



Ethnographic Research Findings

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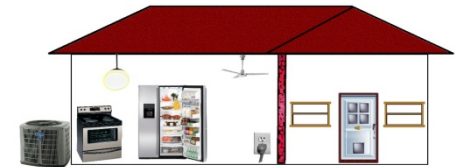
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Ethnographic research findings

- Welcome
- Methods
- Intro and Overview
- The Language of Energy
- Energy Use in the Home
- Motivations and Barriers
- Household and Community Dynamics

Methods

- 136 in-depth interviews in homes across the IOU territories by trained ethnographers
 - ~110 in English, and 26 in Spanish
 - ~1.5 hour discussions
 - General discussion
 - Walk through kitchen and primary living space
 - Fill out brief survey of actions taken in home
 - Discussion of motivations and barriers
- Ethnographic research not representative of the state, but insightful
 - Interspersed with findings from quantitative survey efforts to ground some of our qualitative research



Intro and overview

- Research to help inform the 2010-2011 Marketing Strategy
- Key “policy” questions raised by Marketing Strategy Team:
 - Should the efforts focus on energy efficiency, energy saving behaviors or both?
 - Should the efforts include demand response and/or solar?
- While not definitive, our research can provide insights in these and other areas

Key take-aways

- The majority of households that we talked to believe that they are “doing everything that they can” within the realm of their control
 - Marketing strategy needs to find ways to overcome the feeling that “I am doing everything I can”
- **Semantics matter**
 - When designing a marketing strategy and campaign, need to really think through the language that we use to communicate to individuals



The Language of Energy

In their words ... the language of energy

Terms Californians Use

“Electricity”

“Bills”

“PG&E”

“Saving”

“Wasting”

“Cutting back”

“Using wisely”

- Notably:
 - “Saving” is something they do
 - “Wasting” is something others do

In their words...the language of energy

➤ Key associations

- “Turn off lights”
 - Number one association with energy
- Other energy saving behaviors in the home



➤ Association with light stronger for Spanish-speaking populations

- “luz” ... “ahorrar luz” [save], “dar luz” [give] to the neighbor, and certain appliances “gastan menos luz” [waste less] or “toma mucha luz” [use a lot]. “Luz” is possessed, and has the capacity to be shared.

In their words ... the language of energy

And then as we delve deeper ... active, visual

- “Water”
- “Resources”
- “Recycling”
- “Solar”



In their words ... the language of energy

- Saving energy versus solar
 - For some, solar is more of a priority because it's harder to reduce, and “with solar you can use as much as you want”
 - Interestingly, when we asked about overall interest in a free in-home consultation versus installing solar panels, more interest in solar
 - Product placement (e.g. Jon and Kate Plus 8)



Things that they aren't saying...

Terms Californians Do Not Use	Terms Californians Use
CFLs	Energy-saving bulbs, twisty light bulbs, fluorescent
Carbon Footprint	No term
Efficiency	Use energy better. Waste less
Conservation	Save. Waste Less. Do your part
ENERGY STAR	New. Energy-saving
Kilowatt	Energy
Demand response (or anything associated with time of day)	No terms

Energy efficiency vs. energy conservation

- Respondents require prompting for the concept to even enter the conversation.
- About half were able to give somewhat academic or technical definitions
 - Broke down term to root: conserve, efficient
 - But even these respondents were not consistent in the use of the terms
- Many other could not distinguish or define terms
 - Conserve = something to do with wood
- Very often, respondents will equate the two concepts

Energy efficiency vs. energy conservation

- A snapshot of definitions among those who were able to give a definition...

To me, Energy Efficiency is. . .	To me, Energy Conservation is. . .
"doing something better"	"not doing that at all"
"an inherent property of the equipment"	"behavioral"
"like a Prius"	"like...walking"
a mechanical attribute	a human behavior
something the appliance/machine does	consciously not using unnecessary energy
"building a product that uses less energy"	"more of an awareness; it's a personal action to use less energy"
"more mechanical"	"more human"
"making it work for better purpose without spending too much"	"using the energy in the right way/ in the same desirable amount"
the appliance using less energy	using less (behavior)

Personalization of conservation...

➤ Energy conservation:

- Is an action that *I can do*, because I can *choose* to reduce my energy use
- Is more important and saves more than EE, because I can do it myself; it requires no extra equipment
- Has limits, because there's only so much energy use I can cut back on

Less control over energy efficiency...

- Energy efficiency:
 - Is the property of an object, not something humans or Californians have control over day to day
 - Is viewed as wasteful if it requires replacing a product before the end of its life cycle
 - Cannot contribute to “saving” if it also requires consuming

AUDIO CLIPS

*Respondents in their own words...
energy conservation versus energy efficiency*

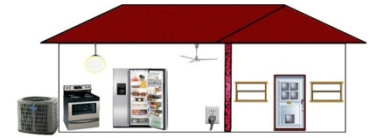
Semantics matter!

- Language must be carefully considered when communicating with the public
- Frequently, communicators are saying one thing, but Californians are “hearing” something different
 - Language often communicates a different meaning to Communicator than to Californian
- Communicators need to be careful not to use terms that contradict one another
 - Efficiency requires consuming, not saving



Energy Use in The Home

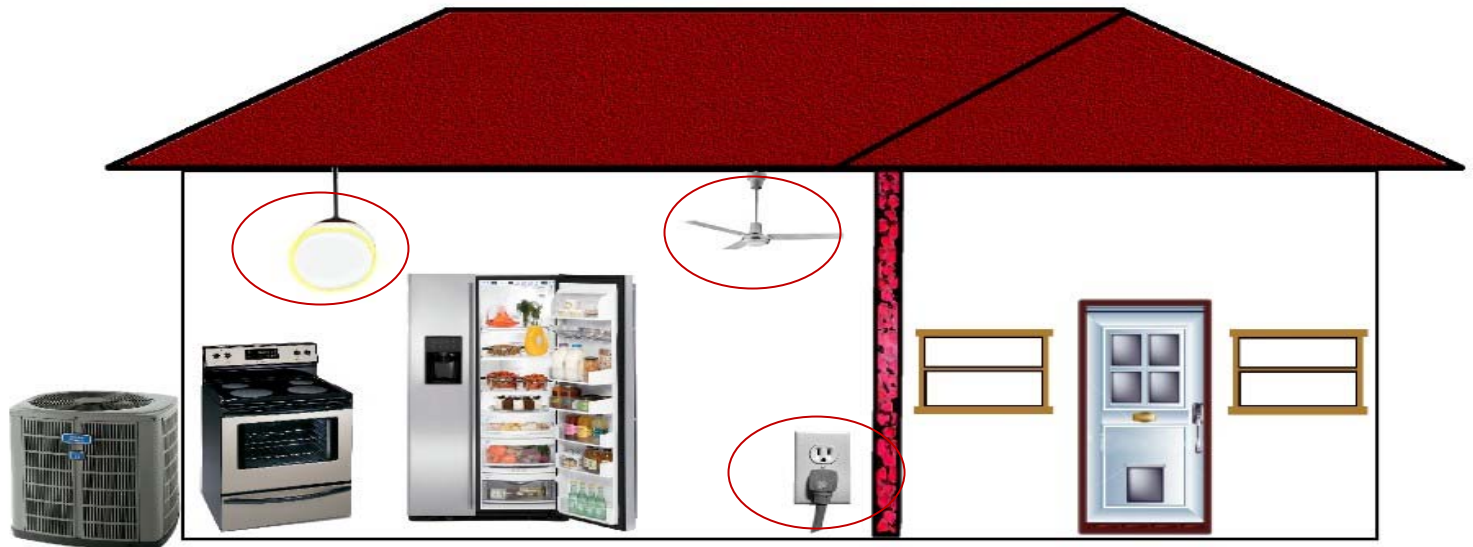
Overcoming the belief that ... “I am doing all I can do”



- Most believe they are doing “everything they can” to reduce their energy use
 - It is others who are making poor decisions
- Reason #1 is that they cannot readily determine what contributes the most to their energy use

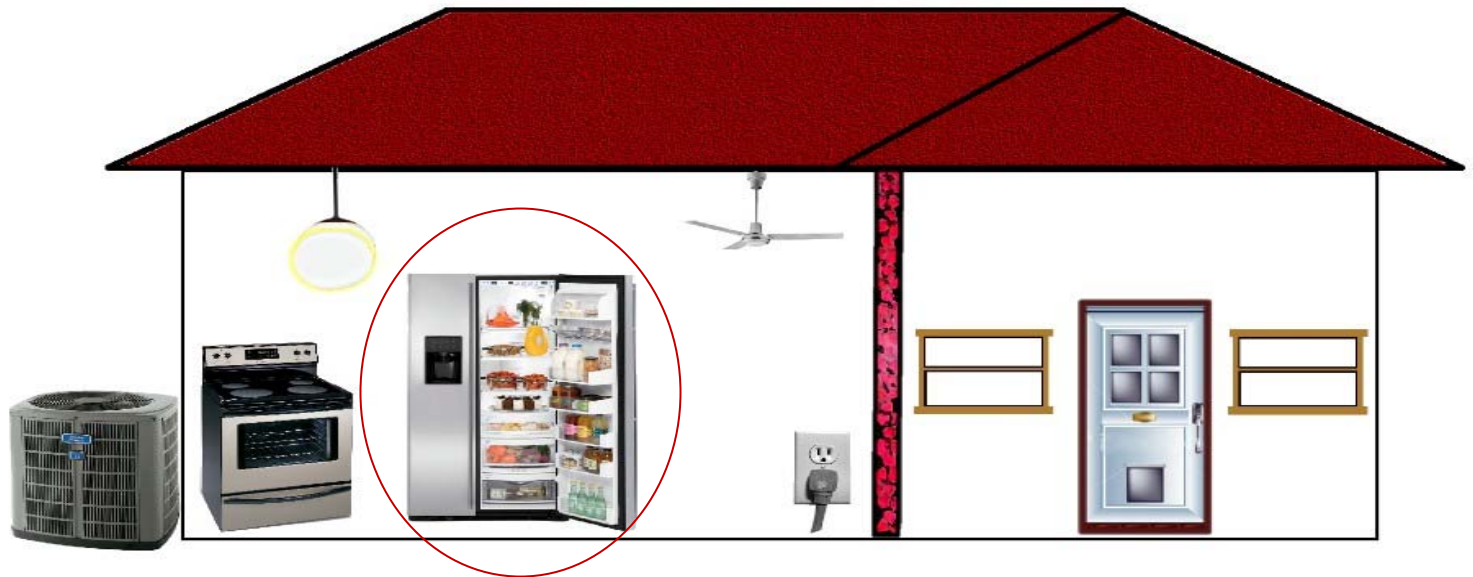
Energy use in the home ... what “uses” energy

- Most immediate associations are with “active” sources and tend to be behavior-based



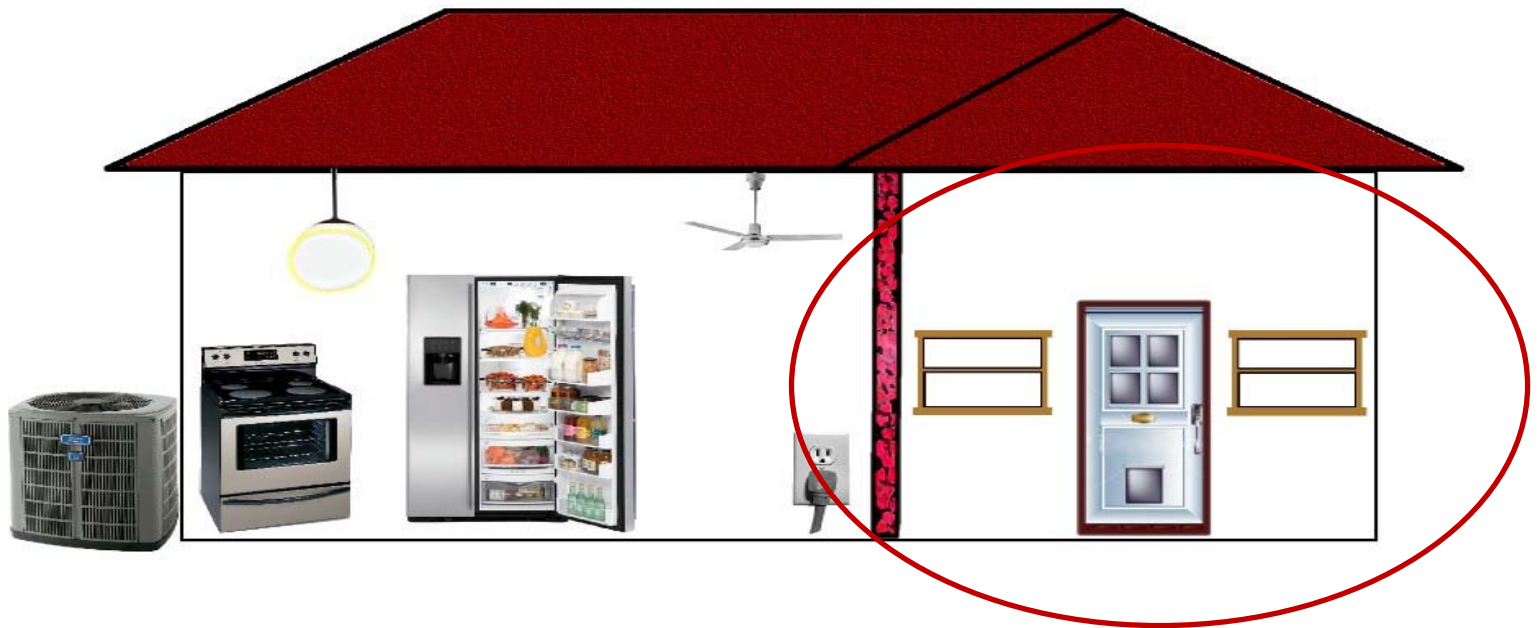
Energy use in the home ... what “uses” energy

- After some probing, will mention other “visual” appliances, but more likely to mention microwave than refrigerator



Energy use in the home ... what “uses” energy

- Insulation, windows and other envelope measures *infrequently mentioned*



AUDIO CLIPS

Respondents in their own words...
“I think I am doing all that I can do”

Energy use in the home ... what “uses” energy

- Reason #2 energy efficiency is assumed or unnecessary



- Approximately 80% of purchasers assume they have bought energy efficient appliances
 - “New” is efficient
 - Many respondents confused about what constitutes an energy efficient appliance

Energy efficiency is assumed...

- “I’ve got a new refrigerator. I’m sure it must be saving energy...because I just bought it. I had an old one, and I’m sure that wasn’t saving anything. I’ve got a fairly new stove, and that’s electric, so that must be saving electricity...you see advertisements all the time saying that the newer appliances are made to save energy, so I’m hoping that mine are.”

...or unnecessary

- For those not purchasing, energy efficient appliances are actually thought of as wasteful because they are unnecessary
 - “I conserve by not having surplus things”
 - “You don’t replace them until they die, and they aren’t dead yet”
 - “I think it’s better just to not have a microwave if you don’t need one. To me, buying an energy-efficient thing is part of the problem.”
- This is a particularly strong sentiment among Spanish respondents

Energy use in the home ... what “saves” energy

Current List

- ✓ Unplug or Turn Off Appliances
- ✓ Donate to Sierra Club
- ✓ Bike to Work
- ✓ Open Blinds for Light
- ✓ Take Shorter Showers
- ✓ Only Wash Full Loads

- Reason #3-- Californians are checking off many things within their household constraints
- There are multiple opportunities, not just energy-related, to “check the box”

Californians are taking many actions, most of which are not easily quantified or counted

Standard EE Behaviors

- Installing double-paned windows
- Installing weather stripping/caulking
- Insulating hot water tank
- Buying EE appliances

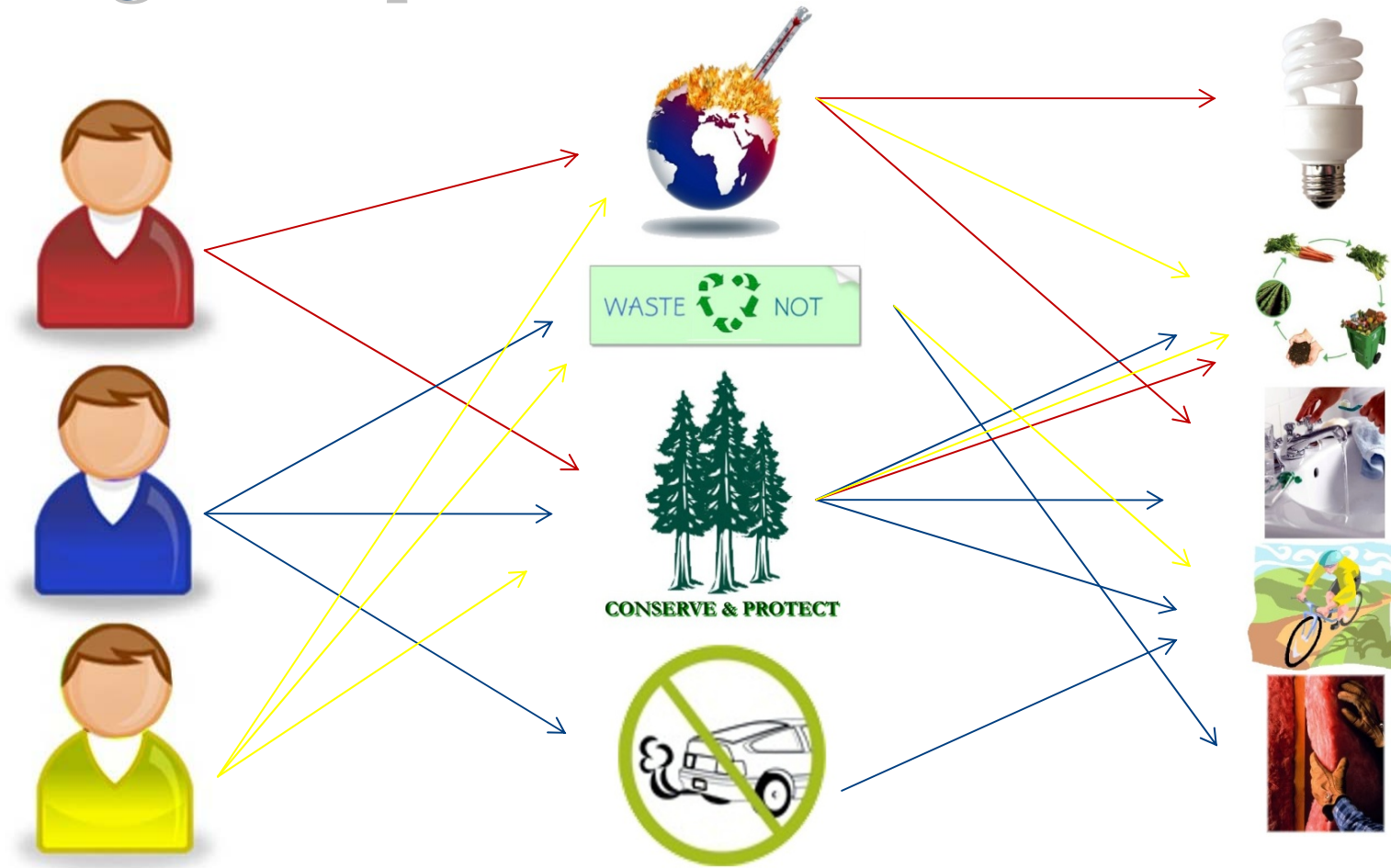
Non-Standard Behaviors

- Reusing water to wash fruit
- Unscrewing light bulbs
- Cooking food in microwave or on outside grill instead of using stove or oven
- Going to bed early
- Doing things manually instead of using an appliance

Standard EC Behaviors

- Taking short showers
- Unplugging adapters or appliances
- Opening blinds for light
- Using dishwasher or washing machine only when full

Multiple actions contribute to Californians “doing their part” to reduce use



Energy use in the home ... what “saves” energy

- Need to expand the list of actions to include more energy saving actions and measures

Current List

- Unplug or Turn Off Appliances
- Donate to Sierra Club
- Bike to Work
- Open Blinds for Light
- Take Shorter Showers
- Only Wash Full Loads

Potential List

- | | |
|---|--|
| <input checked="" type="checkbox"/> Weather-strip Doors & Windows | <input type="checkbox"/> Install Solar Panels |
| <input checked="" type="checkbox"/> Recycle | <input type="checkbox"/> Purchase EE Appliances |
| <input checked="" type="checkbox"/> Install Drapes on Windows | <input type="checkbox"/> Install Double-Paned Windows. |
| <input checked="" type="checkbox"/> Take Public Transportation | <input type="checkbox"/> Clean Refrigerator Coils |
| <input type="checkbox"/> Install CFLs | <input type="checkbox"/> Use Low-Flow Shower Heads |

Most believe they are “doing everything they can” because...

1. ...they cannot readily determine what contributes the most to their energy use.
2. ...they assume that new or smaller is energy efficient, or believe EE is wasteful
3. ... their list is short and they are not aware of “smarter” energy use trade-offs or actions they could be taking to reduce their overall usage



Motivations and Barriers

There is a wide range in household approaches to managing energy

Actively Concerned



NAME	RELATIVE ACTIVE CONCERN WHEN COMPARED TO OTHER HHs	MOST CITED MOTIVATIONS
Highly Educated, Action-Oriented	Energy Efficiency:++++ Energy Conservation:+++ ENVIRO:++++ USAGE: Moderate	Environmental & Planetary Awareness Regard for Future Generations Avoiding Waste
Savers by Principle	EE:+++ EC:++++ ENVIRO:+++ USAGE: Least	Avoiding Waste Environmental & Planetary Awareness Saving Money
Pragmatic Savers	EE:+++ EC:++ ENVIRO:+++ USAGE: Moderate	Saving Money Environmental & Planetary Awareness Avoiding Waste

There is a wide range in household approaches to managing energy

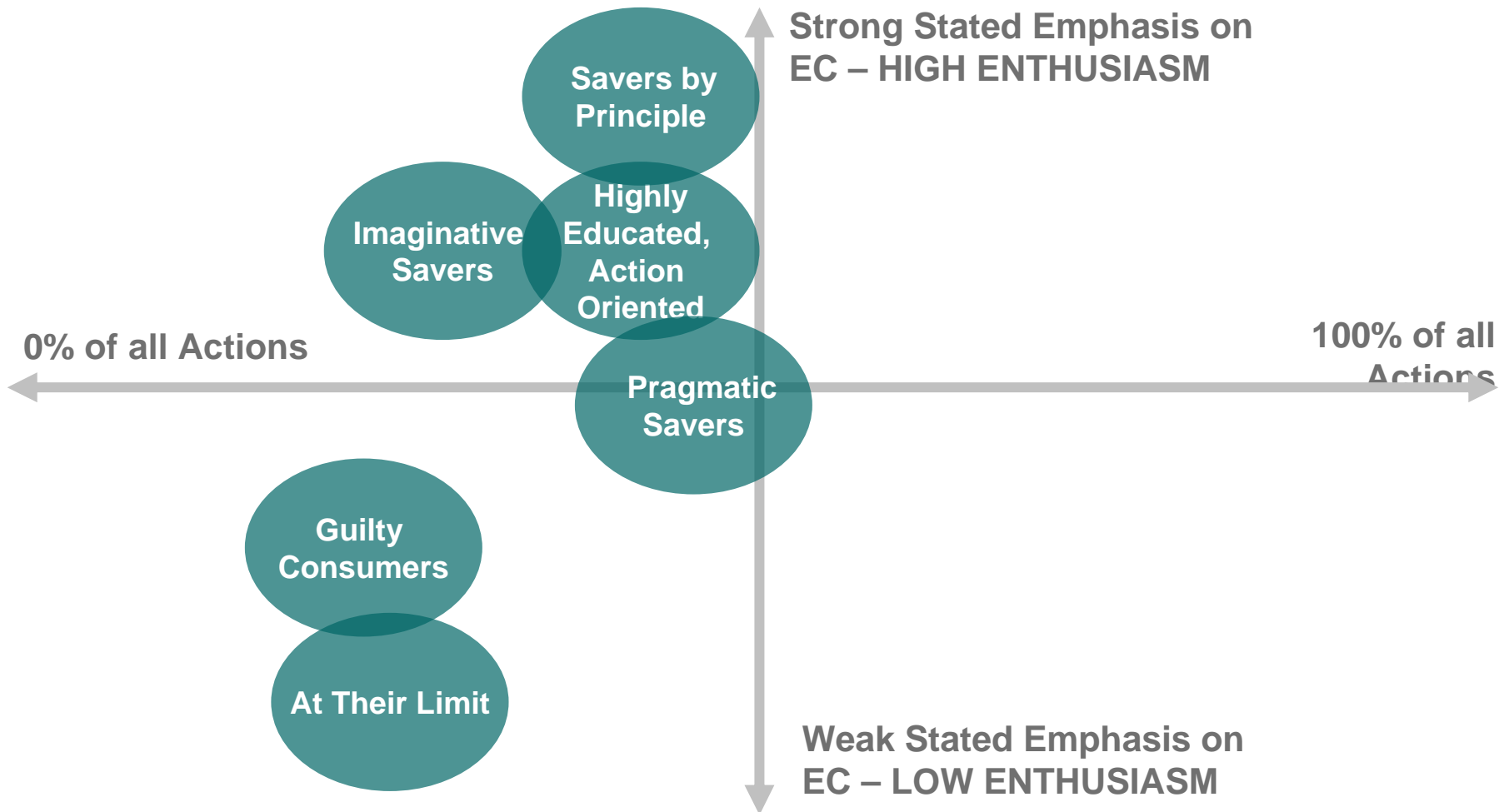
Actively Concerned

NAME	RELATIVE ACTIVE CONCERN WHEN COMPARED TO Other HHs	MOST CITED MOTIVATIONS
Imaginative Savers	EE:++ EC:+++ ENVIRO:+++ USAGE: Moderate	Environmental & Planetary Awareness Saving Money Avoiding Waste
Guilty Consumers	EE:++ EC:++ ENVIRO:+++ USAGE: Most	Environmental & Planetary Awareness Avoiding Waste Saving Money
At their Limit	EE:+ EC:+ ENVIRO:+ USAGE: Minimal	Saving Money Environmental & Planetary Awareness Societal Pressure

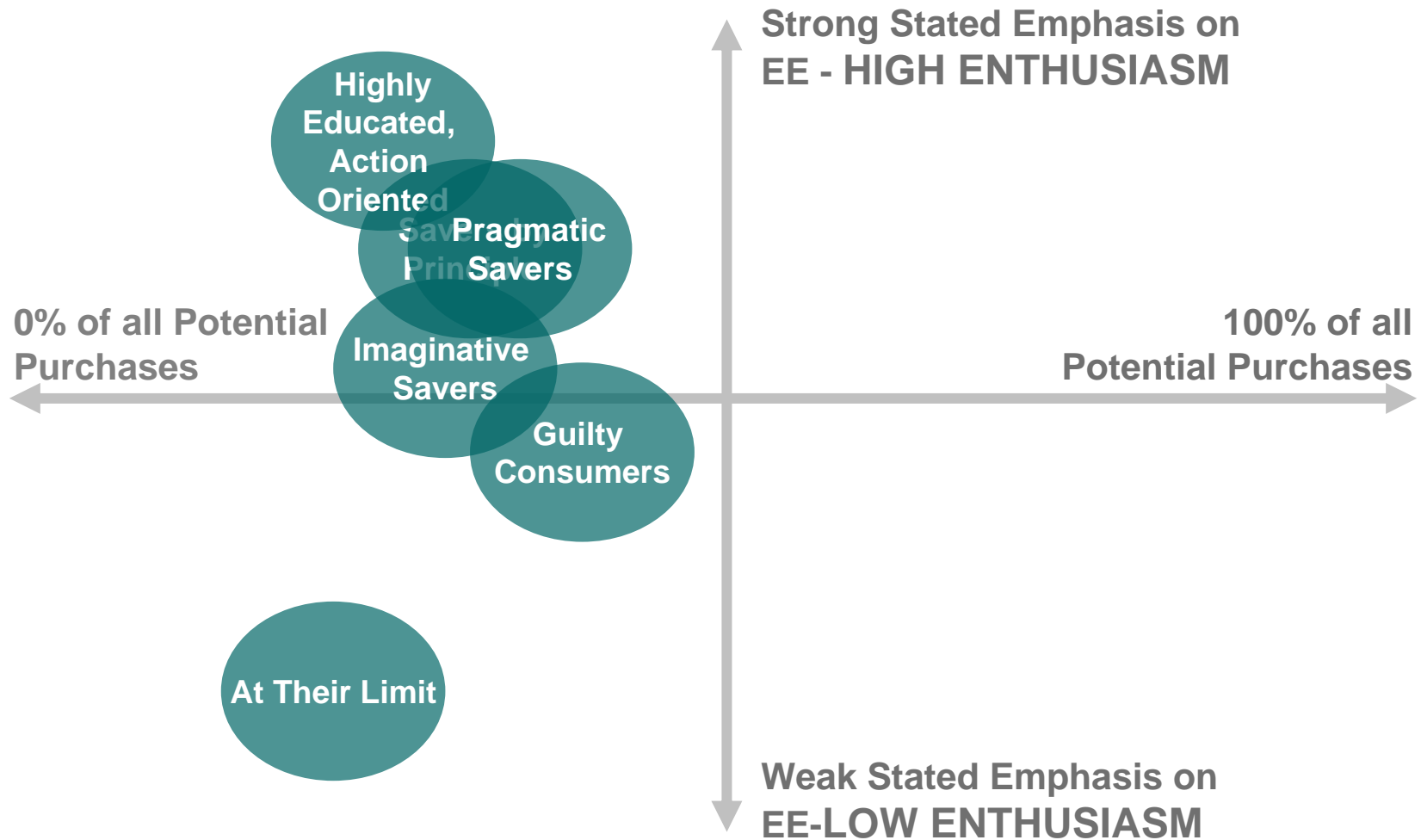
Most households behave similarly when saving energy (EE and EC) despite stated motivations

- Stated motivations and stated desire are weakly linked to actual EE and EC actions in the home
- When we compare the behaviors of households to one another, most exert a similar level of effort

Most households behave similarly despite stated motivation - CONSERVATION

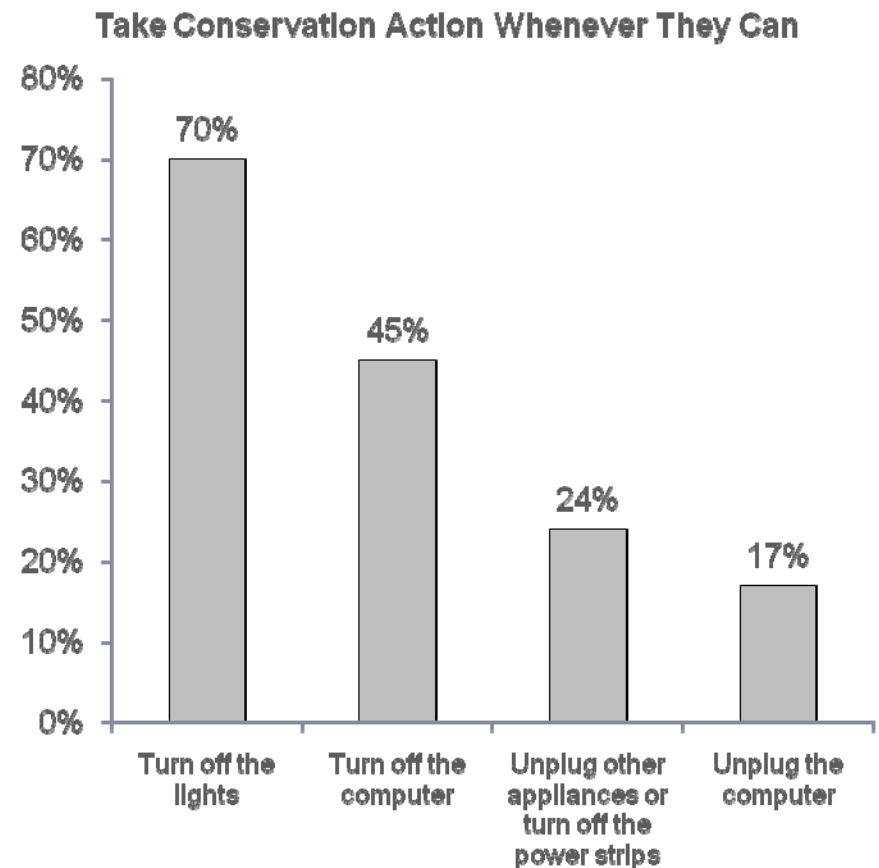
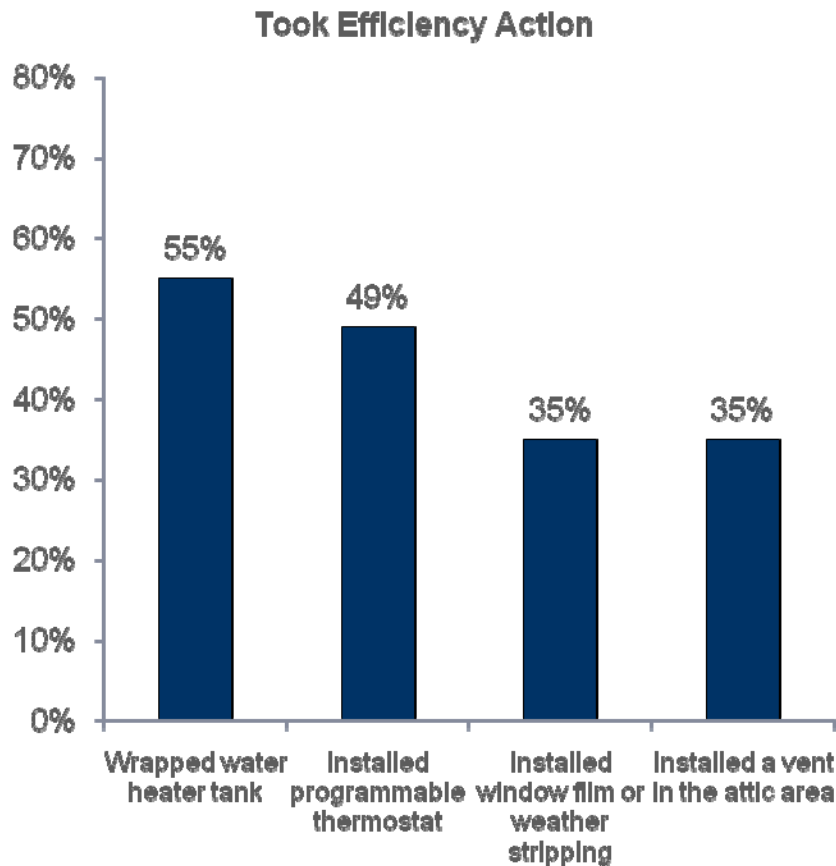


Most households behave similarly despite stated motivation - EFFICIENCY

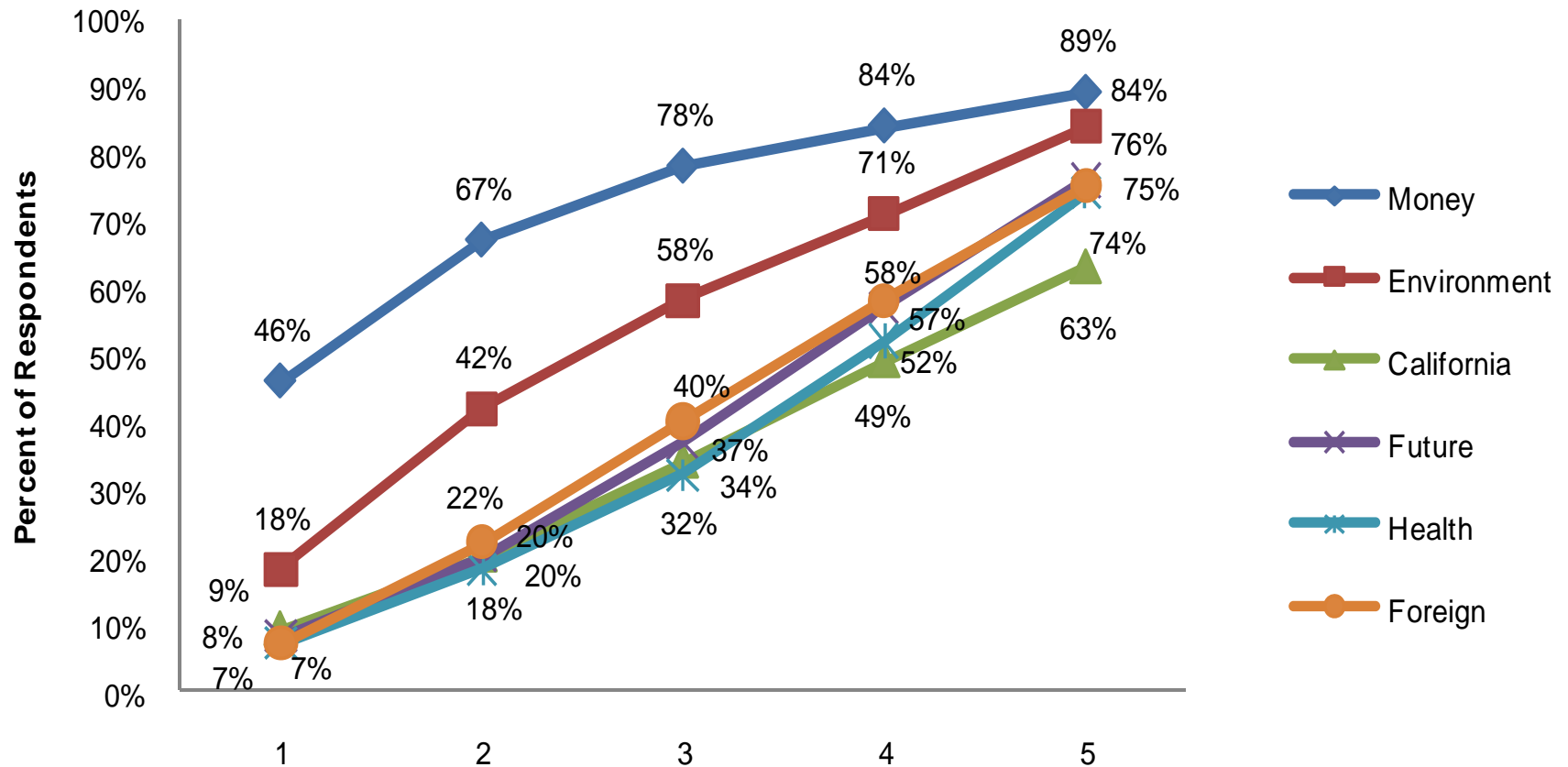


Each household has the potential for movement

- Households differ greatly in their absolute ability to take action, but no single household is doing everything they can



Most respondents indicate that saving money and saving the environment matter most



However, commonly cited motivations are weakly linked to energy saving action

- When asked “what motivates you” to save energy, respondents are thinking much larger than specific EE or EC actions
- When digging deeper, these motivations do not inspire specific actions
 - Inspire lifestyles generally
 - Do not translate into EE or EC actions

Why saving money is only weakly linked to motivating action

- Energy costs are low and a small portion of overall spending, thus the cost incentive is weak for energy reduction
- Most households are willing to pay for their usage
 - If costs increase, customers will adjust behavior to get over the “shock” but don’t “move beyond” immediate action
- ROI messaging requires an observable “delivery” on its promises

Why saving the environment is only weakly linked to motivating action

- The relationship between household energy use and the environment is not obvious like other resources
- Saving the environment requires multiple actors
 - “It’s not my responsibility”
 - Household effects are viewed as relatively inconsequential
- There are multiple options available, not just EE or EC, to live an environmentally responsible life

Waste emerged as the most promising motivator

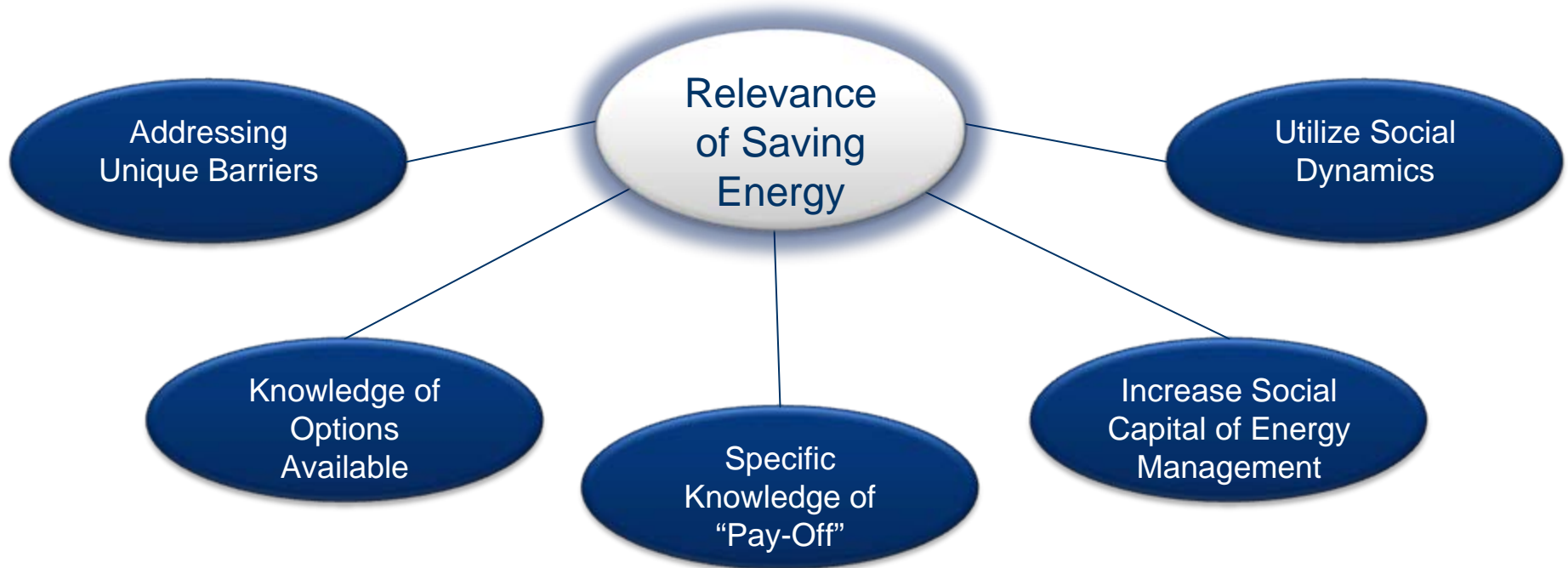
- Most respondents frequently reference waste and avoiding waste is the most promising motivator
- However, there is an energy efficiency “waste” paradox
 - Energy “waste” is not visible
 - Energy efficiency is a consumptive choice, so it is often viewed as wasteful outside of POP
 - Net energy impact is unclear
 - Buying something new does not equal saving

EE and EC are consistently low priorities for most households

In order to move households to action, the CPUC must increase the *relevance* of energy efficiency and energy conservation by addressing barriers, not motivations

Increasing the relevance of EE and EC requires addressing barriers

- EE and EC need to matter more than other “feel-good” lifestyle decisions



EE and EC have different barriers to action and should be treated as different “asks”

- Energy Efficiency
 - Money: Households are generally unwilling to spend outside of POP or more at POP
 - Feel they have “done enough” to save
 - Product barriers: Wide range of energy efficiency products and services have unique barriers associated with the product



EE and EC have different barriers to action and should be treated as different “asks”

- Energy Conservation
 - Inconvenience: Conservation actions are often viewed as inconvenient if simple solutions are not obvious
 - Want a “switch” solution
 - Material gain (e.g. savings) is not immediately evident, like turning off the lights
 - Household dynamics dictate the frequency and consistency of behavior adoption



Households cite money first, but lack of information emerges as the greatest barrier

Households are generally unaware of:

- *What to Do:*
 - the breadth of EE and EC actions available
- *What I Gain:*
 - The relative ROI on EE and EC actions
 - How EE and EC stack up against other lifestyle choices
 - Non-energy benefits of EE and EC compared to other lifestyle options

Barriers matter more than motivations

- Motivations such as saving money, the environment, and avoiding waste do not inspire **specific and direct** action
- Outreach must overcome barriers, not leverage motivations, to make EE and EC matter to households
- Increasing the relevance of EE and EC requires clearly communicating options and pay-off
- EE and EC have unique barriers and must be addressed as different “asks”
 - EC is a lifestyle choice
 - EE is a product choice



Household Dynamics

Household influences play the greatest role in mediating behavior

- Above all influences, household actors drive behavior
- Actors in the home are most affected by energy decisions
- Household nags, offenders, and competing beliefs drive action



AUDIO CLIPS

Respondents in their own words...
Social and household influences

Next to household actors, personal experts and norm setters can be influential

- For EC, norms can be set among friends and acquaintances
 - Sustained changes of those “influenced” requires constant contact
- For EE, a well-known lay expert can play a pivotal role in decision making

Community influences bolster egos, but do not mediate behaviors

- Community influences play a prominent role in energy-related awareness and actions
- Respondents believe they are aware of their actions relative to others outside of the household
- However most respondents indicated that they are generally doing as much, or more, than others



Energy efficiency and conservation lack visibility and social capital

- EE and EC are not “visible” contributions to identity
- EE and EC lack the social capital of other lifestyle choices



After personal relationships, all information sources have the potential to inform action

- Elements that enhance trust
 - Personal contact
 - Regulator/watchdog status
 - Well-intentioned
 - Expertise/based in research

- Elements that diminish trust
 - Profit motives
 - Biases
 - Political agenda
 - Incompetence

Each information source has pros and cons

Information Source	Example Quote Reflecting More Trust of the Source	Example Quote Reflecting Less Trust of the Source
The U.S. Government/ Department of Energy	"They investigate the energy problem and will hopefully be honest. I figure they investigate it more..."	"(It's) hard to trust the government when so much of it is political, look at what happened during the Bush years, they threw away science."
The State of California	"I should hope that their investigation would be more truthful. They don't exaggerate. They tell it like it is."	"I don't trust the state of [California]; the state is in such a mess..."

Each information source has pros and cons

Information Source	Example Quote Reflecting More Trust of the Source	Example Quote Reflecting Less Trust of the Source
Respondent's Local Utility	"Because they [the utility] are providing the service direct to me... They are the closest. They are the ones that have the direct contact with us... They are the boots on the street."	"They want you to keep your heat up too high and your cooling down too low; they have a conflict of interest, they have a profit motive."
News Media	"...they're trying to do a good job of reporting."	"They kind of get it wrong a lot"

Among all sources, IOUs stand out as the most cited source for information

TOP 5 MOST TRUSTED INFORMATION SOURCES

My electric or gas utility	34%
The Department of Energy	12%
People I know who have already saved energy	11%
ENERGY STAR	9%
“Green” companies	9%

TOP 5 LEAST TRUSTED INFORMATION SOURCES

Retailers	25%
The State of California	14%
Specialty contractors	11%
News Media	11%
Information brought home from school by my children	10%

Spanish-speakers trust IOUs

- Spanish-speakers were aligned on what organizations were the most trustworthy and untrustworthy
 - Trusted, Public Utilities:
 - Easy to communicate with
 - Established rapport
 - Experts on energy
 - Not trusted, The U.S. Government:
 - Impersonal
 - Powerful
 - Secretive

Key take-aways

- Saving money and saving the environment are weak motivators to action, despite how frequently they are cited by households
 - Marketing strategy should carefully consider the use of these motivators when communicating on energy efficiency or energy conservation
- Barriers matter more than motivations when moving households to action
 - Marketing must take on barriers directly to increase the relevance of energy efficiency and energy conservation in the household
- Household dynamics have the greatest influence on behavior, above community and information sources
 - Marketing needs to identify ways to capitalize on household relationships to generate norms

Overview of 5 key take-aways

- **The majority of households that we talked to felt that they were “doing everything that they can” within the realm of their control**
 - *Marketing strategy needs to find ways to overcome the feeling that “I am doing everything I can”*
- **Semantics matter**
 - *When designing a marketing strategy and campaign, need to really think through the language that we use to communicate to individuals*
- **Saving money and saving the environment are weak motivators to action, despite how frequently they are cited by households**
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Questions?

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