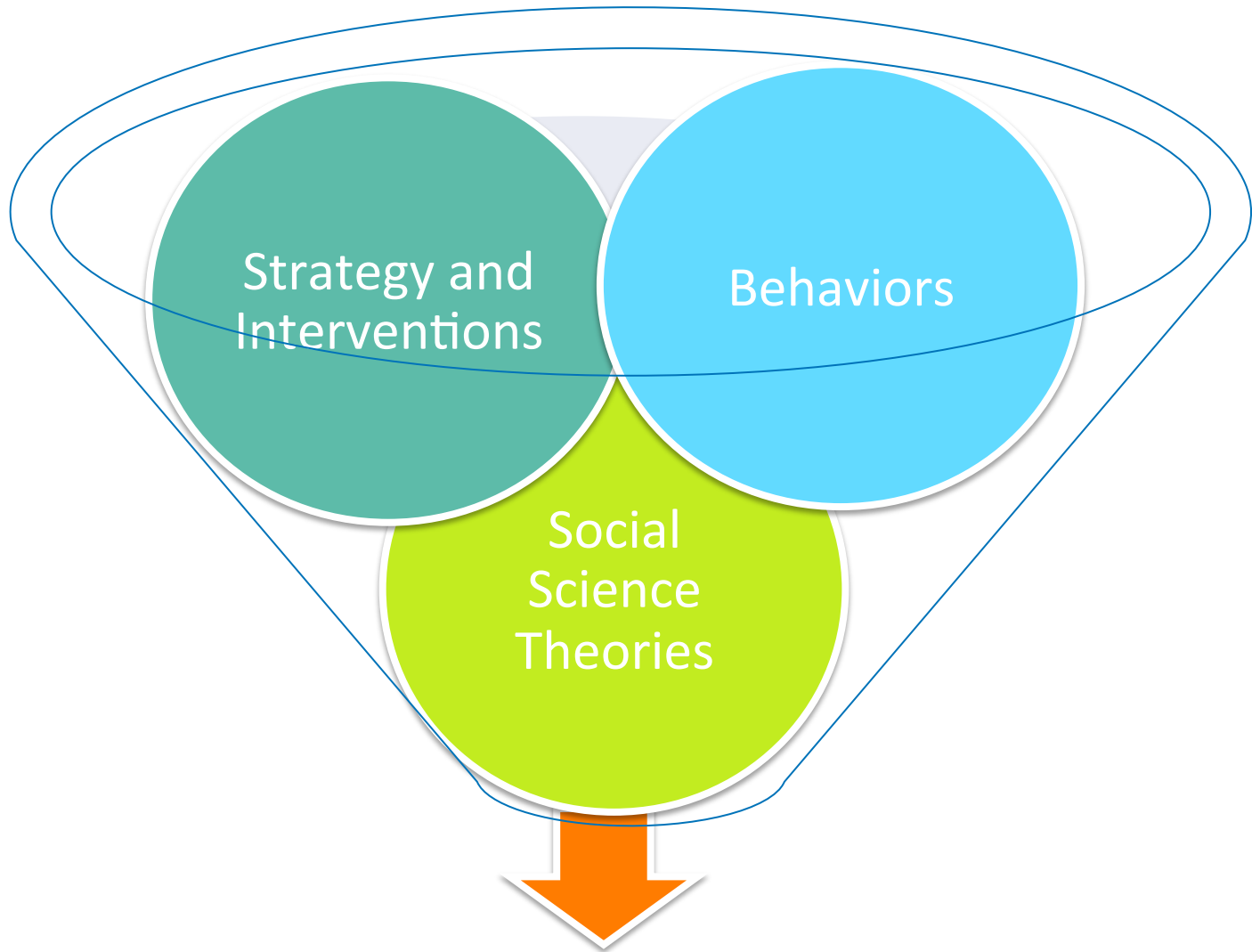


Expand Your Thinking: A Design Strategy for a New Mix of Behavioral Programs


 ENERNOC
UtilitySOLUTIONS

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Unite for new program ideas!

Four steps

Start with behaviors, theories, or interventions

Consider all three elements to get the best fit

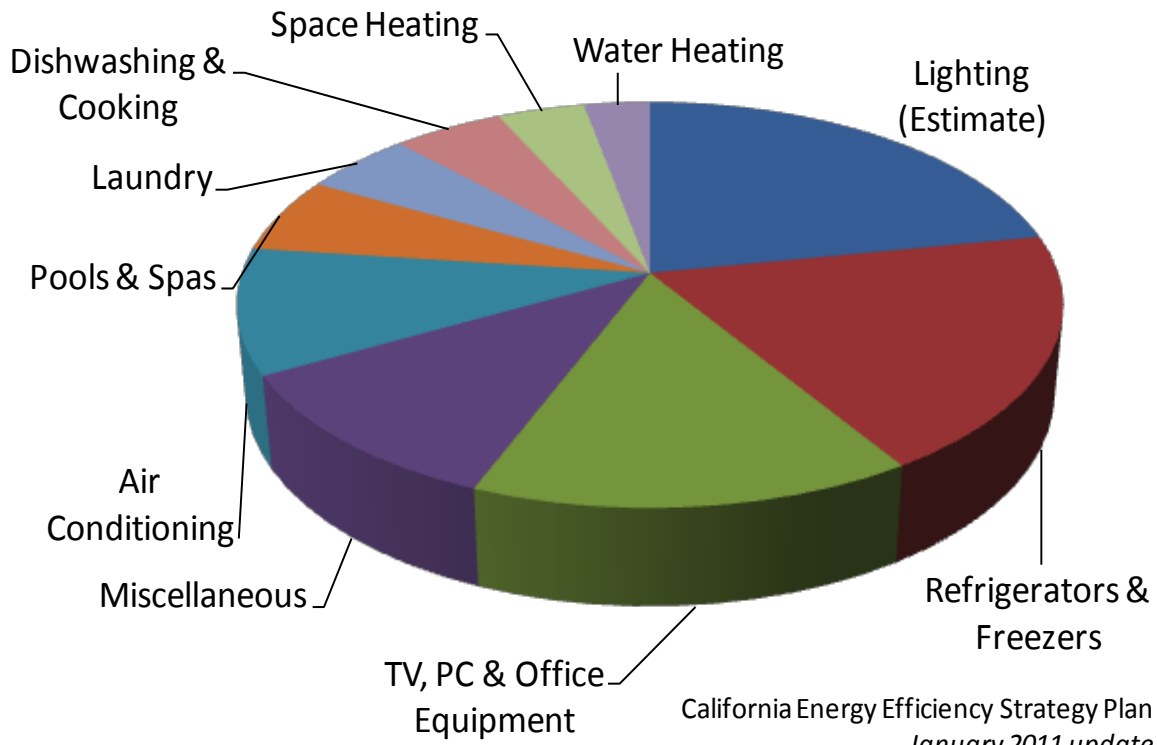
Conduct preliminary research

Ensure the program can be evaluated

A word about behavior schemes

End Use

California Statewide Average Electricity Use Per Household



California Energy Efficiency Strategy Plan
January 2011 update

Many other schemes



Purchase versus
Non-Purchase



Savings Potential

Quick Fixes
Things you can do right now

- Adjust the display on your TV**
New televisions are originally configured to look best on the showroom floor—at a setting that's generally unnecessary for your home. Changing your TV's display settings can reduce its power use by up to 50% without compromising picture quality. Use the "display" or "picture" menus on your TV; adjusting the "contrast" and "brightness" settings have the most impact on energy use. Dimming the display can also extend the life of your television.

SAVE UP TO \$40 PER TV PER YEAR

Smart Purchases
Save a lot by spending a little

- Install occupancy sensors**
Have trouble remembering to turn the lights off? Occupancy sensors automatically switch them off once you leave a room—saving you worry and money. Sensors are ideal for rooms people enter and leave frequently (such as a family room) and also areas where a light would not be seen (such as a storage area). Wall-mounted models replace standard light switches and they are available at most hardware stores.

SAVE UP TO \$30 PER YEAR

Great Investments
Big ideas for big savings

- Save money with a new clothes washer**
Washing your clothes in a machine uses significant energy, especially if you use warm or hot water cycles. In fact, when using warm or hot cycles, up to 80% of the total energy used for washing clothes goes towards water heating. Some premium-efficiency clothes washers use about half the water of older models, which means you save money. SMUD offers a rebate on certain washers—visit our website for more details.

SAVE UP TO \$30 PER YEAR

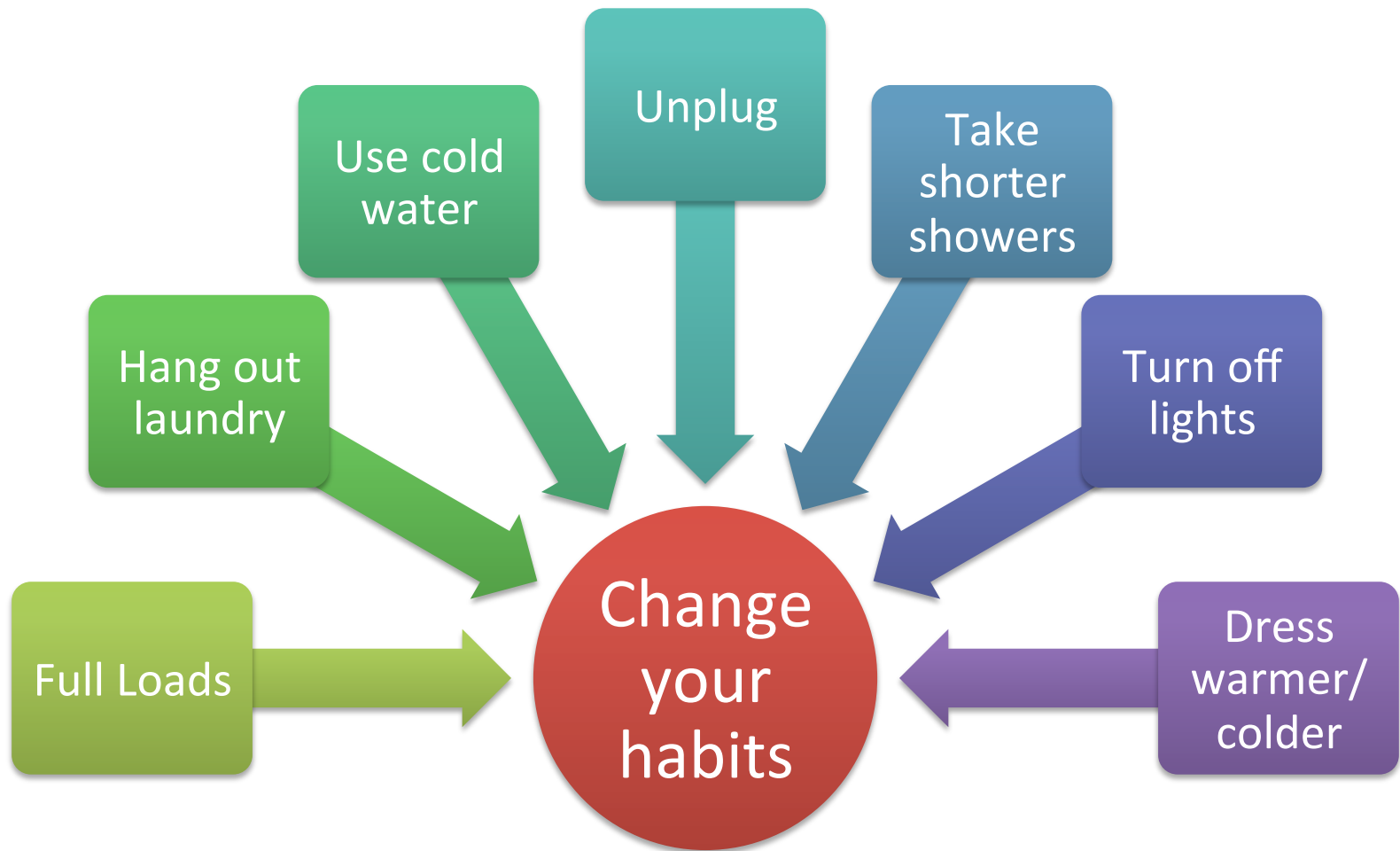


Popularity

How about a consumer-based scheme?



Close up: Change your habits



Extending the reach of an appliance rebate program

Traditional focus

Encourage purchase of more efficient appliances

Added focus

Encourage more efficient use of those hi-efficiency appliances

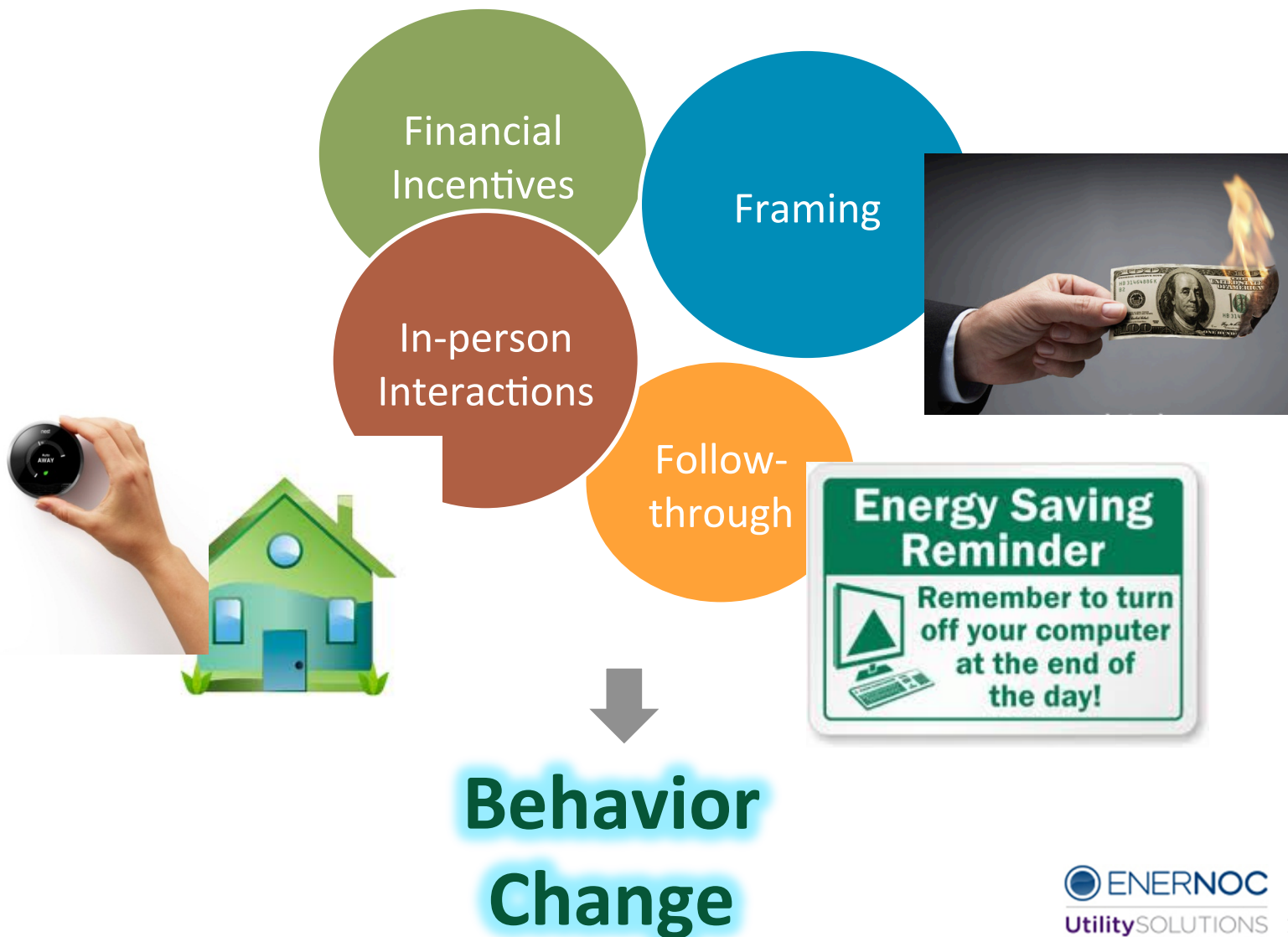
Support adoption of newest technologies

Help from social sciences

- Neoclassical economics
- Cognitive science
 - Framing/Priming
 - Loss aversion
- Decision heuristics
 - Ease and convenience
 - Recognition of encouraged behavior
- Diffusion of innovation
 - Technology acceptance & adoption



Interventions to Increase Purchase and Usage Efficiency

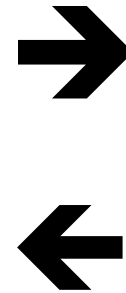


Resulting behavior changes

- Buy something different
 - Tankless instead of storage water heater
 - More appropriately sized unit
- Change habits
 - Unplug/turn off
 - Wash clothes in cold water
- Use appliances better
 - Install the bulbs
 - Program the thermostat
 - Turn down water heater temperature



Personal Energy Trainer (PET)



What do I want in a PET?



Social science evidence

- Learning theory
 - Positive reinforcement
 - Feedback
- Bounded rationality and decision heuristics
 - Ease and convenience
 - Elimination of choices
- Theory of planned behavior
 - Behavioral control



PET Interventions



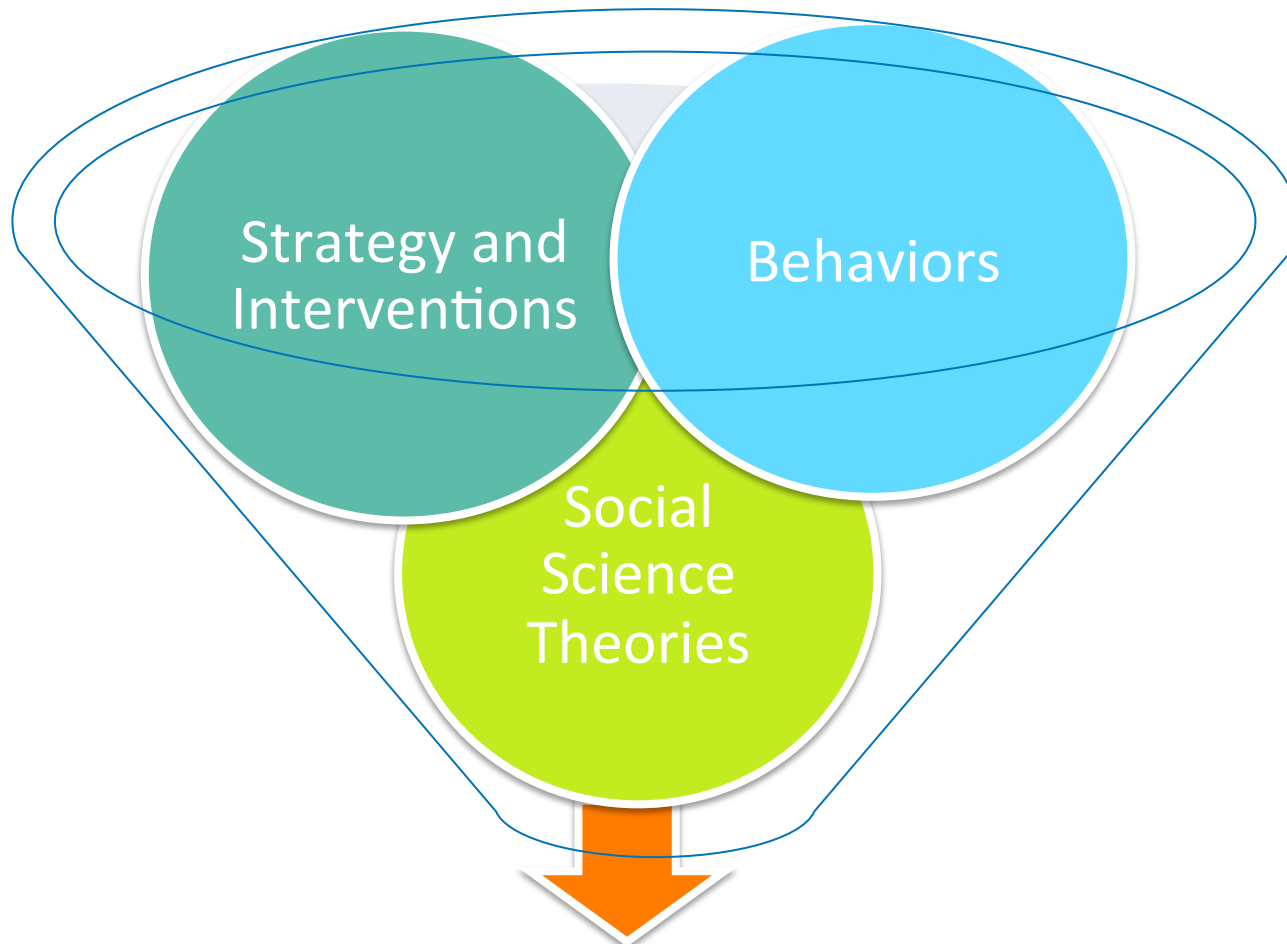
**Behavior
Change**

Resulting behavior changes

- Change your habits
 - Unplug/turn off
 - Shift timing
- Get rid of stuff
 - Take out the wine cooler
 - Put wine in basement
- Use equipment better
 - Thermostat control
 - Use fans instead of A/C



So, shake or stir



**NEW OR REFRESHED
PROGRAMS**

A typical day with my PET



Thank You!

“Paving the Way to a Richer Mix of Residential Behavior Programs”

www.calmac.org

QUESTIONS?

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