

# Recommendations for Alaska Energy Efficiency and Conservation Public Education and Outreach

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Alaska Energy Authority

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# Executive Summary

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The purpose of this project is to provide research-based recommendations for the creation of an education and outreach plan to promote successful energy efficiency and conservation behavior change in Alaska. Reducing energy consumption through greater energy efficiency and conservation (EE&C) can help to create healthy economies and sustainable communities in Alaska. While financial incentives and government buy down of efficient products are important tools in implementing efficiency measures, some measures can also be implemented using private funds and through simple conservation. Speaking to energy consumers about their behavior in a way that moves them to take action is one way to create private investment in energy efficiency and conservation.

There is a plethora of specific energy efficiency and conservation measures that can be taken to reduce consumption, save money, extend the life of our natural resources and otherwise reduce the environmental impacts of energy use. The research conducted for this project helped to identify a short list of energy reduction behaviors that Alaskans will be most willing to engage in and to develop a messaging framework that will be most likely to move them to adopt those behaviors.

The project used both primary and secondary data and information sources to evaluate potential EE&C behaviors, and to design an effective messaging framework and education and outreach campaign. Primary information sources included direct input from rural and urban Alaskans through community meetings, stakeholder and key informant interviews, a statewide telephone survey, and polling to test potential messages. Secondary sources were identified through a comprehensive literature review that brought together best practices and case studies from within and outside Alaska to provide a base of knowledge about what has been successful in moving consumers to change their behavior in both the EE&C and other industries with particular focus on the healthcare industry.

## **Guiding Principles: Learning from other markets and industries**

Researching best practices from Alaska and around the world provides valuable guidance to future efficiency and conservation efforts. Communities, states, and even countries across the globe are successfully reducing energy consumption through behavior change campaigns; it would be ill-advised not to consider the lessons these more mature markets have to offer.

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*For many consumers there is a disconnect between energy use behaviors and energy consumption.*

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Studies show that consumers in general overestimate the impact of energy conservation behaviors and underestimate the impact of efficiency measures. Here, and throughout this report, conservation refers to those energy saving activities that require consumers to make an active choice to reduce energy use. For example, reducing the temperature and putting on a sweater is conservation as is turning off the lights when leaving the room. Efficiency refers to technology solutions that reduce energy use but maintain level of service; for example, an Energy Star refrigerator uses less energy than older models but there is no difference in how well the food is kept cold.

Individuals also have a limited understanding of the relative size of energy use associated with different activities and functions. Consumers who pay their own utility bills have the highest direct economic incentive to behave in an energy efficient way, yet by and large they still lack basic information about how much energy they consume.

This disconnect between behavior and consumption holds true in Alaska, where a 2008 statewide survey of households showed that most people don't even know how much energy they use per month, let alone the energy use associated with specific appliances and behaviors. Not surprisingly, this disconnect is more significant where energy costs less.

In urban Southcentral Alaska, consumers enjoy relatively inexpensive natural gas for both electric generation and home heating, and they display a very limited knowledge of their personal energy consumption and of the behaviors that impact that consumption. In rural communities where energy costs are high, awareness is greatest around home heating fuel consumption. Not only is heating oil expensive in rural markets, but the correlation between conservation behaviors and fuel consumption is immediate and easier to understand.

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*General education is important, but consumers need a clear path to follow in taking EE&C measures*

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Consumers need more than just information! Many entities (including utility companies, government and non-profits) are guilty of pointing to information sharing and calling it an energy efficiency program. Information sharing is important but is ineffective alone. Consumers need a clear "path to completion" to be successful in adopting new EE&C measures. Once consumers have been both educated and convinced that the desired behavior is in their best interest they still need to be shown the immediate next step(s) to take action. Creating easy pathways for consumers is an established and proven industry best practice.

In Alaska, the Home Energy Rebate program provides a good example of a successful local program that provides consumers with clear steps to completion. While the HER program also provides a financial incentive, other program components like providing a clear path and timeline have been critical to its success.

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*To be effective, it matters how the message is framed*

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Messaging will be most successful in promoting behavior change when it considers audience values, self-perception and inclinations. Messages must speak to consumers in a way they understand and be framed so they feel they should care. Effective messages around behavior change will incorporate the following six principles of persuasive messaging:

- **Reciprocity:** *If I give you something, you will feel compelled to give me something in return (e.g., free samples at the store).*
- **Liking:** *Consumers must like or wish to emulate the person or sponsor delivering the message (e.g., use of celebrities, a local respected elder, etc.)*
- **Social proof:** *Individuals are more likely to do something if they know others are doing it (e.g., lots of people in your community are already participating).*
- **Authority:** *An expert or person in a position of authority endorses the product or behavior (e.g., advertisements for toothpaste that feature a man in a dentist coat).*
- **Commitment and consistency:** *Small commitments lead to larger commitments (e.g., car salespeople get potential customers to name the color they are most interested and work from there to final sale).*
- **Scarcity:** *The possibility of losing out on something due to short supply can be very motivating (e.g., airlines advertising “only two tickets left” at a given price point).*

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*Many programs have good intentions, but fail to execute*

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Programs that recognize the connections between personal motivations, desires, interests and experiences are more likely to succeed. Current research suggests the following strategies to create effective programs:

- Clearly identify the behaviors to change and make them attainable
- Develop people-centered initiatives
- Understand the barriers
- Appeal to people’s emotions
- Provide clarity, data and commonality
- Make the program opt out or providing a clear and easy path completion
- Develop programs with consumer input on the front end to reduce costly program adjustments later.



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*Localize the message as much as possible when targeting rural Alaska*

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Urban Alaskans closely resemble our energy-consuming counterparts in the Lower 48, and rural Alaskans are not so dramatically dissimilar that many of the best practices employed in other places would not also work in those communities. There are some important differences, however:

- Rural Alaskans are perhaps most different in that they are already highly engaged in energy efficiency and conservation. The high cost of energy and low household income in most rural communities means that rural Alaskans have been practicing efficiency and conservation out of necessity for some time.
- The messenger is key! Rural communities must trust the messenger. In many places this means getting buy-in from community Elders/leaders and using community members to deliver the message (including hiring local people in order to build trust, create economic activity and goodwill). Rural programs often require more time to build trust than is needed in urban places.
- Engaging the whole community from youth to elders is important in very small communities. Events that offer activities for everyone create a sense of “doing” for the greater good.
- Education and outreach campaigns should incorporate regional modification, such as using local language, local personalities and entities, and appropriate delivery mechanisms. The level to which campaigns can be localized may depend in large part on the level of funding available.

## **Targeting Outcomes: Identifying behaviors with the greatest potential to reduce energy**

In addition to reviewing the literature and analyzing best practices, the project team held community meetings in Anchorage, Juneau, Fairbanks, Bethel and Kotzebue, conducted a statewide telephone survey with representative samples of both rural and urban Alaskans, and interviewed stakeholders working in the field of energy efficiency and conservation in Alaska’s commercial and residential markets.

Information compiled through all of these activities was used to generate and vet a list of desired energy-reducing behaviors to target throughout the state. Considering such factors as cost of adoption, current saturation, public awareness, and perhaps most important, consumer interest and preference. The following EE&C measures appear to offer the greatest immediate potential for changing energy use behavior in both urban and rural Alaska:

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*Behavior 1: Switch to efficient lighting*

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Moving to efficient lighting sources can have important energy saving implications in both commercial and residential settings. There is widespread awareness of the benefits of efficient lighting throughout the state and in rural communities in particular. By and large, Alaskans are

interested in efficient lighting as a way to reduce their energy bills. Efficient lighting is affordable, easy to adopt, and widely accessible. Barriers to this behavior are primarily based on misconceptions about, or improper use, of the technology and can be readily addressed through education.

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*Behavior 2: Install and use programmable thermostats*

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Alaskans recognize that in our cold climate, thermal energy consumption is often the largest utility cost in a household. High and sometimes unpredictable heating costs create a significant burden on Alaska households. The installation and use of programmable thermostats is an efficiency measure with great energy saving potential because of the relatively low saturation rate (i.e., the number of households currently using the devices), low implementation cost, ease of use, and level of consumer interest.

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*Behavior 3: Get an energy audit*

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Recent efficiency efforts conducted primarily through AHFC, AEA, and their contractors have increased public awareness of the benefits of an energy audit and the potential savings associated with implementing recommended efficiency measures. Both commercial and residential energy audits provide direct one-on-one education from a trusted source. There are few opportunities for this type of education, but where it exists it is highly effective. Audits also provide a clear path for consumers to follow to implement a range of efficiency measures designed for their specific building and circumstance. Additional benefits include flexibility in type of efficiency measure (e.g. lighting retrofit, building envelope, etc.) and availability of trained workforce.

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*Behavior 4: Replace and renovate right*

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Many of the efficiency measures that promise the highest return also come with a higher up-front cost. A large initial investment creates a significant barrier to implementation. However, when consumers are already at the point of replacing a major appliance or renovating an older building, they need only consider the incremental cost associated with a more efficient option, rather than weighing the entire cost of the purchase or renovation. The greatest opportunity for promoting higher cost efficiency measures is at the point of replacement or renovation. Financial rebates can also help influence consumers decisions about purchase of efficient models and materials but again, unless the financial incentives are substantial they are unlikely to be effective if the consumer is not already at the point of replacement or renovation.

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*Behavior 5: Reduce hot water heater temperature setting to 120 F*

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Whether they own or rent their homes, Alaskans set hot water temperatures well above an efficient level in both urban and rural Alaska. The limited level of awareness about the relationship between water and energy use points to an opportunity for promoting greater energy efficiency through

education on this issue. Reducing hot water temperatures is an attractive efficiency measure because it has little to no impact on a consumer's level of service, comes at no cost, extends the life of the appliance, and requires action just once. Targeted outreach to vendors and contractors could further ease implementation.

## Motivating Change: Framing messages for greater effectiveness

Messages targeting each desired EE&C behavior were tested using a series of different frames. "Frames" in the context of messaging about energy efficiency and conservation measures refers to how we present the benefit of the desired behavior. The most effective messages were ones employing a social norm-monetary frame. Other messages that tested well used a monetary-gain frame that included the idea of personal control over consumption, and messages with a future-conservation frame.

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### *Frame 1: Social norming-monetary gain (overall most effective)*

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Example: "Your neighbors have already saved around \$50 per bulb on their energy bills by installing efficient lighting. You can too!"

Social norming-monetary messages were overall considered the most effective in eliciting the desired response. This means that the aggregate of all responses rank these messages as the top choice. Even under scenarios for specific target behaviors when social norming-monetary messages were not the top choice, they always ranked a close second. Additionally, social norming-monetary messages tested well across gender, age and geographic differences.

Social norming messages promote the idea that others within a given peer group or community are already participating in the desired behavior and in this case already seeing monetary benefits from that behavior. Messages with a social norming and monetary gain component were more effective than messages that spoke to monetary gain alone. This finding is consistent both with industry best practices and with input from the community meetings.

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### *Frame 2: Monetary gain-control frame (most effective for repair and renovate right, reduce hot water temperature settings targets)*

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Example: "You've got the power to save money. Take the first step by installing efficient lighting today!"

Messages with the monetary gain-control frame were the top choice when tested for two behavior targets: repair and renovate right, and reduce hot water heater temperature settings. Statewide survey respondents and community meeting participants indicated that instability and the unknown nature of utility prices provide strong incentive for efficiency. Some Alaskans are shifting their focus from reducing costs to simply controlling cost volatility and efficiency is one way to meet this goal. However, most consumers are still focused on cost reduction. A message about controlling costs speaks to both groups, those concerned about future volatility and those concerned about current price.



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*Frame 3: Future-conservation frame (most effective for programmable thermostat target)*

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Example: “Conserve now for the next generation!”

Messages with a future-conservation frame tied for the top choice in message effectiveness when tested for the programmable thermostat target. These messages were often ranked second and third for message effectiveness under other targets.

Messages that were less effective included those with environment-gain and straight gain messages. The environment-gain framed messages describe how the desired behavior will have an improving impact on the environment. The gain only message tested did not explicitly name the benefit but instead described generic “savings” (energy or money).

In general, messages with a gain frame that did not include a component of personal control did not test well. Messages that asked consumers to change their behavior for environmental reasons also failed to motivate.

## **Choosing Media: Learning where Alaskans get information about energy efficiency and conservation**

Alaskans rely heavily on Internet search engines to find information on energy efficiency and conservation. Nearly three-quarters of Alaskans who were asked this question said they rely on Internet search engines for this type of information. State and other government websites, product vendors, and friends and family are other places EE&C content is found, but none of them a significant portion of the time.

Most Alaskans get their news from multiple sources. Nearly half of those polled get at least some of their news from national news media (both newspaper and television), while another two-fifths use local print and broadcast media as their primary sources of news information. The Anchorage Daily News is used as a source by Alaskans outside of Anchorage, as is KTUU. Nearly a third of Alaskans polled listen to public radio (the number is higher in rural communities). Other popular news sources include word of mouth, friends and family, and a variety of Internet sites.

## **Defining Audiences: Discovering who makes the decisions around energy use**

According to telephone survey respondents, in both urban and rural places men are slightly more likely to be the decision makers about large home purchases and to pay the utility bill. These differences are not significant enough to suggest that advertising be directed at a specific gender; both men and women should be targeted. Not surprisingly, the average age of the primary decision makers/utility payers is higher for owners than for renters and higher for urban respondents than rural.

Marketing strategies should target the people who make the decisions. According to the statewide survey of EE&C behavior, men and women are equally likely to make decisions in Alaska about

purchases and practices related to energy use. Regardless of gender, most decision makers are in their mid-40s to late-50s, and owners are both more likely and better able to implement energy efficiency and conservation measures than Alaskans who rent their homes or apartments. In the private commercial sector business owners, building managers and finance department management are decision makers who should be specifically targeted; large energy consumers should be given individualized attention with direct marketing that speaks to their particular business environment.

Other clear targets for EE&C messaging include vendors who sell products or services associated with the desired behaviors. For example, plumbing and heating companies should be a primary target for messages related to hot water heater settings, and managers of large commercial buildings should be targeted for messages related to efficient lighting in commercial space.

Target audiences for EE&C measures:

- Individuals in their mid-40s to late-50s
- Homeowners/landlords
- Business owners/building managers
- Vendors of efficiency products including plumbing and heating and big box stores for do-it-yourselfers (Home Depot, etc.)



# Literature Review:

## EE&C Behavior Change in Alaska

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Alaska is unique in many ways, including some of the ways in which we use and think about energy. There are strong natural incentives for energy efficiency and conservation in the far north, chief amongst them the cold climate and some of the highest energy prices in the nation. Basic comfort dictates that buildings are more efficient in our coldest communities and harsh economic realities in some rural places necessitate reducing household cash expenditures wherever possible. Additionally, with the exception of towns and cities that heat with natural gas, individual homes and businesses can often physically see the amount of heating fuel they are using, resulting in a customer base that has at least some awareness of magnitude of their fuel consumption.

Despite these and other compelling reasons to act in as energy efficient a way as possible, we still fail to fully realize the potential energy and monetary savings associated with energy efficiency and conservation. One reason may be some of the unique disincentives to efficiency and conservation found in Alaska.

Power Cost Equalization (PCE) is a government program that subsidizes electrical energy costs in rural Alaska, diminishing a natural incentive to use less. There are home heating subsidies in place in some rural places where energy costs are very high, ranging from basic Low Income Energy Assistance Program (LIHEAP) to borough government subsidies on heating fuel. There are also large numbers of housing units in both urban and rural communities in which the utility bills are not paid directly by the occupant. Regional housing authorities and the military often directly pay utility bills on the housing units they manage, distancing users from their energy use. It is important to note that urban Alaska households use, on average, significantly more energy than their rural counterparts. This is a fact that most urban Alaskans are not aware of but most rural residents are. The average household in rural Alaska uses less than 300 kWh/month of electricity, which is less than half the national average according to the Department of Energy.

Considerable effort has been paid to changing the preferences and behaviors of end consumers to achieve greater energy efficiency and conservation gains. While most of these efforts and much of this research has been conducted outside of Alaska, the findings are valuable in informing the development of behavior change programs in Alaska. The literature review and review of best practices that follows draws on research from outside, as well as experiences within Alaska related to energy efficiency, and health and wellness programs that target behavior change.

## Program Development & Communication Best Practices

### Observation #1

#### **Consumers are disconnected from energy use behaviors**

In order to effectively engage end consumers in reducing their energy consumption, a mix of energy efficiency (installations of more efficient equipment) and conservation (curtailing the use of energy) actions are necessary.<sup>1</sup> However, studies show that consumers do not accurately predict how energy intensive their choices are. In a recent study 55 percent of consumers believed that energy conservation, in particular turning off lights, was the most effective way to reduce home energy use.

This is in contrast to only 12 percent of respondents who indicated installing more energy efficiency measures would yield greater savings.<sup>2</sup> Additionally, while respondents understood that a compact fluorescent bulb consumed considerably less energy than their clothes dryer, they grossly underestimated how much energy their dryer consumed.<sup>3</sup>

### Observation #2

#### **Education is important but consumers need a clear path**

Many programs provide education to end consumers on energy behaviors, but recent studies have illustrated that education alone does not motivate consumers to reduce energy consumption.<sup>4</sup> A study evaluating the impact of real-time meters in single family residences found that consumers with real-time meters were not using them to make energy decisions.<sup>5</sup>

<sup>1</sup> Attari, et al (2010)

<sup>2</sup> Attari (2010); McMakin (2002)

<sup>3</sup> Ibid

<sup>4</sup> Simon (2010)

<sup>5</sup> McNall (2011)

## Connecting & Educating

### In-state lessons learned & best practices

The disconnect between energy use and behavior bears true in Alaska, where a 2008 statewide survey of households that included questions about energy consumption showed that most people don't even know how much energy they use per month, let alone the specific energy use associated with different appliances and behaviors.

This disconnect is particularly true in urban South-central Alaska where consumers enjoy relatively inexpensive natural gas for both electric generation and home heating.

There is evidence that consumers need a clear path to reduction in both electric and home heating.

When consumers don't have a very clear idea of the next step, they are likely to stop moving altogether. Communicating a clear path to completion is essential.

Electric energy: There is currently a significant effort underway to install real time meters in rural Alaska homes. Real time meters can raise awareness, though there is recognition even amongst program staff that the meters eventually become viewed as just another appliance and people will begin to ignore them after a few months. Clear and easy next steps must be provided.



While the intent is that real-time feedback will provide consumers the motivation to change their behaviors, they have not demonstrated the anticipated success because consumers are not provided with a clear path on how to reduce their energy consumption. In fact, short of turning major appliances off, consumers did not know how to positively affect their usage.<sup>6</sup>

### Observation #3

#### Framing matters

It is important to address the target audience using language they understand and with which they connect.<sup>7</sup> Language is an important part of framing the behavior change message. Framing is the manner in which the information is presented; when done effectively it can shift thinking about the personal relevance of the issue at hand, and assist an audience in understanding and discussing an issue.

However, framing can also hinder a message. People who are disinclined to believe what is being promoted might only look for evidence that supports their alternative belief<sup>8</sup>, absolve themselves of additional changes<sup>9</sup>, or disassociate with the message by claiming a different identity.<sup>10</sup> Therefore, it is imperative that messaging is crafted that considers audience values, self-perception and inclinations.<sup>11</sup>

#### Persuasive messaging can be effective

Robert Cialdini is a leading psychological expert on persuasive messaging and has identified six universal principles in creating effective behavior change messaging that have been shown to motivate action to do the targeted behavior. These

## Creating Pathways

### In-state lessons learned & best practices

Electric energy represents such a small percentage of household expense relative to home heating that relating information from the meter to cost alone seems unlikely to be an effective motivator.

Meters might, however, reduce the occurrence of large unplanned electric bills by increasing real time awareness of use. For example, the Alaska Village Electric Cooperative reports instances in which customers run out of money for heating fuel and use their electric oven to heat the home.

The electric bill that results six weeks later is often a cause for significant concern to the customer; creating awareness about the amount of energy being used at the time of use in these circumstances might reduce such practices.

Home heating: The Home Energy Rebate program has been successful in motivating consumers to implement energy efficiency measures in their homes throughout the state.

The program provides fiscal incentive through a rebate to home owners and has steadily increased education and outreach material available in an effort to create a clear path to completion for customers.

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<sup>6</sup> Ibid

<sup>7</sup> Dougherty (2010)

<sup>8</sup> Pike (2009); Marshall (2009); Gertner (2009); Gilbert (2006)

<sup>9</sup> Harding (2010); Marshall (2009)

<sup>10</sup> Marshal (2009); Heath (2010)

<sup>11</sup> Pike (2009); Allen (2010); Cialdini (2008); Dougherty (2010); Heath (2010)

principles are as follows:

**PRINCIPLE #1: RECIPROCITY**

Reciprocity involves giving your audience something small that engages them and serves as a “trigger” that entices them to repay in kind what they receive.

Example: Free samples at the supermarket.

**PRINCIPLE #2: LIKING**

The deliverer of the message is nearly as important as the message itself. Having the message delivered by someone with whom the audience can personally relate or by someone your audience emulates (e.g., celebrities, local leaders) can create a sense of belonging and familiarity and move the audience towards the desired action.

*Example: Similarities such as shared values; praise; attractiveness; genuine friendship/liking.*

**PRINCIPLE #3: SOCIAL PROOF**

Individuals like to know that others who have come before them have engaged in the same behavior, especially where there is uncertainty in what the behavior/action will result in.

*Example: People go to restaurants that already have people in them; successful hotel campaign used the message that 75% of those who stayed in this room reused hotel towels during their stay.*

**PRINCIPLE #4: AUTHORITY**

Here, the focus is on having the deliverer of the message be a person in a high position or with expert knowledge who endorses the message.

*Example: Person in a dentists’ coat promoting toothpaste in a TV commercial.*

**PRINCIPLE #5: COMMITMENT & CONSISTENCY**

Asking target audiences to start small and with “public” commitments to those behaviors that they have indicated they feel positively about, and those that are “intended actions” paves the way for bigger actions tomorrow.

*Example: Car salesman asking you what color car you are interested in and moving to bigger and bigger commitments until you purchase a vehicle.*

## Creating Pathways

### In-state lessons learned & best practices

*Continued from previous page*

The program provides fiscal incentive through a rebate to home owners and has steadily increased education and outreach material available in an effort to create a clear path to completion for customers.

When the Home Energy Rebate program began in 2008 customers brought questions to program administrators in overwhelming volume; making evident the need for a better and simpler material laying out the steps necessary to complete the program.

Additionally, surveys of homeowners who received an initial rating but failed to complete the program show that frustration with the process was one reason, although not the primary reason, that they failed to complete.

**PRINCIPLE #6: SCARCITY**

The possibility of “losing” something because it is in short supply is more powerful than highlighting what you might “gain”.

*Example: “We only have five house specials left tonight.”<sup>12</sup>*

**Different frames will lead to different actions**

When crafting a behavior change message that seeks to motivate action, it is important to leverage frames that build upon Principle #5: Commitment & Consistency,<sup>13</sup> with a keen focus on starting first with smaller commitments and achieving success and then making public and verbal commitments to others. When this approach is taken, compliance to targeted behaviors increases and people tend to make bigger commitments.<sup>14 15</sup>

Further, in general, messaging using “loss” framing has been shown to be more effective than “gain” framing in motivating people to act<sup>16, 17, 18</sup> “Gain” frames tend to be inspirational and appeal to an audience seeking to advance and maximize their impact or to participate in screening type behaviors.<sup>19</sup>

A “loss” frame tends to focus on prevention and appeals to those seeking to maintain the status quo and minimize or eliminate losses. In the world of energy efficiency and conservation, a “gain” frame can be tied to building audits that inform the audience how to improve and a “loss” frame can be tied to weatherization or tune-up programs that help to minimize or eliminate losses.

**Observation #4**

<sup>12</sup> Allen (2010); Cialdini (2008)

<sup>13</sup> Ibid

<sup>14</sup> Allen (2010); Cialdini (2008); Gilbert (2006)

<sup>15</sup> Allen (2010); Cialdini (2008); CRED (2009)

<sup>16</sup> CRED (2009)

<sup>17</sup> Allen (2010); O’Keefe (2009)

<sup>18</sup> Ibid

<sup>19</sup> Ibid

**Framing & Incentives****In-state lessons learned & best practices**

Developing targeted frames for specific audiences is key to success in Alaska. One example of how motivators differ regionally between urban areas can be found in the survey conducted about the attractiveness of fuel pellet furnaces.

Interior Alaskans reported the fact that these furnaces would be locally produced as “Greatly increasing the attractiveness” of the product 34 percent of the time; ranking it second only to reduction in price as a variable that increases attractiveness.

Alaskans in South-central ranked local production third in variables that greatly increase attractiveness, after reduction in price and the fact that the unit has no chimney and would thus not increase insurance premiums. Both of these subsets are urban Alaskans but one community appears to be more motivated by local production (community economic development) and the other more motivated by personal financial incentive.

Rural communities are different both from urban places and from each other. Behavioral change specialists at South-Central Foundation report having to develop specific and specialized plans for each village they enter. Plans are built around what motivates the community to action and that can vary from place to place.

***However, in both urban and rural places we can see that many of the best practices developed outside are used successfully in Alaska.***

### Many programs have good intentions, but fail to execute

Personal motivations, desires, interests, and experiences drive consumer behaviors. Programs that recognize the interconnection between these variables will be more effective at engaging end consumers. A well-developed behavior change program will enable greater and lasting savings resulting from consumer behavior. Current research suggests several strategies that may be employed to engage consumers in a way that results in desired behavior changes. These strategies are presented below.

#### STRATEGY #1: IDENTIFY THE BEHAVIOR TO CHANGE

The behavior change research of Doug McKenzie-Mohr<sup>20</sup> reinforces the need to check our assumptions about what we believe individuals need in order to change their behavior. To begin, program developers need to be intentional about the specific behavior to be changed, considering in the process the likelihood of changing said behavior and the potential resulting decrease in consumption. Seeking input from the target audience on their needs, interests, and experiences will help to shape the target behavior change. Additional research supports the need for a clear path for consumers – initially with easy to achieve, prescriptive steps – as highlighted above and discussed further below.<sup>21</sup>

#### STRATEGY #2: UNDERSTAND THE BARRIERS

Through a review of the potential for energy efficiency to transform the U.S. energy economy, McKinsey & Company<sup>22</sup> found that a significant barrier to the adoption of energy efficiency in the commercial and residential sectors is people's lack of awareness of their own behavioral preferences, tendencies and resulting patterns of energy consumption. An individual's identity, customs, and

<sup>20</sup> Mohr (1999)

<sup>21</sup> Heath (2010); Fogg (2009); Ariely; Gilbert (2006)

<sup>22</sup> Granade (2009)

## Framing & Incentives

### In-state lessons learned & best practices

Delivering messages through a trusted figure is one example of an industry best practice that works in Alaska. Gaining the trust and cooperation of village Elders is critical to the success of social behavior change efforts in rural Alaska. Elders represent a trusted source; they are authorities in the community and a culturally appropriate messenger.

The Energy Wise program, a behavior change effort of RurAL CAP, employs local people and opinion leaders in order to develop relationships so that their message will be delivered from a trusted source.

A similar previous attempt by RurAL CAP relied on bringing people in from outside the community; the change to using local people has been a key to the success of the Energy Wise effort.

The Indian Health System in Alaska has learned valuable lessons about communicating who benefits from a behavior change to its target audiences.

They have found that benefit to community and future generations are more effective motivators than appeals that promote benefit to the individual.

Helping people understand the benefits of a change to the community and/or to their children/grandchildren is culturally appropriate and provides effective incentive. Promoting the benefits to individuals, particularly women, is less effective.

practices may prevent the adoption of new technologies and behavior change, regardless of incentives,<sup>23</sup> and campaigns that are designed to address these barriers to action are more effective at achieving those changes.<sup>24</sup> McKenzie-Mohr and Fogg further illustrate that the program needs to incorporate both the barriers and benefits to change by 1) gaining a full understanding of each and 2) developing appropriate strategies to address each.

**STRATEGY #3: DEVELOP PEOPLE-CENTERED INITIATIVES, PILOT TEST AND REFINE**

Senior researcher Karen Ehrhardt-Martinez,<sup>25</sup> of the American Council for an Energy Efficient Economy, suggests that programs focused on people-centered initiatives have the greatest likelihood of success. These initiatives engage individuals in a fun, motivating and dynamic way.<sup>26</sup> They make energy “visible”<sup>27</sup>. Additionally, they provide individuals with information and other resources to manage near-term consumption, and change their behaviors to achieve more long-term resource consumption goals. These initiatives are more complex than traditional engagement models that focus on one widget or one way to reach the individual. Again citing McKenzie-Mohr, programs that pilot test the effectiveness of the implemented strategies at addressing the targeted behavior are well positioned to achieve their stated objectives.

Fogg warns that pilot testing should be small and focused, to avoid attempting to tackle the veritable Mount Everest of problems and setting the program up for failure.<sup>28</sup> Focused pilot testing will provide early feedback from the target audience that should then be used to refine the program accordingly.

## Programs that Work!

### Lessons from Alaska’s Indian Health Care System

One of the most successful models for changing behaviors of individuals in rural Alaska is South Central Foundation’s Family Wellness Warriors Initiative (FWWI). FWWI aims to reduce the cycle of domestic violence, child sexual abuse, and child neglect in one generation. FWWI engages the community, develops a plan, implements the plan, and transitions out of the community while empowering local people to carry on the program/effort.

It operates on a three year model. Key applicable lessons learned and best practices from this initiative include:

Ideas need to be introduced several times before people will even consider them

Identify natural helpers or some equivalent, natural/local leaders

Time must be taken to build trust, provide trainings, and engage the community.

<sup>23</sup> Heath (2010)

<sup>24</sup> Attari (2011)

<sup>25</sup> Martinez (2009)

<sup>26</sup> McMakin (2002)

<sup>27</sup> Martinez (2009); McMakin (2002)

<sup>28</sup> Fogg (2009)



**STRATEGY #4: PROVIDE CLARITY, DATA, AND COMMONALITY**

When individuals know what decisions they can make, and have access to data to help make an informed decision, they are more empowered and can more quickly execute a strategy in a manner that ensures lasting results.<sup>29</sup> Similarly, providing common metrics, reporting tools, and approaches helps to ensure consistent communication across and within target audiences (e.g., Corporate departments), furthering one's ability to successfully execute strategies.

**STRATEGY #5: MAKE IT OPT-OUT OR PROVIDE A CLEAR AND EASILY ATTAINABLE PATH**

When consumers are overwhelmed with information and data, decision paralysis sets in.<sup>30</sup> Programs that change the "norm" or "status quo" and require people to opt-out, have much higher participation rates than those that are opt-in.<sup>31</sup> Additionally, providing consumers with clear direction on the behavior you are seeking to change, using their language, will enable them to take the leap and make the change. Consumers are not likely to make changes if they have to make too many decisions, or if they perceive the impending loss or gain as a far off possibility.<sup>32</sup> Additionally, people are much more likely to act if they feel as though they can achieve the change they are being asked to do, so it is important to start simply.<sup>33</sup> Ultimately, providing people with a path that is simple, attainable, visible, immediate, and opt-out will ensure more widespread and effective participation.<sup>34</sup>

**STRATEGY #6: APPEAL TO PEOPLE'S EMOTIONAL SIDE**

When motivating change it is important for people to know that they are not alone in their efforts and to leverage their peers in the effort.<sup>35</sup> It is important for the audience to know that their peers are engaged and to communicate what they and you are willing to do to achieve the stated goals.<sup>36</sup> While appeals about the intrinsic value of the desired behavior change may appeal to your

<sup>29</sup> Neilson (June 2008).

<sup>30</sup> Ariely; Gilbert (2006)

<sup>31</sup> Ariely; Johnson(2003)

<sup>32</sup> Gertner (2009); CRED (2009); McMakin (2002)

<sup>33</sup> Fogg (2009); Heath (2010)

<sup>34</sup> Heath (2010); Fogg (2009); Gertner (2009); Martinez (2009); Pike (2009); Johnson (2003)

<sup>35</sup> Cialdini (2008); Pike (2009)

<sup>36</sup> Heath (2010); Pike (2009)

**Programs that Work!****Lessons from Alaska's Indian Health Care System**

The program is culturally appropriate with emphasis on reclaiming traditional roles – men as protectors, women as instillers of values.

All messages relate back to traditional Alaska Native culture and values – defining who the people are and how they should behave.

Positive messages are more effective than dictatorial ones.

Motivational interviewing is successfully used extensively.

Stressing the positive impact a change will have on children/ grandchildren/ community is more effective than stressing the impact the change will have on the individual.

audience's rational side, research has shown that people need to understand the benefits beyond financial and kWh savings to be motivated to change.<sup>37</sup> Lastly, it is important to show that consumers are already on the path to success by pointing to the work that has already been achieved. This can result in a positive and inspirational message that may lead to additional future behavior changes and program participation.<sup>38</sup>

## Best Practices for Behavior Change Efforts in Rural Alaska

Urban Alaska communities mirror their counterparts in the rest of the country in many ways. Households and businesses follow many of the same patterns and behaviors. There are more substantial differences between the rest of the nation and rural Alaska communities. The best practices outlined below are gathered from a variety of sources. Sources include rural energy providers as well as health program administrators that focus on behavior change such as prevention of chronic disease, substance abuse, domestic violence, and child abuse.

Community wide engagement creates more widespread and lasting behavior change. In many rural communities residents have a high level of awareness about energy costs; cost alone will not provide a powerful enough incentive to create behavior change that will create a real and lasting reduction of energy consumption. It is the value placed on the group and the social pressure to conform that act as effective incentives to change behavior in a lasting and meaningful way.

Teaching and learning through story telling is an important part of Alaska Native traditional and contemporary culture, and can be a powerful tool in culturally appropriate education efforts in rural parts of the state.

Local leaders and elders should be employed as messengers for outreach and education. Alaska's rural communities have extremely influential and powerful local leaders; these individuals should be used to deliver messages about energy efficiency and conservation. Local leaders are trusted sources.

Culturally appropriate material should be developed for rural Alaska; this includes translating messages into local Alaska Native languages, employing local leaders in delivering the message and creating stories that convey the benefits of the desired behavior change.

Price matters! Power Cost Equalization (PCE) subsidizes rural electricity costs up to 500 kWh per month. In PCE eligible communities households regularly use up to, but not more than the 500 kWh per month. Even with subsidies there is price variability that impacts consumption; in PCE communities with higher costs usage is lower than those with lower costs.

Sustainability is a loaded word in rural Alaska, but it is on everyone's mind. In rural parts of the state where the young population is leaving and the overall population is declining, communities are in danger of disappearing altogether. Just this year there were two communities in which the student population fell below 10 and the school was shut down; after a school is shut down it is not long before the community ceases to exist year round. Promoting the idea that using energy and

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<sup>37</sup> Ibid

<sup>38</sup> Ibid

resources efficiently can be a tool in creating community sustainability should be part of whatever messages are delivered in rural Alaska.

Unlike most places in the developed world, waste is not a part of the culture. Everything is so expensive, and relatively difficult to obtain, in rural Alaska that things get used much longer than they might in urban settings. This aspect of rural culture is both a help and a hindrance in saving energy. While conservation is in many ways already practiced in rural places, the infrastructure of the place will not be quickly replaced and that infrastructure is not, by and large, energy efficient.

Examples of inefficient infrastructure:

- Many rural housing units have inefficient electric hot water heaters that were installed initially because they are easy to maintain and many communities lack a skilled maintenance person.
- When new refrigerators or freezers are purchased, the old inefficient units are not disposed of. The old units become additional food storage (esp. important for families that participate in subsistence activities) and continue to use energy.

## Current Energy Efficiency and Conservation Efforts

There are well established and successful energy efficiency and conservation efforts in Alaska. Although most have some consumer education component, few directly address behavior change. The programs described below represent some of the larger and/or long-standing energy efficiency and conservation efforts.

**Alaska Housing Finance Corporation (AHFC)** runs several energy efficiency programs, which are briefly described below.

- Weatherization programs provide energy efficiency improvements to households meeting income eligibility guidelines. Some resident education occurs during weatherization visits.
- Building Energy Efficiency Standard (BEES) – A BEES rating is required for all homes with mortgages and building loans that are underwritten by AHFC, roughly 40 percent of residential home mortgages in the state.
- Home Energy Rebate (HER) program – HER provides rebates of \$325 for an initial “As-Is” energy audit, up to \$10,000 for energy efficiency improvements ,and \$175 for a follow up “Post” improvement energy audit for owner occupied residential housing units in Alaska. The program has no income guidelines.
- Five Star Plus New Construction Rebate – This program provides a \$7,500 rebate on new homes that receive a BEES rating of Five Star Plus.
- Supplemental Housing Development (SHG) Grant program – SHG provides supplemental funding to regional housing authorities to implement energy efficiency measures in their housing units, up to 20 percent of total development costs.
- Research Information Center (RIC) – RIC provides information on energy programs, and general energy and construction related topics and is available to the public, housed at AHFC in Anchorage and online.

- Alaska Energy Efficiency Revolving Loan Fund - \$250 million fund to provide loans for energy efficiency improvements to public buildings including state, municipal, university buildings and those located in Regional Education Attendance Areas (REAA).

**The Alaska Energy Authority (AEA)** has recently taken the lead on a number of energy efficiency and conservation efforts, including those listed and described below.

- Alaska Energy Efficiency Partnership (AEEP) formerly the Energy Efficiency and Conservation Working Group (EECWG) – the AEEP created a one-stop shop website for energy efficiency and conservation in Alaska ([www.akenergyefficiency.org](http://www.akenergyefficiency.org)) and meets regularly to share information and enhance collaboration between their more than 30 member organizations.
- Energy Efficiency Community Block Grant – More than \$5 million in grants to small communities to implement energy efficiency improvements in public and community facilities.
- Department of Energy funded studies
  - This project – Assessment of Barriers to EE&C Behavior Change
  - Cold Climate Housing Research Center EE&C Program and Policy Review
  - End-use data collection

**Utilities** in Alaska are just at the beginning stages of planning and implementing end-use management programs. Most utility companies now have energy efficiency and conservation information on their websites and periodically or regularly send information to their customers via newsletters and/or with monthly billing.

The most developed and longest standing program in the state is housed at Golden Valley Electric Association (GVEA), the cooperative utility that provides services in Interior Alaska. GVEA runs three energy programs:

- **Home Sense** – provides a \$40 energy audit to residential housing units, and installation of efficient equipment including compact florescent lamps (CFLs), electric water heater blankets, refrigerator thermometers and vehicle plug-in timers.
- **Builder Sense** – provides rebates to builders who install eligible electrical energy efficient measures in newly constructed, major addition or major retrofit residential housing units.
- **Business Sense** – offers rebates of up to \$20,000 to commercial customers to help finance energy efficient lighting retrofits for reducing electrical consumption.

**Regional Housing Authorities (RHA)** – RHAs build energy efficient housing units throughout Alaska and provide limited education to residents/tenants in an effort of reduce energy use through behavior change. Regional Housing Authorities often pay utility costs on the units they manage and so bear the cost of excessive energy consumption. Most RHAs statewide are interested in finding ways to stretch their dollars by reducing utility bills on the units they manage.

**Renewable Energy Alaska Project (REAP)** – REAP has recently expanded their scope to include energy efficiency and conservation. They also took on management of the [www.akenergyefficiency.org](http://www.akenergyefficiency.org) website. REAP is a well-known education and advocacy organization.

**Rural Alaska Community Action Program (RurAL CAP) Energy Wise**

Energy Wise was a pilot program that provided energy efficiency education and \$300 in energy efficiency upgrades to 1,000 rural homes. The program is continuing in northwestern Alaska with funding from the Northwest Arctic Native Association (NANA) and has asked for a legislative appropriation to serve more rural communities throughout the state.

Energy Wise aims to have people hear their energy efficiency messages at least three times: 1<sup>st</sup> at an energy fair which includes schools/local people organize/etc. At the fair residents can sign up to have the energy crew come to their house for an eight hour visit in which the crew develops a personalized energy plan and installs about \$300 worth of energy saving equipment. The resident has to be present when the crew is there to learn about the measures and receive education about their energy consumption. The last contact happens three to six months later when the crew goes back for a half hour check-in to provide reminders, do more education, and assess the effectiveness of the measures and education.

**University of Alaska (UA)** – UA campuses each have offices of sustainability which work on a variety of issues related to sustainability including the supply and demand side energy efficiency.

**State of Alaska Department of Transportation and Public Facilities (DOTPF)** – DOTPF is the State entity charged with improving the energy efficiency in state owned and operated public buildings. The State contracts with Energy Service Companies (ESCOs) to implement energy efficiency measures in their buildings. These efficiency measures focus more on technology solutions than on the behavior of the tenants.

**Alaska Building Science Network (ABSN)** – ABSN has operated the Community Energy Efficiency (CEEP) program since 2005, working on contract under AEA’s Village End Use Energy Efficiency Program. The CEEP program works with villages to save energy through efficiency measures including efficient lighting, switch boxes, motion sensors, set back thermostats, weather stripping and low mass boilers. ABSN also offers training and technical assistance on building science topics including those related to energy use.

**Alaska Craftsman Home Program (ACHP)** – ACHP holds workshops and produces publications related to building in northern regions. ACHP tailors classes about building and energy efficiency to a several distinct audiences including: home owners, energy raters, contractors and builders, real estate professionals, appraisers, mechanical administrators, architect and engineers and home inspectors.

**Alaska Native Tribal Health Consortium (ANTHC)** – ANTHCs’ Division of Environmental Health and Engineering works in villages throughout the state. The organization has historically focused on water sewer systems (big energy users in rural communities) only recently introducing programs that address energy use through efficiency. ANTHC is beginning a Community Building Energy Efficiency Program which will bring professionals to villages to assess energy use identify potential savings to be found in community buildings through efficiency improvements.

**Green Star** – Green Star offers a program to help businesses become more efficient in their energy use and waste management. Energy saving services includes a personalized lighting audit with



recommendations related to technology and behavior. Green Star offers membership, awards and recognition.

**Alaska Conservation Alliance (ACA)** - ACA is a statewide coalition of conservation groups in Alaska and has named energy efficiency as a priority in 2011. Their primary purpose is to provide education and advocacy on issues that impact the environment in Alaska.

**United States Department of Agriculture (USDA)** – USDA has funds available for a wide range of purposes; opportunities related to energy efficiency include funding for energy audits and energy efficiency improvements. Specific programs target replacement of old and inefficient heating systems and efficiency measures for agricultural producers in rural places (in Alaska this is most applicable in the Matanuska-Susitna Valley).

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# Community Meetings

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At community meetings in Juneau, Bethel, Anchorage, Kotzebue and Fairbanks, Alaskans engaged in small group discussions about community issues and priorities around energy efficiency and conservation. Participants also provided information on their own EE&C practices at home and at work through a comprehensive questionnaire on energy efficiency and conservation actions. The objectives for these meetings were to:

- Provide an overview of the project
- Share findings from the review of best practices
- Learn about local challenges to overcome and successes to build upon
- Discuss what will be necessary to ensure priority energy efficiency and conservation actions can be achieved

The following findings from community meeting discussions and questionnaire responses informed the design of the telephone survey that was conducted in the next phase of the project.

## Community Insights

The five communities in which meetings were held are distinct in both their challenges and achievements in implementing energy efficiency and conservation measures. This is not surprising, since each community has different power sources, costs and varied access to a network of service providers and other market actors, such as retailers. However, there are also strong similarities, including a notable desire for energy efficiency and conservation even when the underlying reasons for this desire were different.

## Similarities and Differences among Communities and Regions

### Similarities across the state

- Money and saving it is important in all communities. Saving money was the only benefit of EE&C measures that was noted in all communities.
- Energy associated with space heat is considered higher priority in nearly all settings.
- Participants believe in the value of EE&C.
- Campaigns that engage the community, create a sense of togetherness and are present throughout the community are more effective.
- Leadership participation in campaigns helps ensure their success. The definition of a leader varies across communities. In Bethel, YKHC is considered a leader, in Kotzebue the leaders are the elders, in urban places leaders are identified as politicians, business people and other community opinion leaders.

- There is a direct relationship between the price of a unit of energy and the level of understanding the consumer has of their own consumption and how their behavior impacts that consumption; this of course leads to differences in communities but is noted here as a similarity because the relationship exists across the state. For example, in Kotzebue where energy is very expensive most participants know how many kWh/month was normal. In Anchorage, where energy is relatively inexpensive, there is limited comprehension about what is normal.

### **Regional differences**

- Kotzebue participants conveyed strongly that there was a connection between traditional Native values and efficiency and conservation and that this would be a powerful motivator for behavior change. The messengers involved in EE&C behavior change efforts must be local, respected and trusted. Effective campaigns will include elders in some way. Kotzebue residents have a heightened level of awareness about how much energy they use; they understand what typical consumption looks like and how they compare to that norm. They are also keenly aware of the risk high energy costs pose to the sustainability of their community.
- Bethel participants focused less on traditional culture but indicated that a local and trusted source was needed to lead a successful effort. Yukon Kuskokwim Health Corporation (YKHC) is the largest employer in town and has employees in all of the regional villages; they were identified as an appropriate leader in community EE&C efforts. There is a lot of transiency in Bethel and YKHC can offer the additional benefit of longevity in the community.
- Anchorage participants were extremely varied in their definition of the benefits associated with EE&C but chose “creating a sense of community” in the largest numbers. Anchorage participants nearly unanimously desire more data about current use with which to gauge change; they want more points of comparison to help them better understand their own consumption. There is a large amount of commercial space in Anchorage and a perception that there is a nearly complete disconnect between commercial owners and tenants. Anchorage participants also expressed a high level of interest in reducing transportation related energy consumption though they also identified significant barriers to success. Most of the ideas generated to address transportation efficiency were grassroots and community based.
- Fairbanks participants saw a strong connection between the economic health and sustainability of their community and EE&C measures. Participants articulated the value of a kind of frontier independence associated with doing with as little as possible. Also noted was the importance of remaining in compliance with federal air quality standards; Fairbanks is currently a PM2 attainment area, a status which can threaten economic growth and development if industry is not permitted to increase their energy demand. Energy efficiency in Fairbanks has sometimes become politicized for this and other reasons.
- Juneau residents have reasonably priced energy and are aware that the source of their electricity is clean and renewable hydro. Similar to Anchorage, participants in Juneau reported that they wanted more information about current energy consumption and better,



more meaningful points of comparison to establish a sense of what is normal. They also expressed a desire to be recognized for their efforts; they want to be seen as a model community that other communities in the state can look to.

### **Rural and urban segmentation**

It is dangerous and wrong-headed to lump all of rural Alaska into one market segment. There are different cultural values and norms within different Alaska Native groups as well as different languages and histories. However, one thing that nearly all rural communities in Alaska share are high energy prices, and so we can look at rural Alaska as a segment of consumers who pay very high prices and are uniquely well informed about personal energy consumption. Another similarity shared across rural Alaska is that energy consumption per person is already quite low compared to their urban counterparts. In developing messages and designing delivery systems it will be important to consider regional differences in rural Alaska.

### **Insights for education and outreach plan**

Based on feedback received during the community working sessions, the following elements of an education and outreach program should be considered for inclusion throughout the state:

- Define baseline performance
- Create a clear target and path
- Involve local businesses
- Highlight/showcase local success
- Provide education and training opportunities for youth
- Create local energy champions
- Leverage local media: newspapers and radio (especially public radio) to increase the number of times and ways that people hear messages beyond paid advertising.
- Provide meaningful prizes when participation is sought. Giving away a new hybrid car could get an entire small community talking about efficiency.

## **Benefits and Challenges of Energy Efficiency and Conservation**

During community discussions, several benefits of energy efficiency and conservation were noted by participants. Table 1 highlights the most common responses and denotes which benefit was identified most often by participants in each community.

Looking across all the benefits mentioned, the one offered by all communities is that EE&C saves money. While that is one benefit that may resonate in every community, there may also be opportunities to tailor campaign messaging to specific areas. For example, Fairbanks may respond well to a campaign that helps to build a local economy; Anchorage to a message that creates a sense of community and shared action; Juneau to a message that indicates efforts will be “showcased” to others; and Kotzebue to a message that ties in traditional Native values and identifies energy efficiency and conservation as a way to show respect for land and traditional values.

Table 1: Benefits of energy efficiency and conservation named at community meetings EE&C BENEFIT	Juneau	Bethel	Anchorage	Kotzebue	Fairbanks
Create sense of community	X		✓		
Save money	✓	✓	X	X	X
Reduce dependence on foreign oil/ state assistance	X		X	X	X
Reduce carbon footprint/ slow climate change	X			X	X
Create healthy environment	X		X		X
Draw attention to great actions	X				X
Build a local economy			X		✓
Resources go further			X	X	
Improved air quality			X		X
Improved comfort					X
More educated community			X		
Create a sense of pride				X	
Teach traditional values				✓	
Create more predictability				X	
Improved quality of life			X		X

✓ = Top benefit noted by meeting participants

### Energy Efficiency and Conservation Challenges

Participants in all five communities identified systemic issues that need to be addressed to ensure energy efficiency and conservation becomes a top priority for Alaska. These systemic issues relate primarily to the way in which utilities are organized and regulated. Several additional challenges were noted that present clear opportunities for the Alaska Energy Authority and others, but which will require a cross-utility and government focus for resolution. Each major challenge is identified by community in Table 2 along with a recommended path to resolution. Several of the challenges identified with a specific community may have statewide impact; for the purposes of this summary they are associated with the community in which they were mentioned, but both the challenges and the solutions can have more far reaching implications.

Table 2: Challenges to achieving greater energy efficiency and conservation behaviors

ANCHORAGE	
Challenges	Potential paths to resolution
Residents and businesses don't always understand how to translate savings from energy efficiency and conservation into dollar savings.	Provide straight forward, easy-to-understand education to home owners and businesses on the dollar savings potential of energy efficiency measures and conservation behaviors.
Residents and businesses lack baseline data about energy consumption from which future savings can be measured. On a community level it is impossible to know if programs are working if there is not good information from which to measure change.	<p>Develop energy consumption baselines from end-use data being collected now; Use baseline data to target and evaluate EE&amp;C programs.</p> <p>Encourage utilities to create an "average" energy use profile for different housing types and include that information on customer utility bills, providing a basis for comparison.</p> <p>Provide commercial customers with personalized energy use analysis and reduction recommendations.</p>
Energy costs are relatively low, providing limited incentive to change behavior	Energy prices are likely to increase over the next five years. Local government leadership in Southcentral Alaska is already attempting to raise awareness about personal consumption on the residential side.
Disconnect between commercial sector owners and their tenants	Target building owners, guide them to AEA's commercial energy audit program or, if appropriate, to AHFC's public building EE&C revolving loan fund.
BETHEL	
Challenges	Potential paths to resolution
Many of the energy efficiency actions don't apply when residents are renters or not direct payers of their utility bills.	<p>Provide energy efficiency focused education and outreach to dwelling owners (landlords/housing authorities).</p> <p>Provide education on conservation behaviors to renters.</p>
High level of distrust of local utility.	<p>In most places the utility is a highly trusted source of information about energy. This is not always the case in rural Alaska. It is essential that the messenger be a trusted source with access to rate payers. The Alaska Village Electric Cooperative and the State Power Cost Equalization program both have positive reputations in rural Alaska and may be good messengers for <i>specific</i> electric energy use information.</p> <p>In rural places with good relationships to regional Native corporations these corporations offer an additional potential avenue for disseminating EE&amp;C information.</p> <p>In communities in which the utility has a positive working relationship with the community they are an appropriate avenue for information sharing.</p>

<b>BETHEL (Continued)</b>	
Many existing buildings are poorly built; needed upgrades are very costly.	<p>Educate builders about incentives that exist through AHFC to follow BEES standards for new building construction and existing building renovation to help ensure energy efficiency measures are included in new and major construction efforts.</p> <p>Increase outreach efforts to solicit participation in existing programs that address thermal energy efficiency, e.g. Home Energy Rebate, Public Building Revolving Loan Fund, AEA Commercial Energy Audit and Village Energy Efficiency Program (VEEP), etc.</p>
Bethel has high resident turnover.	Education and outreach efforts may best be directed towards long-term employers such as YKHC and focused on actions that can easily be transferred from the place of work to the home (e.g., turning thermostats down, replacing incandescent with CFLs or other efficient lighting, etc.).
<b>FAIRBANKS</b>	
<b>Challenges</b>	<b>Potential path(s) to resolution</b>
Energy conversation often gets politically polarized	Use appropriate and non-political messengers to deliver simple and honest messages.
Lack of accountability leads people to fail to perform desired behavior, e.g. residents continue to burn wood and coal despite effort to reach PM2 attainment unless they perceive that everyone else is on board.	Create perception that everyone is doing the desired behavior. Showcase local people and businesses, create competitions to engage people at the community level, put comparisons on utility billing, etc.
<b>JUNEAU</b>	
<b>Challenges</b>	<b>Potential path(s) to resolution</b>
Local retail stores do not always carry energy efficient options and retail personnel are poorly trained regarding energy efficiency measures.	<p>Provide education to retail store staff to increase knowledge of energy efficiency products and measures</p> <p>Partner with local vendors in EE&amp;C to create focused competitions. For example, Home Depot participated in a full-house/business lighting retrofit competition, customers could sign up to win every time they purchased an EE&amp;C product in the store.</p> <p>Encourage greater offerings of energy efficiency equipment and behavior change devices (e.g., smart plug strips, Kill-a-Watts, home energy monitors, shower timers, etc.) through Statewide buy-down and coordination with utilities to distribute.</p>

JUNEAU (Continued)	
Residents and businesses are unaware of their energy consumption.	Provide on-bill points of reference and comparison for all households and small businesses. For larger commercial users, provide personalized audits with a clear path to energy reduction. This could be via the AEA commercial audit program or directly with the local utility.  Encourage private commercial and public building energy use labeling.
KOTZEBUE	
Challenges	Potential path(s) to resolution
When rules and regulations from outside the region are brought to residents they tend to not follow through.	Take time to travel to the villages to learn what is important to the residents, allow residents to help design a program that will resonate with their elders and youth and then involve those elders and youth in carrying out the campaign.  Use and expand the model developed by RurAL CAP for their Energy Wise program.  Support current regional energy planning efforts in rural places by offering priority funding and technical support to local implementing entities.

## Community Successes to Build On

In each community, activities, campaigns and other efforts were mentioned as having been especially successful in achieving immediate and lasting behavior change. Each of these are noted here, as are the specific tactics the participants indicated as important to incorporate into any future education and awareness building campaign or outreach effort.

### Juneau

The post-avalanche Juneau Unplugged campaign was considered very successful in helping residents and businesses curb their energy consumption in the immediate wake of the avalanche crisis. The campaign was upbeat and focused on identifying and highlighting those who were doing a good job in reducing consumption. Energy efficiency measures and conservation behaviors were highlighted on radio, in the newspaper, and an outside expert was brought in to provide information to the community about how to reduce consumption in homes and businesses.



#### Insights for education and outreach plan

In Juneau what has worked well to date is to have a crisis that spurs action. Post-crisis, Juneau's energy consumption has returned to within three percent of its pre-2008 avalanche consumption since transmission lines were fixed. While a crisis cannot be created, community stakeholders sense

that this may be the only thing that moves people to immediate—though not necessarily lasting—reductions in energy consumption. There were however, several lessons learned and actions noted that are worth considering when designing a campaign/outreach effort focused on energy efficiency and conservation:

- Send the perception that your neighbors are doing it
- Give a clear message and directions
- Target owners and condominium associations rather than renters
- Provide demonstration projects and focus on government and business actions being taken that can be replicated at home
- Involve the youth through education, competitions and training on weatherization
- Subsidize energy audits
- Provide more outreach around existing energy programs
- Do more energy efficiency and conservation programs even when there is not a crisis
- Make some behaviors/measures mandatory or “opt out” rather than “opt in”
- Develop talent and expertise, create an EE&C local industry
- Make anything you are trying to promote both convenient and “cool”

## Bethel

As a community, Bethel is relatively untouched by energy efficiency and conservation campaigns or education efforts that focus on personal choice and behavior change. Most examples of behavior change campaign successes noted by the workshop participants drew from social and health service campaigns. In particular the recent Alaska statewide campaign on suicide prevention was viewed as very successful. The campaign became a centerpiece of the 2010 statewide student government association meeting held in Bethel and hosted by the Bethel High School student government association. The campaign featured a multi-pronged approach that included submissions of YouTube videos as part of an awareness building campaign, workshops on how to talk about suicide to others, and anti-suicide messages developed through various art mediums. Other campaigns that were identified as particularly noteworthy include the pre-diabetes screening campaign which provided outreach and education through all local media and through local healthcare providers.

### **Insights for education and outreach plan**

For the people of Bethel and the Bethel region, the river is identified as “everything.” Focusing on preservation of the river may have an impact in awareness and potentially in action to engage residents in energy efficiency and conservation as a way to preserve the village way of life.

A campaign should repeat key messages and successes and use multiple forms of communication to get the word out. Where possible, engaging local leaders and Elders will be important to carry the message, but this is perhaps more relevant in the smaller villages in the Bethel region than in Bethel proper.

In Bethel it will be more effective to deliver a campaign or education and outreach effort through an organization that has had long-standing presence in the community and one that will be present for many years to come. This organization can be used to demonstrate new technologies and practices that can easily be implemented in homes and businesses throughout the community. Yukon Kuskokwim Health Corporation (YKHC) is a natural choice to carry the message of EE&C in the community of Bethel and to coordinate those efforts in the smaller villages in the region.

## Anchorage

Anchorage benefits today from having several community members and businesses that are engaged in the topic of energy efficiency and conservation both in the building and transportation sectors. Many of the workshop participants were involved in the home (and the recent expansion into business) energy audit service sector. They believe very strongly that the audit process is very successful and that the tools being employed are helping to increase awareness of, and actions toward, energy efficiency. This is seen as especially true when an audit is combined with significant dollars for implementation of energy efficiency recommendations.

### Insights for education and outreach plan

Anchorage participants advocated for more education as a component of any future outreach effort or campaign. Providing residents and business owners with information on their baseline energy consumption, as well as their moment-to-moment and month-to-month usage and savings potential, would help to inspire change. Further promoting a certification program, encouraging the identification of local energy champions and developing utility-based energy efficiency and conservation programs were also viewed as important elements of future efforts in Anchorage and statewide.

## Kotzebue

Kotzebue participants identified the “Kids Don’t Float” campaign as a particularly successful campaign for behavior change in their community. NANA provides free life jackets, and specialists come to the villages to speak with the residents about the campaign. Campaign materials are present in many locations across the region and adults are able to lead by example in a very visible way (i.e., wearing a life jacket).



Other examples of successful campaigns include the Cleanest Yard contest, the search and rescue survival skill training in Noatak, and the science culture camp in Selawik. All of these campaigns contained a strong cultural component and messages that aimed to motivate individuals to engage in the desired action for the benefit of the whole community. Also identified was the diabetes prevention program Walk for Life that features a picnic and door prizes, with everyone in the community interacting with one another.

### Insights for education and outreach plan

Focusing on respecting each other, respecting the earth and our shared natural resources, and respecting elders were highlighted by workshop participants as very important messages and approaches for future efforts. Investing in energy efficiency and conservation is viewed as a very



respectful action that resonates well with a cultural tradition of only using what is needed and not wasting.

Also important is focusing on youth education and involvement. Children are not only valued as representative of the future but are seen as an influence for good behavior with their parents or guardians. If school curriculum includes energy efficiency and conservation in a fun way, the children develop efficient energy use habits themselves and might also bring information home to share with the adults in their lives.

Information and education should be disseminated through as many channels as possible including local radio, newspaper, flyers, schools and community events.

Following are additional suggestions for consideration:

- Hold an annual energy efficiency and conservation summit with elders and youth, something fun and educational. Slowly educate people with a community event, repeat every year with NANA.
- Reach kids in schools when they are really young and teach them energy efficiency and conservation behaviors so it becomes the normal way they operate.
- People in the region are good with their hands, they are good mechanics – this skill should be leveraged, perhaps by EE&C workshops that are a little more advanced than those generally given to the public.
- The fact that “everyone is related” can be an advantage – there is a strong sense of commitment to the larger community which can be effective in motivating change.
- Engage elders, parents and youth. Create a sense that the campaign is all around: everyone is doing it.
- Elders have knowledge and are respected. They are the most educated conservationists: they know how to do with less.
- Connect rural campus to EE&C programs so people can take classes or workshops
- Demonstration projects work. Point out successes in the community!
- Lead by example, some people will compete with themselves to use less energy but most need to know what someone else is doing to be able to use them as a model.
- Fold everything together into a conservation framework: using less, recycling, picking up trash in the yard and generally taking care of things.
- Remind people of the value that is conservation; it is a traditional value. People expect convenience, and it is costing us.
- Specific info is more likely to lead to behavior change (e.g., one hour of video games costs \$X. If you play video games for X number of hours LESS, you will earn \$X).
- Subsistence is key, and tying EE&C messages to the messages and values around subsistence could be really effective (e.g., not wasting, only taking what you need so there is enough for all).

- Flattery first: recognize what people already do, and honor the efforts that have been made before asking for more.

## Fairbanks

One program that was deemed very successful by all participants in Fairbanks is the annual Clean-Up Day. Its success is due in part to the business community's involvement in supporting the program, as well as its longevity and the resulting expectation among residents that after break up comes Clean-Up Day. Like successful programs noted in other towns, Clean-Up Day creates a feeling of community and draws on individual residents desire to do something good not only for themselves but as part of a larger movement to benefit the entire community.

There was less agreement on other programs or campaigns that have worked in Fairbanks. Some felt that where there was a policy passed or already in place that supported efficiency efforts it was more successful; others disagreed that policy led to behavior change. National campaigns such as Energy Star and MADD were recognized as being successful nationally and at the local level.

Much of the conversation about benefits and campaigns in Fairbanks came back to the business community—both in terms of influencing employees and the public by leading by example and in terms of the opportunities in EE&C work that could create new local business and economic development opportunities in the Interior.

### Insights for education and outreach plan

Future campaigns and outreach efforts will be most successful if there is: widespread business support for the effort; marketing communications from a trusted source (e.g., a local utility or a cross-section of the business community); consistently delivered and repeated messages; and when accompanied by an education effort on the value or benefit of the recommended action.

## Prioritized EE&C Actions by Community

Community discussion participants completed a survey of energy efficiency and conservation behaviors and then broke out into small groups and were asked to prioritize those actions.

## Juneau

### Transportation

While participants in the Juneau community meeting expressed a strong desire for reduction in transportation energy, they did so with recognition that achieving efficiencies through public and alternative transportation in Alaska and in small communities is very challenging. The three behaviors participants felt would have the most significant impact are:

- Public transportation
- Five miles of walking a day instead of driving
- Purchase fuel efficient cars

## Residential

Participants felt the greatest savings could come from targeting residential energy users. Residential users represent more members of the public and, as evidenced by post-avalanche energy reductions, they are capable and willing to adjust their use patterns if the incentive is powerful enough. Many of the top recommendations relate to thermal energy use since most homes rely on diesel to heat their homes—a non-renewable resource with high price volatility. The behaviors participants felt would have the most significant impact are:

- Increase insulation
- Increase awareness of state (AHFC) programs
- Caulk/weather strip
- Turn home temp down
- Programmable thermostat
- Lower temp on hot water heater
- Install efficient appliances
- Turn off lights and appliances
- Renters pay their own utility bills
- Home energy audit
- Financing for energy upgrades
- Annual home energy inspections
- Education about energy use of specific consumer products (i.e. flat screen TV, refrigerator, hot water heaters, etc.)
- Education about specific energy use behaviors (i.e. washing in cold vs. hot water, keeping freezer full, etc.)

## Commercial

- Implement energy saving policies: offer assistance to businesses in creating and implementing policies within their organizations that save both energy and money
- Business energy audits with subsidized support and monetary incentives
- Focus on EE&C behaviors that can be fostered at work and transferred home
- (e.g. paper reduction, appropriate efficient lighting, turning off electronics when not in use, etc.)
- Remove incandescent light bulbs from stores
- Ensure better lighting design in commercial space from the beginning

## Bethel

The actions or behaviors that participants felt could result in the most significant impacts, by area, include:

### Transportation

- Public transportation (Note: While Bethel has a shuttle that many individuals use, it is not clear if this is an actual reduction in energy consumption)
- Encourage bike riding and infrastructure

### Residential

- Timer on car plug

- More efficient appliances in the home
- Use of power strip

### **Commercial**

- Encourage local businesses to both participate in energy efficient behaviors and to tell the community about what they are doing
- Focus on EE&C behaviors that can be fostered at work and transferred home (e.g., paper reduction, appropriate efficient lighting, turning off electronics when not in use, etc.)

## **Anchorage**

The actions or behaviors that participants felt could result in the most significant impacts, by area, include:

### **Transportation**

- Biking, walking, and car pooling
- Change workplace policies to support bikers (e.g., flex schedules, showers, bike rack, dress code, etc.)
- Support a reliable and efficient public transportation system
- Driver awareness campaign to make it safer to bike
- Reduce parking

### **Residential**

- Energy audits
- Engage landlord associations
- Include incentives for renters
- Use power strips that are on timers
- Install energy detective on appliances
- Programmable thermostats
- Light bulb replacement
- Increase information and programs targeting water-related energy use. Ideas include: install low flow shower heads; aerators and low-flow toilets; meter shower heads; wash clothes in cold water; educate plumbers and vendors about on demand water heaters; reduce hot water heater setting to 120 degrees

### **Commercial**

- Workplace audits
- Weatherize small commercial space
- Programmable thermostats (target small business)
- Energy efficient lighting
- Informed facility management for commercial properties and good communication between managers and facility users
- Use conservation measures: turn off lights and turn down heat

## Kotzebue

### Transportation

There was no interest in talking about transportation efficiency in Kotzebue. The general consensus among participants was that if efficient ATVs come on the market that are affordable, reliable and can go long distances in the cold, then they would be interested in considering them. There is very little interest in public transportation for the sake of efficiency.

### Residential and commercial

Stakeholders in the Kotzebue meeting did not feel there was a need for strong distinctions between residential and commercial energy use programs. They did note that RurAL CAP's Energy Wise program would be coming into the region soon and that they expect a model that not only utilizes community events and hires local people but also partners with the NANA regional Alaska Native Corporation is likely to be successful. The behaviors that participants felt could result in the most significant impacts are:

- Give people a benchmark to compare energy use to
- Provide more grants and financing for individuals and businesses to do energy efficiency improvements
- Energy meters are a useful tool, especially for people who use more than the Power Cost Equalization (PCE)-subsidized 500 kWh/month or are not PCE eligible

## Fairbanks

### Transportation

Most of the discussion around transportation efficiency focused on the need for government funding to make public transit reliable and affordable, as well as discussion of appropriately located housing (i.e., in the city, not out in the country). There is recognition that most residents of the FNSB are unlikely to move into city limits to reduce their energy consumption and that owning property and living in the country is part of the reason that people choose to live in Interior Alaska.

### Residential

There was broad consensus in the Fairbanks meeting that the biggest impact would be felt through efforts to reduce energy used for space heat, and that home energy audits were a successful means to achieve that end for both residential and commercial energy users. The actions or behaviors participants felt would have the most significant impact are:

- Ensure ongoing and improved Home Energy Rebate program, and help auditors give better customer support and education
- Increase insulation and tighten up buildings.
- Promote energy efficient appliances, particularly proper sizing and setting of hot water heaters

**Commercial**

- Fund audits of commercial space with government assistance in financing improvements
- Educate business community about dollar savings associated with energy efficiency improvements. One potential messenger could be other business people who have already implemented EE&C measures and seen real benefit
- Create campaign to promote widespread adoption of EE&C workplace policies related to paper reduction, electronic shut-off, etc. Use competition to garner attention initially

**Meeting Questionnaire Insights**

Participants at each of the community meetings were asked to complete a questionnaire about their own energy use habits at home and at work. The questions asked about their adoption of EE&C behaviors in five areas: home heating, home electric, home water (heating and use), transportation, and actions at work. Participants prioritized their actions into the top three items in each area to be carried out for the greatest impact, and also were asked to identify the number one action that should be taken immediately.

The intent of the questionnaire was to identify which actions across different communities are 1) already being undertaken; 2) desired to be taken; and 3) unlikely to be taken. The results of the questionnaires were cross-tabulated to identify differences in EE&C behaviors between owners and renters.

Results from the community meeting questionnaire were used to inform the design of the statewide telephone interview that was conducted in summer 2011. Survey results are included in

**Home Heating**

In the area of home heating there was a larger variation in response between owners and renters than between urban and rural residents, with home owners being the most likely and renters the least likely to have adopted EE&C behaviors in this area. The most commonly completed behavior across all groups (owners/renters and urban/rural) was adjusting the thermostat when leaving the house, even though most people did not have programmable thermostats.

The behavior most often cited as something respondents do not plan to do varied by group. Even though a large numbers of urban residents already reduce the temperature in their homes to 60 to 65 degrees, this is the behavior that urban respondents expressed aversion to most often, while rural respondents indicated that they are least likely to already have and use a programmable thermostat.

**Urban/Rural**

In the area of home heating there is general alignment between current EE&C behaviors in urban and rural communities. The activity the largest number of participants report already engaging in is adjusting the thermostat when leaving the house.

When the questions asks about “keeping home thermostats set to between 60 and 65 degrees,” however, there is significant variation between rural and urban respondents: 69 percent of urban respondents reported engaging in this behavior, while only 38 percent of rural respondents

indicated they engaged in this behavior. This was the biggest difference between rural and urban audiences on the home heating section of the questionnaire.

### **Renters/Owners**

The difference in home heating practices between home owners and renters turns out to be more significant than the difference between residents who pay their own utility bills (whether they own or rent) and those who do not. Energy efficiency measures that require investment in the home are less likely to be done by renters than owners for obvious reasons. However, there is a high degree of renter interest in several of these measures including caulking, weather stripping and increasing insulation.

Renters also expressed interest in programmable thermostats. Installation and use of a programmable thermostat is a low-cost energy efficiency measure that requires limited resident behavior change and offers high returns in terms of energy savings. It is notable that respondents who identified as renters were split roughly into thirds with the largest share (37 percent) expressing interest in using a programmable thermostat but not having installed one yet.

Home owners are overall much more likely than renters to take EE&C measures in the area of home heating. Approximately 60 to 90 percent of respondents are already engaged in every behavior listed. The most popular measure among home owners is adjusting the thermostat when they leave the house; over 9 out of 10 respondents (91 percent) report doing so. The least practiced behavior among home owners (accounting for 59 percent of respondents) is keeping the home between 60 and 65 degrees; this behavior also appears to be the least likely to attract additional participation, with 28 percent of home owners and 32 percent of renters indicating that they have no plans to do it.

## **Home Electric**

As with home heating the group most likely to have adopted EE&C behaviors in the area of home electricity use are home owners, though they have done so at a somewhat lower rate. The most commonly completed behavior across all groups (urban/rural and owner/renter) is replacing incandescent bulbs with a compact fluorescent (CFL) light bulb. Just as consistent, and not at all surprising, was the lack of interest in Alaska in drying at least half one's laundry on a line during the winter. In general there is less variability in responses related to home electric energy use than home heating for both urban/rural audiences and owner/renter audiences.

### **Urban/Rural**

In general, urban respondents were more likely to have already taken EE&C measures with the notable exceptions of "drying at least half laundry on a clothesline" and "shutting off electronic equipment when not in use." The large majority of the time, both urban and rural respondents reported having "replaced at least one incandescent light bulb with a CFL".

The areas that appear to have the most potential in urban communities include unplugging or powering down appliances when not in use. Rural respondents have relatively high interest in most areas in which they are not already engaged.



A significant number of urban residents reported that they do not plan to dry their clothes on a line in either summer or winter, while rural residents indicated that they are least likely to install motion sensors on outdoor lighting.

### **Renters/Owners**

There is less difference between renters and owners in relation to home electric energy use than home heating energy use. Owners are still more likely to have completed one of the EE&C options listed on the survey but by a smaller margin. This is likely due to the fact that there is a larger number of conservation behaviors associated with saving electric energy and that measures in this area are relatively inexpensive to take. There is good penetration of incandescent light bulbs but still a sizable opportunity and a lot of interest.

## **Home Water (heating and use)**

Fewer participants had already adopted EE&C measures related to home water heating and use. The average completion rate for all measures was 26 percent among renters and 50 percent among home owners. There would appear to be substantial opportunity to increase EE&C with low and no-cost behaviors across all groups (urban/rural and owners/renters). However, a high proportion of respondents indicated that they had no plans to engage in these behaviors although they did not show any explicit aversion to doing so. This indicates a need for increased education efforts related to water heating and use efficiencies. Across the board there appears to be little understanding of the relationship between water heating and use and overall energy use.

### **Urban/Rural**

Urban participants had a slightly higher rate of completing EE&C measures related to water heating and use than their rural counterparts. The greatest differences were in installing low-flow toilets (44 percent of urban respondents had done this compared with 22 percent of rural respondents) and installing low-flow shower heads (55 percent urban vs. 40 percent rural).

Overall, there is moderate interest but appears to be relatively little penetration or understanding of energy efficiency related to water heating and use.

In particular, few rural residents who have not already installed low-flow aerators on their faucets expressed either desire or plans to do so. Among urban residents, the behavior with the least degree of penetration and intention is installing an insulating blanket on the hot water heater. The most commonly cited behavior that rural residents report already doing is lowering the hot water heater to 120 degrees (44 percent of rural respondents) and for urban residents, installing a low flow shower head (55 percent of urban respondents).

### **Renters/Owners**

Once again, there appears to be a lot of opportunity to increase efficiencies in water use and heating. Renters indicated no plans to participate in most of the water-related EE&C measures the questionnaire covered. This can in large part be attributed to the fact that most of these fall under the category of things paid for by the landlord (or owner.) This is also reflected in the significantly smaller percentage of owners who indicated no plans to engage in the listed behaviors. Overall

owners are nearly twice as likely as renters to have completed and/or plan to continue with EE&C activities related to home water heating and use.

## Transportation

Overall transportation energy efficiency has limited saturation across all groups, with rural respondents having completed the fewest of the listed behaviors. The most commonly completed behavior for all groups except rural respondents was keeping up with car maintenance. The activities respondents admitted they have the fewest plans to do are purchasing a fuel efficient or hybrid car and carpooling or taking public transportation.

### Urban/Rural

Not surprisingly, for Alaska there is little participation and limited interest in public transportation. There is somewhat greater interest among urban respondents than rural ones; but still more than half the urban residents surveyed revealed that they do not plan to use public transportation. Lack of enthusiasm is likely related to the lack of infrastructure necessary to make public transportation a convenient and viable option in Alaska.

Proper car maintenance was the behavior cited most often by urban respondents (93 percent) as something they already do; a much higher rate than their rural counterparts (fewer of whom own cars). In rural communities nearly one third of respondents expressed interest in proper car maintenance and 43 percent reported doing it.

## Actions at Work

The overwhelming sentiment about EE&C behaviors in the workplace is that there is a basic lack of information. Many community meeting participants expressed not knowing or thinking about energy use at their workplace. Some recalled having been surprised to learn that their workplace had implemented energy efficiency measures already, since nobody seemed to know about it.

The workplace represents an opportunity not only to reduce energy use on site, but to educate and reinforce positive EE&C behaviors that workers may then transfer to their homes. Meeting participants indicated that they believe behaviors learned and practiced at work can become habits at home.

### Urban/Rural

Urban respondents overall were nearly twice as likely as rural residents to be engaged in EE&C in their workplace. The contrast is greatest in space heater use, with 79 percent of urban respondents indicating that they do not have one at their desk, compared with 42 percent of rural respondents. Other conservation behaviors also showed significant variations. The majority of urban respondents reported that they always print double sided (68 percent) and do not print emails (78 percent), while less than one third of rural residents reported doing these things.

The behaviors where urban and rural respondents were relatively similar included conservation behaviors like turning off the computer at night and powering down other electronics, as well as energy efficiency measures related to the building envelope like caulking around windows.

There is strong interest in taking additional EE&C measures at work; in particular, replacing inefficient lighting and installing occupancy detectors had relatively low levels of current participation but a very high degree of interest.

**Renters/Owners**

There is general alignment between home owners and renters when it comes to EE&C habits at work. Owners are only slightly more likely to have adopted EE&C behaviors in the workplace. While the questionnaire did not ask about the type of a respondent's job or workplace, it is reasonable to assume there are some differences between renters and owners, especially since renters tend to be younger and thus at earlier stages in their careers.

# AEA Survey Findings

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Information Insights conducted a telephone survey with a statewide, stratified, random sample drawn from two groups—urban and rural residents. To survey Alaskans with a 95% confidence level requires a sample size of at least 385 individuals. However, in order to draw a sample that is representative of both urban and rural Alaskans, two samples are needed, each of equal size to ensure equal representation. Therefore, to assess Alaskans' EE&C behaviors, motivations and future plans statewide, 385 surveys were completed in rural and 385 in urban Alaska for a total sample of 770. The survey was conducted over the summer of 2011 with calls made in the evenings and on weekends.

Looking at the demographic and housing characteristics of Alaskans who completed the survey, the sample population was very similar to the state's population as a whole. Around 80 percent of telephone survey respondents live in single-family homes with the remaining 20 percent in other types of housing, including multi-family units and trailers. Urban households surveyed, both owner- and renter-occupied, are on average significantly bigger (nearly a third larger) than their rural counterparts.

Approximately 82 percent of respondents own their own homes. Rental households, the other 18 percent, tend to be smaller in terms of square footage and number of household members, with an average of two people per rental household and three per owner-occupied household.

Approximately one in five renters has utilities included in the rent (19.3 percent in rural communities and 21.9 percent among urban renters). This is an important factor to note since the user/payer disconnect is often blamed for low rates of energy efficiency and conservation in rental housing and commercial space.

The following section presents the survey key findings organized by target EE&C behaviors. Findings do not fit within the target behaviors they have been noted at the end. Although these additional findings may be less valuable in informing the final education and outreach plan, they still provide insight into how Alaskans view and interact with energy in their homes and places of work, including valid feedback on specific efficiency measures that may be promoted.

## Perceived Benefits of EE&C

If we are interested in reducing energy consumption, it is important to understand exactly what will motivate people to engage in EE&C behavior. In other words, we need to understand Alaskans' perceived benefits of reducing energy consumption. Looking at the results of the statewide survey, we can say that any campaign promoting energy efficiency and conservation in Alaska should be focused on three overarching benefits:

- Saving money

- Saving energy for the future
- Protecting the environment<sup>39</sup>

The two benefits to EE&C cited most frequently by survey respondents were “saving money” and “saving energy for the future.” These two benefits were mentioned almost equally often in urban and rural places, though for rural residents saving energy for the future was a slightly more popular motivator than saving money, while the inverse was true in urban Alaska. It is clear that for both urban and rural Alaskans both of these benefits are highly valued.

The third most cited benefit of EE&C is protecting the environment, which was mentioned with almost equal frequency in rural and urban places. Popular wisdom in Alaska often promotes the idea that Alaskans are not receptive to environmental messages. These survey findings indicate that there are a large number of people across the state who at least report that they place a high value on protecting the environment.

It is worth noting that while the EE&C behaviors and inclinations of renters differ dramatically from that of owners, this differences does not hold true when considering the benefits of EE&C. Respondents’ perceptions of the benefits of specific EE&C measures are discussed in the summary of survey findings that follows.

## Target behaviors

The statewide telephone survey findings were considered in concert with other components of the project including literature review insights, extensive conversations with entities currently engaged in promoting EE&C in Alaska, an online commercial survey, and findings from the community meetings. Looking at both quantitative and qualitative information, a short list of EE&C measures was developed that are considered to have the greatest potential for reducing energy use through consumer behavior change. The five behaviors to target to produce the greatest energy savings are:

- Switch to efficient lighting
- Install and use a programmable thermostat
- Get an energy audit
- Reduce the temperature setting on hot water heaters to 120 °F
- Replace and renovate right, using efficient practices and products

As previously noted, key survey findings are presented within each target EE&C behavior. Additional survey findings are also summarized at the end because while they do not directly relate to the desired behavior change targets they do provide valuable insight into how Alaskans think about and interact with energy.

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<sup>39</sup> It is worth noting that while the environment is considered a benefit across a wide range of respondents, messages with explicit environmental themes were not compelling when tested with both urban and rural resident.

## Switch to Efficient Lighting

Based on telephone survey findings, there is already decent saturation in both urban and rural places of efficient lighting, including CFLs, other fluorescents, LEDs and halogen lighting. Rural respondents indicated higher use of energy efficient lighting than their urban counterparts. Over 40% of rural respondents reported having switched all their lighting to efficient bulbs compared with about 22% of urban respondents. It should be noted that nationally consumers tend to over-report (due to social desirability) or over-estimate the level to which they have replaced inefficient lighting with efficient bulbs. Nearly all respondents indicated interest in switching to more efficient bulbs.

Close to one in five of all survey respondents thought switching to efficient lights would have the biggest impact on reducing electric energy costs in their homes, further identifying the disconnect individuals have between their actions and actual energy performance of their homes and businesses. Rural renters chose efficient lighting as the home electric EE&C measure of choice more often (over 20% of the time) than did rural owners (14.3 percent) or urban respondents overall (18.5 percent).

Spending resources to market efficient lighting is arguably not necessary because of federal law will phase out inefficient incandescent lighting between 2012 and 2014. In the short term, however, there is still opportunity to save significant energy by promoting voluntary change over to efficient bulbs. Even after the phase out of the traditional incandescent bulb, additional energy savings will still be attainable at low cost to the consumer. This will be true because efficient lighting technology has improved far beyond what will be minimally required by the law, and the cost of efficient lighting units is decreasing as the market matures.

Efficient lighting is probably more beneficial, *from a purely energy saving perspective*, in urban communities than in rural places for the reasons listed below.

- There is lower saturation in the urban market, thus more potential for new energy savings.
- Urban homes use substantially more electricity than their rural counterparts. Houses and commercial space are larger and have not only more electronics but more lighting fixtures.
- The cost of electricity in most rural Alaska communities is subsidized, decreasing the benefit to the homeowner of implementing electricity saving measures *relative to benefits of heating efficiencies*. It should be noted however that rural subsidized rates are still nearly always substantially higher than rural rates; the benefit is reduced in relation to home heating fuel which is not subsidized, not in relation to urban rates.

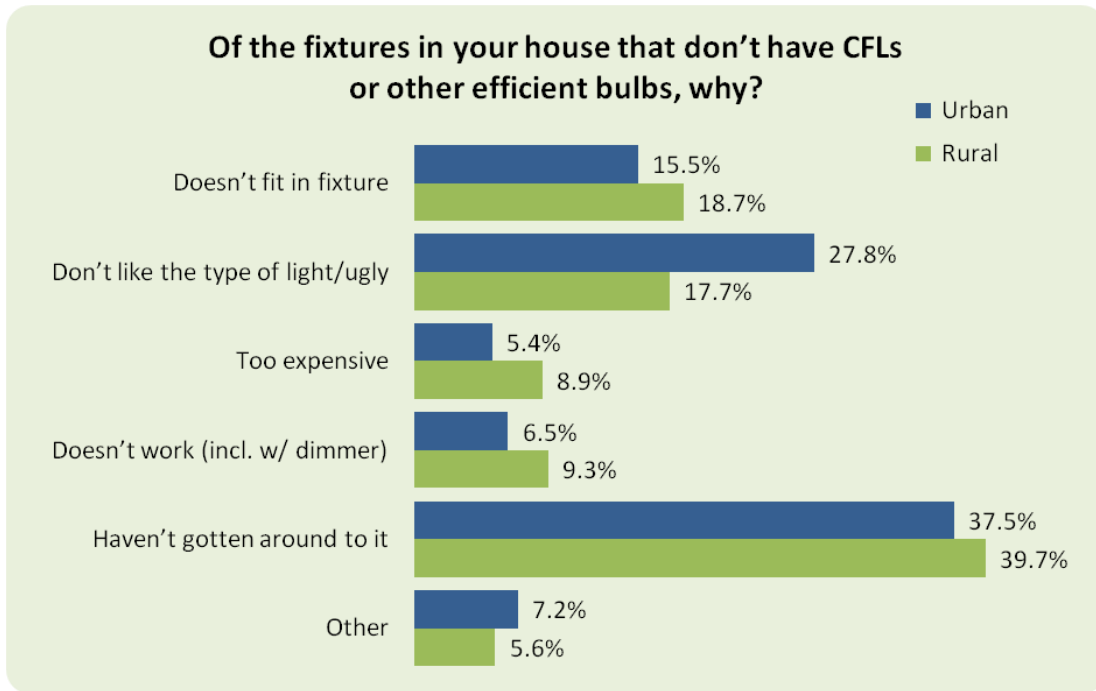
For these reasons, urban households and businesses are ideal targets for promoting lighting efficiency in Alaska. Rural private commercial enterprises, which tend to be larger than rural homes and do not qualify for Power Cost Equalization (PCE), are also good targets for lighting efficiency. However, because the cost of electricity represents a larger percentage of household monthly income in rural places (with high costs and low income) all efficiency and conservation measures should be promoted in rural places. The benefits from a social and economic perspective are substantially higher.

Reasons given by respondents for not switching to efficient lighting were often based on misinformation (“it won’t work in all bulbs”) or based on an image of early CFLs (“the light is ugly”). Urban Alaskans tend to think they can save more energy by turning off the lights when they leave a room than by switching to all efficient lighting. Urban respondents were also more likely to rate turning off lights as more beneficial than all other EE&C measures. Rural respondents ranked the energy saving value of turning off the light just below switching to efficient lighting.

The idea that an efficient bulb will not work in the fixture or that it does not work with dimmers, for example, is a substantial barrier in both rural and urban places, but it is one that can be addressed with basic education and information to correct misconceptions. There is great opportunity for energy savings through simple awareness raising.

The single biggest reason for not switching to efficient lighting is “haven’t gotten around to it,” which was indicated by up to 40% of rural and urban respondents. The other notable barrier, especially in urban communities, is the perception that energy efficient lighting is ugly.

Figure 1: Barriers to voluntary change over to efficient lighting



These barriers can be addressed by working with utilities and vendors to promote efficient lighting products to consumers and to provide incentives for their use (e.g., collaborating with grocery stores to place efficient lighting better and create competitions that engage the community). It is worth noting that access was not considered a barrier in either urban or rural places. Even amongst people who did *not* report high use of efficient lighting, availability was not listed as a reason.

### Install a Programmable Thermostat

Installing programmable thermostats offers an easy way to increase energy savings. Units are relatively inexpensive and once programmed take no effort on the part of the home owner. Note



that industry best practice dictates that the campaign to increase saturation of programmable thermostats should include clear directions on getting them programmed.

Programmable thermostats are found in few households in urban or rural Alaska. Not surprisingly, the group with the highest adoption rate is urban home owners; the lowest rates of programmable thermostat use are among rural and urban renters. It is notable that despite substantial differences in the types of heating systems found in urban and rural homes, the real difference in saturation of programmable thermostats is found between renters and owners. EE&C programs designed to increase use of programmable thermostats should first target landlords in both urban and rural communities.

The absence of programmable thermostats in rental units where heating costs are included in the rent further exacerbates the user/payer disconnect between energy consumption and cost. From the renter perspective, whether the heat has been turned down when they are not home has no tangible impact on their wallet.

Many renters say they do manually lower the heat before leaving home. Some report that this is for monetary savings and some for energy conservation, but just as important, others give “habit” as the reason. All groups of respondents recognized programmable thermostats as a more effective way to save energy than turning the heat down manually.

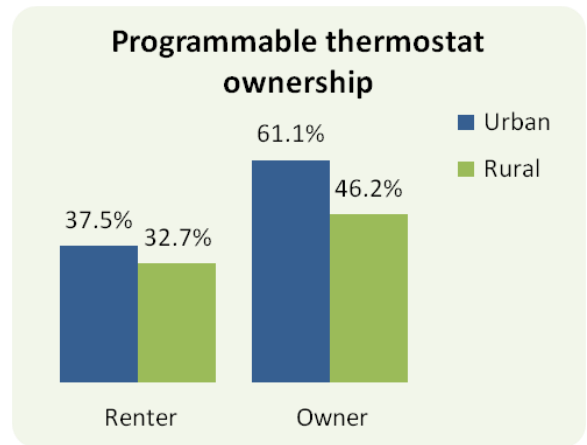
Many of those who own programmable thermostats live in homes with multiple heating zones. Despite this fact, nearly all report programming the zones for the same temperature.

Respondents who use programmable thermostats also report that they maintain temperature settings of 65 degrees, on average, when not at home.

Well over half of both urban and rural respondents reported that they “almost always” or “usually” keep their thermostats set at or below 68 degrees in the winter. Rural renters are the least likely to lower space heating temperatures to 68 degrees or cooler.

There is an opportunity for education even among users of programmable thermostats to reduce their energy consumption by encouraging lower temperatures throughout the house when they are away from home as well as lower temperatures for less used zones when they are at home. This may require building trust in the technology so people have faith that if they set the thermostat to start warming the house half an hour before they are scheduled to be home, it will be warm by the time they get there.

Figure 2: Programmable thermostat usage



### Get an Energy Audit

The successful adoption of many EE&C behaviors is influenced by the recommendations of an energy audit. The State of Alaska has energy audit programs for both residential and commercial

buildings and has also been working through Department of Transportation and Public Facilities (DOT&PF) for many years to do efficiency upgrades of state-owned facilities. An energy audit is the ideal delivery mechanism for education and outreach on energy efficiency and conservation. The audit creates a personal relationship with an individual or entity; this trusted source is able to provide targeted information through one-on-one consultation that is directly and immediately relevant to the consumer.

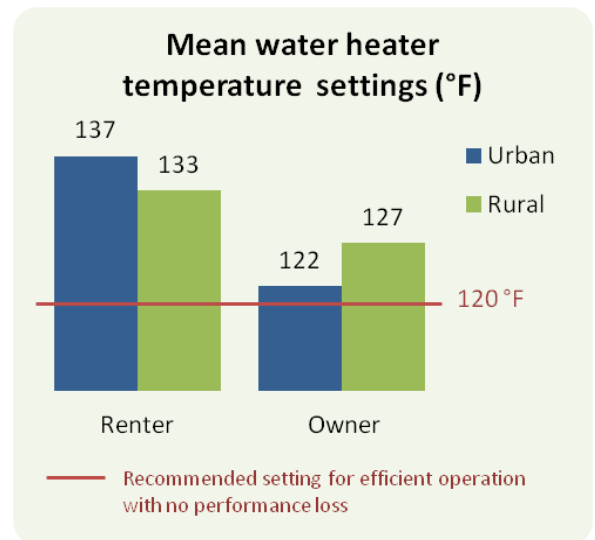
In Alaska, there is a large pool of certified energy raters, and a range of types of energy audit is available. And while energy audits are most typically associated with improving the thermal energy use in homes, they can include or be focused on other EE&C areas as well. This range of services creates both flexibility and the opportunity for customization based on customer desire. For example, a business can choose to have a very basic lighting audit done or can hire a dedicated Energy Service Company to audit, finance and implement efficiency measures.

### Turn Down Hot Water Heater Temperature Setting

Telephone survey respondents in both urban and rural Alaska reported mean hot water heater settings well above efficient levels. The recommended temperature setting for efficient operation with no performance loss is 120 °F. Reported settings ranged from a minimum of 60 °F to a maximum of 200 °F. In addition to saving energy and money, lowering the temperature on hot water heaters extends the life of the product—an important benefit to convey to consumers.

Plumbing and heating contractors are an important link in any education and outreach campaign that promotes reducing temperature settings and replacing inefficient hot water heaters. However, it is consumers who should be the primary target audience to educate about the benefits associated with reduced water heater temperature—primarily saving money and extending the life of their hot water heater—since they are the primary beneficiaries, while contractors see less direct benefit to themselves.

Figure 3: Hot water heater settings



### Replace and Renovate Right

Telephone survey respondents who already implemented EE&C measures with higher up-front costs (such as large appliance replacement, adding insulation or replacing windows) reported that they took this action when required for replacement or renovation. Most reported replacing something because it was broken or just too old. If the replacement was part of a renovation, they reported that it was motivated not by an interest in increasing energy efficiency per se, but as a secondary activity associated with a renovation whose primary purpose was something else (e.g. adding space, fixing something that was falling apart, etc.).

The high cost of some efficiency measures creates the biggest barrier to implementation; energy savings is not likely to provide adequate incentive by itself. Outside of direct rebates to consumers or a coordinated buy down of efficiency products, the most appealing opportunity presents itself at the point of replacement or renovation. At this point consumers who have already made a decision to make a major purchase can more readily be sold on the benefits of efficiency since they only need to consider the incremental costs associated with a more energy efficient purchase rather than the whole cost of replacement.

Messages about replacing and renovating right have the potential for widespread application, ranging from purchases of simple electronics to large home renovation projects. Replacing hot water heaters and adding increased insulation, as discussed below, are just two examples.

### **Replace inefficient hot water heaters**

Despite the fact that in nearly all parts of the state electric water heaters are the least efficient option for heating domestic hot water, just over a third of respondents in rural communities (39 percent) and urban communities (31 percent) reported having them. Electric water heaters do have other benefits that may outweigh their energy costs especially in rural communities. They are easy to operate and easy to maintain, and many rural communities lack the local expertise to maintain and repair more complex heaters, which can lead to systems breaking down in winter, not being immediately repaired, and suffering additional damage from freezing.

Urban respondents expressed limited understanding or appreciation of the relationship between water use and energy use. The opportunity to raise awareness through simple information sharing in urban communities is great because the current level of knowledge is so limited. Rural residents are more aware of the amount of energy expended in heating and moving water. Rural home owners chose efficient hot water heaters as their number one choice for saving electric energy, while urban owners chose it last. However, of those who knew what type of hot water heater they had, more rural residents had an electric unit (39 percent) than urban respondents (31 percent). The prevalence of electric hot water heaters is higher among renters in both urban and rural communities.

Hot water heaters are expensive and it is unlikely that most consumers will replace a working unit unless they have adequate financial incentive to buy down the initial investment. Plumbing and heating companies in urban Alaska are an important target audience for messages and information about hot water heater replacement, however they are most likely to respond to educated consumers who demand efficient products. The Alaska Housing Finance Corporation's Home Energy Rebate program also provides an opportunity to dramatically reduce the cost to the consumer of replacing an inefficient unit with an efficient one. Within the rental market the target audience should be building owners, since renters are not in a position to replace major appliances within their housing units.

### **Increase insulation**

The amount of energy used to heat space is a significant burden on commercial and residential budgets throughout Alaska. Both renters and owners in rural and urban Alaska are correct in recognizing that thermal energy consumption is the biggest energy user overall.

The primary reasons given by survey respondents for investing in increased insulation are saving money and making their homes more comfortable. Future efforts to encourage the public to improve their building envelope should focus not just on the monetary benefit but also on increased comfort within the building.

The main barriers to increasing insulation reported by survey respondents were cost and complexity. The process of adding insulation is both complicated and time consuming. Most people are not sure where to begin once they purchase the insulation. Any campaign to increase insulation and building envelope performance needs to include a clear path to completion.

Examples of successfully communicating the path to completion are the two large state programs that address the residential building envelope: 1) Weatherization and 2) Home Energy Rebate programs. Both generally do a good job of providing a clear path to completion. The Weatherization program employs workers who do the work for the resident, removing the barriers of time and complexity. The Home Energy Rebate program provides an energy audit and, more importantly, creates a relationship with a certified energy auditor who can assist consumers with making decisions in which they can feel confident.

## Additional Findings

In addition to the findings related to energy efficiency and conservation behaviors that rose to the top and became the identified targeted behaviors there were other areas with findings that should be held for consideration. Findings related to phantom load, workplace behavior and transportation are described below. Workplace behaviors in particular offer opportunities for individual businesses and organizations to make no and low cost changes to reduce both cost and energy waste.

### Phantom Load

There is growing awareness of the problem of “phantom load” from electronics that remain plugged in even when they are not in use. Energy can be saved by increasing the number and proper use of power strips that can both protect electronics from power surges and can be easily turned off. Survey respondents who already use power strips reported that they are motivated by fire safety, protecting/preserving expensive electronic equipment, and conserving electricity. About half of all respondents indicated that they already unplug devices or use a power strip; however, the extent to which these respondents are engaging in this behavior is not clear.

About two thirds of those who do not unplug or use a power strip indicated that they are not interested in doing so. The primary reason most gave is the inconvenience of having to turn something else on and off. While there appears to be an opportunity to save energy based on low saturation, low cost and relative ease of implementation, the willingness of people to adopt this habit compared with other EE&C measures seems relatively low, making it a poor candidate for a statewide energy efficiency campaign.

### Workplace Behaviors

Telephone survey respondents were asked a series of questions about their workplace behavior related to energy use, including turning off electronic equipment and lights, printing, office heat and

space heaters. Many of these behaviors are also relevant in the home but are primarily associated with work. The majority of respondents who already participate in an EE&C behavior say they do because of a culture or “norm” within the workplace. Norming is a powerful tool in generating desired behaviors, and employers have a unique ability to mandate behavior that creates desired norms. For example, a workplace policy requiring that all computers be turned off at the end of the day—with follow up reminders—soon turns into a habit that requires no enforcement.

The biggest barrier to implementing workplace efficiencies is the disconnect that exists between the energy user and the bill payer. Cost is not as effective a motivator at work unless you are the business owner or cost reductions are included in your performance reviews and compensation structure. Mechanisms to create EE&C norms can include policies, competitions, goals with prizes or a social component; these are all good ways to generate EE&C-minded behaviors in the workplace. An additional benefit to workplace efficiency efforts is that habits developed at work are often transferred to the home.

### **Turn off computers**

People are far more likely to turn off their computers at home than at work. The reasons appear to be the user/payer disconnect in most work places and the fact that computers are in use more of the time at work than at home.

More than a third of people in urban communities never turn their computers off when they leave work. The two most common reasons reported for this are that “the power save kicks on automatically so there is no need” and “it takes too long to boot up.” Other reasons given: “the company wants it on all the time”, “it’s inconvenient”, “don’t know/no reason” and “I only use a laptop which runs on a battery when it’s unplugged.” It is less clear to most people how to save energy using a laptop. The misconception about laptop energy consumption will likely become a larger problem as more workplaces transition away from desktop machines for their staff.

Approximately 85 percent of respondents reported either “always” or “never” turning off their computers when they leave work; the remaining 15 percent were split among the three other options offered – “most of the time”, “about half the time” and “less than half the time”. This would seem to indicate that the behavior is the result of habit more than thought; it is either part of employees’ end of the workday routine or it is not.

Setting a workplace policy and providing reminders and acknowledgement could create a workplace habit or norm for shutting down computers that will also transfer home in many cases. When asked about turning off computers at home, roughly half the respondents said they already do so all of the time.

### **Printing**

It is easy to see that printing on a single side of each sheet paper is wasteful because employees can physically see the volume of paper that is used especially when printing large documents. Survey respondents who said they print double sided the majority of the time at work do so primarily for environmental reasons, followed by “it’s normal workplace practice.”

People who do not print double sided said they either “had not thought of it” or “don’t know how” to make their computers or printers do so. For offices that own duplex-capable printers, there are technology solutions that can be easily implemented to encourage use of this option. For example, print settings can be changed so that double-sided printing is the default for all users, essentially creating an *opt-out* rather than *opt-in* choice for printing to both sides of the paper.

Another workplace behavior that results in extra paper and energy consumption is the practice of printing out emails. People most often reported doing this behavior to create a physical record of their communication. Survey results show that older people are more likely to print emails than younger ones, and rural residents are moderately more likely to print emails than their urban counterparts. The survey did not contact a single respondents age 18 to 29 years who reported printing email more than half the time. On the other end of the spectrum 22 percent of respondents 60 to 69 years old reported printing emails more than half the time. As older employees retire, this behavior will diminish. However, all employees can be encouraged to archive rather than print out the emails and instructed in how to back up their own email files if this is not being done on a network basis.

## Transportation

Barriers to transportation efficiency are significant in Alaska; the state covers vast areas with limited population density and little to no land use planning that incorporates transportation efficiency as a strategy or goal. More than 80 percent of rural respondents and 85 percent of urban ones said they “almost never, or never” replace 5 miles of driving per week with public transportation or carpooling. The primary reasons given were that these alternatives are either inconvenient or not available.

Survey respondents were more likely to replace driving with walking or biking, particularly in rural communities, where nearly one third of respondents said they engage in this behavior more than half the time. In contrast, only 12.8 percent of urban respondents said they replace 5 miles of driving per week with biking or walking more than half the time. Reasons given for not biking and walking more often nearly always related to inclement weather and to a lesser extent to distance from home to work.

## Target markets

Results from the statewide telephone survey can also help answer the questions of who best to target with EE&C messages and what mechanisms to use to reach them. These answers have also been informed by the study’s literature review and community meetings, as well as the experience of current and past programs.

Overall project findings suggest that the biggest potential for energy saving is likely in Alaska’s urban centers, for different reasons in different places:

- Anchorage rate payers are set to experience substantial increases in all of their utilities over the next several years.

- The level of awareness in and around Fairbanks increased with the price of fuel in 2008 as many residents found themselves struggling to pay their utility bills.
- In Juneau, the recent avalanche that cut off power from the inexpensive hydro resource showed residents and businesses just how resourceful they could be in the face of diesel generated electricity at rates five times higher.
- As prices in urban Alaska rise or fluctuate, consumers are paying more and closer attention to energy saving measures; energy efficiency measures can give them a way to control the size of their bill even when other things are not within their control. Additionally, urban residents use more energy per household than their rural counterparts, and urban Alaska is home to the large majority of commercial space in the state.

While the potential for statewide energy savings may be less, there are other reasons why the rural energy sector is equally important to focus on. High energy costs are having a crippling effect on both home and business economies in “bush” Alaska. Creating sustainable rural communities in Alaska will require more stable energy pricing in the future. EE&C offers one way for residents and businesses to control the size of their energy bill. While EE&C will certainly not make communities sustainable on its own, the high price of rural energy means that even small measures can have meaningful impacts.



# Message Testing

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For each of the five EE&C target behaviors, a set of media campaign messages was developed using different persuasive frames designed to motivate desired behavior change. Framing in the context of EE&C measures refers to how we characterize the benefit of the desired behavior.

For example, we might test two the following two messages about efficient lighting to see which has the greatest impact on consumer behavior. Message #1 might use a *monetary-gain frame* to describe the benefit in terms of saving money, while message #2 might use a *monetary-loss frame* to describe the benefit in terms of avoiding lost money. Each of the messages would frame the benefit of switching to energy efficient lighting differently and one more have a stronger impact over the other depending on the audience’s preferences and motivations.

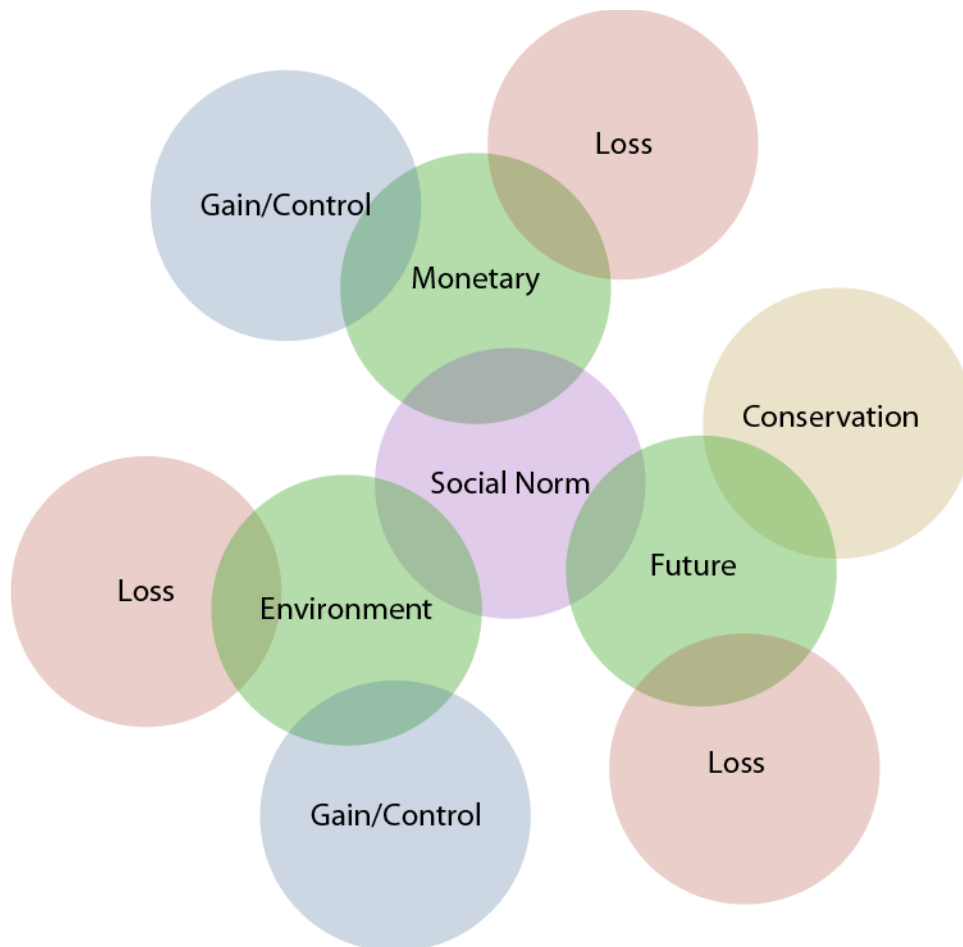
The choice of frames to use in message development and testing was informed by research into best practices, community and stakeholder input, and the statewide telephone survey. Identifying effective message frames is critical to developing specific campaign messages for use by current and future programs and organizations. The frames used in message testing are listed below. (The specific messages tested for each target are provided at the end of this section.)

- Monetary : Gain-control
- Monetary : Loss
- Monetary : Social Norm
- Future : Conservation
- Future : Social norm
- Environment : Gain-control
- Environment : Loss
- Combination: Gain

Polling and online survey to test the effectiveness of frames and messages was conducted via telephone and online. Respondents were guided through a series of questions to identify the message they found most compelling. Messages were delivered in random order to avoid any bias created by the order in which they were given. They were tested with both men and women in urban and rural communities, as well as with members of the Alaska State Chamber of Commerce.

The message that was identified as the most effective (i.e., the most likely to compel the consumer to comply with the desired behavior) was one with a monetary-social norming frame; it was chosen by respondents nearly a quarter of the time. Other messages consistently given as a top choice were ones with a monetary-gain frame that included component of personal control over consumption, and messages with a future-conservation (though not explicitly environmental) frame.

Figure 4: Areas of overlap identify the persuasive frames used in EE&amp;C message development and testing



The results of polling are closely matched with input received at community meetings: Alaskans care about and are motivated by money, community (personal definitions may vary), and the protecting the future—or at least maintaining the status quo.

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*Frame 1: Monetary-social norming*

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*Example: “Your neighbors have already saved around \$50 per bulb on their energy bills by installing efficient lighting, you can too!”*

It is important to note that the monetary-social norming messages were considered more effective than other monetary messages that did not include a social norming component. This finding is consistent both with industry best practices and with lessons learned in the community meetings. Social norming messages promote the idea that others within a given peer group or community are already participating in the desired behavior and, in this example, already seeing monetary benefits from that behavior. The monetary-social norming messages were chosen as the most effective message by both men and women, people under 40 and those 40 and older, commercial and residential respondents, and by urban Alaskans. The only subcategory that did not choose the

monetary-social norming message as their top pick is rural Alaskans but it was a close second to the future-conservation frame which was their top pick.

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### *Frame 2: Monetary- gain-control*

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*Example: “You’ve got the Power to save money. Take the first step by installing efficient lighting today!”*

Messages with the monetary-gain-control frame were the top choice when tested for two behavior targets: *repair and renovate right*, and *reduce hot water heater temperature settings*. Statewide survey respondents and community meeting participants also indicated that general economic instability and the unknown nature of utility prices provide strong incentive for pursuing greater efficiency measures to gain some measure of control of utility bills. Some Alaskans are shifting their focus from reducing costs to simply controlling cost volatility, and efficiency is one way to meet this goal. That said, most consumers are still focused on cost reduction. A message about controlling costs speaks to both groups, those concerned about future volatility and those concerned about current price.

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### *Frame 3: Future-conservation*

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*Example: “Conserve now for the next generation!”*

Messages with a future-conservation frame tied in their effectiveness to motivate consumers to consider installing programmable thermostats. These messages were often ranked second and third for message effectiveness overall.

Messages that were less effective included those with an environment-gain and a straight-up gain frame. Messages with an environmental gain frame describe how the desired behavior will have an improving impact on the environment. The gain-only message did not explicitly name the benefit gained from the behavior, but instead described generic “savings” (energy or money).

## Targeting Specific Markets within Alaska

Targeting specific markets has the potential to produce superior outcomes but it does not come without significant additional cost. For the purposes of a statewide campaign to increase energy efficiency and conservation it will be critical to select unique delivery mechanisms for messages depending on audience but there may be some messages that speak to the majority of the sub-groups generally considered in Alaska. Following is a brief summary of some of the similarities and differences noted during message testing.

### **Urban/Rural**

Much is made of the differences between urban and rural communities and markets in Alaska. While there are certainly differences it is also true that there are significant similarities. The messages that tested best in with urban Alaskans were those with a monetary-social norming frame. These messages also came in near the top for rural Alaskans.

Rural Alaskans chose messages with a future-conservation frame as their top choice. However, the difference between their top choice and the next one down (monetary-social norming) was negligible. For all intents and purposes both future-conservation and monetary-social norming are equally valuable frames to the rural Alaskans on whom messages were tested. Messages with a future-conservation frame did not rank in the top three in urban Alaska.

The least effective messages with rural people were those with a combination-gain frame, the wording in this message speaks to a hustle and bustle lifestyle that is not prevalent in many remote communities.

It is important to note that although the message being sent is important, in rural Alaska equally as important, if not more so, is the messenger. Close coordination with appropriate regional entities, such as Native organizations, in program design and implementation is a preferred model. Regional entities will know what is appropriate and effective in their region and will be able to influence selection of the right messenger to effectively deliver the key message(s) about target behaviors.

### **Gender**

Both men and women chose messages with a monetary-social norming frame most frequently as the most likely to motivate them to action. One difference worth noting is with messages with an environment-loss frame. These messages speak about wasting scarce and diminishing natural resources and women were more than twice as likely to choose this as a top message than men. However, because both men and women are decision makers in Alaska households, it is important to select a message that resonates with both genders.

### **Age**

Messages with a monetary-social norming frame were chosen as most effective by both people under 40 and those 40 and older. Both groups also indicated that messages with a future-conservation frame were effective in motivating them to take action. People 40 and older were far more likely to be moved by messages with a monetary-gain frame than the younger group.

### **Residential/Commercial**

Message testing concluded that individuals are motivated by the same messages at home as they are at work. Social norming messages with both monetary and future frames were considered effective. The messages with a social norming-future frame spoke to individual responsibility to the economic health of the state. These messages were more effective with the commercial sub-group than with other sub-groups.

When business people were asked if their workplace had a policy prohibiting space heaters, 79 percent indicated that they did not, three percent said they did not know, and the remaining 17 percent reported that their employers did have a policy prohibiting space heaters. When asked if they would support a policy prohibiting space heaters around half said they would not; the other half was split between those who would support such a policy and those who said they didn't know.

When asked if there was a policy in place requiring workers to shut down computers and other electronics at the end of the day, nearly 40 percent of business people polled indicated that their workplace did have such a policy. When asked if they would support a policy requiring shut down at

the end of the day, 82 percent said they would support such a policy with only seven percent opposed and the remainder were undecided.

## Media Choices

Where do people get their information about EE&C? Three-quarters of the Alaskans who were asked this question said they rely on Internet search engines to find information about energy efficiency and conservation. Other sources cited frequently included the State of Alaska and other government websites, product vendors, and friends and family. A small number of respondents said they did not know where they would go to look for information regarding efficiency and conservation.

When asked where they get their news nearly all respondents listed multiple sources. More than 40 percent reported their local newspaper or television news station as their primary source of news information, including several respondents from outside of Anchorage who use the Anchorage Daily News as their main news source. Nearly half of all respondents rely on national news outlets (both newspapers and television). More than 30 percent of respondents said they listen to public radio; this number is even higher in rural communities. Other sources mentioned were word of mouth, friends and family, and a variety of Internet sites.

Table 3 provides an example of the messages used for testing.

**Table 3: Tested messages**

Frame	Message (programmable thermostat example)
<b>Environment – gain/control</b>	You’ve got the Power to save the environment. Take the first step by installing a programmable thermostat today!
<b>Monetary - gain/control</b>	You’ve got the Power to save money. Take the first step by installing a programmable thermostat today!
<b>Combination - Gain – (time/control)</b>	You may be burning the candle at both ends, but did you know that your electronics, heating system and lighting are too? Cut your losses! Take the first step by installing a programmable thermostat today!
<b>Future – conservation</b>	Conserve now for the next generation. Take the first step by installing a programmable thermostat today!
<b>Environment – Loss</b>	Leaving the heat turned up when you aren’t there wastes our scarce and diminishing natural resources. Take the first step by installing a programmable thermostat today!
<b>Monetary – Loss</b>	Every day that you wait to install a programmable thermostat is another day where you’ve left money on the table. Take the first step and install efficient lighting today!
<b>Monetary – social norming</b>	Your neighbors are already saving hundreds of dollars on their energy bills by using a programmable thermostat, you can too! Install a programmable thermostat today!
<b>Future – social norming</b>	Alaska’s economic health depends on all of us. Let’s do our part to use our resources wisely by installing a programmable thermostat today!

# Outreach & Education Plan

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There are various mechanisms the Alaska Energy Authority and others can use to encourage people to engage in energy efficiency and conservation behavior including:

- A broad based effort to get message out
- Become the point of consolidation for different programs and information gathering efforts
- Do both of these things and then implement campaigns at the community level

The most successful campaigns to curb energy use long term employ outreach and education as just one component in an *integrated design* that includes policies, programs (existing and new) as well as education and outreach. The Alaska Energy Authority can act as the point of consolidation for all of these elements, bringing together programs and people to leverage resources and ensure that efficiency champions are working together rather than in silos. The Alaska Energy Efficiency Partnership has already begun the work of information sharing, coordination, and collaboration to leverage the resources of a growing number of entities involved with efficiency and conservation.

While the project team recognizes a holistic approach as the superior approach, the focus of this project is the outreach and education component. We note where it fits in the larger scheme simply to reinforce the notion that long term effectiveness will rely on collaboration and coordination of all of these different components in a unified effort. A brief description of an integrated model employing “social mobilization” is provided after the public relations and marketing plan.

Social mobilization is a method for changing behaviors that advocates for creating integrated systems to create long term behavior change. Social mobilization integrates five strategies, treating them as a system: sound bites, simple acts, service, education and leadership. Each element has a different scale of “presence” in the system and requires a different level of resource support to implement, but all are critical to success. RurAL CAP’s Energy Wise program is a good example of a behavior change effort that has created an integrated system that engages local leadership, and then the whole community, around energy efficiency. Many of the elements of a social mobilization campaign are reflected in this project, from stakeholder engagement to the public relations and marketing plan.

## **Alaska Energy Authority Public Relations and Marketing Plan**

*Prepared by Thompson & Co. Public Relations*

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Energy Efficiency & Conservation – Statewide Campaign

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December 2011

### **Background**

Awareness of energy efficiency and conservation in Alaska has grown substantially in recent years, particularly since the Alaska Housing Finance Corporation rolled out its successful Home Energy Rebate incentive for Alaska homeowners. Initially, homeowners interested in participating in the program experienced long waits to get an energy audit from a limited number of energy raters in Alaska. But as consumer demand grew, the number of raters in Alaska increased substantially and now thousands of Alaskans have participated in the program. With the popularity of the program has come a great deal more consumer awareness and interest in energy efficiency improvements in the home.

Nonetheless, there's still a great deal of room for improvement. Most Alaskans overestimate the potential energy savings generated by conservation efforts like turning off lights while underestimating the power of energy efficiency improvements such as installing insulation. Receptivity to efficiency messages varies throughout the state based mostly on the cost of energy in a given community. In rural Alaska and cities like Fairbanks, where energy costs are high, consumers are already fairly educated and more ready to take action; in Southcentral Alaska, where natural gas supplies make energy relatively inexpensive, a more intense effort will be needed to convince consumers to take action.

Five target energy efficiency and conservation behaviors have been identified in the research conducted for the Alaska Energy Authority as part of this project. They are:

1. Switch to efficient lighting;
2. Installation and use of programmable thermostats;
3. Get an energy audit;
4. Replace appliances with Energy Star labeled products and make renovations to your home with energy efficiency in mind;
5. Reduce hot-water heater temperature setting to 120 degrees Fahrenheit

This plan addresses these behaviors as a “package” rather than proposing distinct marketing approach for each.

### **Rationale**

This plan for a statewide marketing education initiative to advance energy efficiency and conservation across the state is presented in two sections: the first with the assumption of a \$600,000 budget (Strategy A) for a statewide campaign and the second (Strategy B) with a view toward what a more comprehensive statewide campaign would look like without regard to cost. In



the first section, the emphasis will be on generating maximum impact with minimal expense. In the second, a more traditional approach that includes TV, radio and print advertising, social media and public relations will be laid out.

Based on survey respondents' answers about where they get information on energy efficiency and conservation, the agency recommends a campaign foundation laid in searchable, online content. The first step will be establishing a Facebook presence for the Alaska Energy Authority to serve as a home base for several different thematic and campaign options to be presented in this plan. Leveraging existing websites such as [www.energyefficiency.org](http://www.energyefficiency.org) can provide additional online capacity and presence.

### **Core Messages/Audiences**

Consideration was given to a number of factors in identifying the primary and tertiary audiences addressed in this plan: making the biggest impact with the most people; reaching people with the largest gap in understanding on the issue; and communicating with key constituencies like realtors, brokers, mortgage-loan originators, energy raters and contractors that have an authoritative voice in the home buying and improvement process. With those factors in mind, the emphasis for the first part of this plan is primarily on property owners in urban Alaska. Other audiences specifically addressed in this plan include: residents of rural Alaska; real estate agents and brokers; energy raters and contractors; and mortgage-loan originators (to capture homeowners in the process of refinancing their homes).

Information Insights' research indicates that positive social pressure and the potential to save money are the biggest motivators to engaging in energy efficiency and conservation behavior. All campaign elements and materials will be produced with those message frames in mind.

## **OBJECTIVE**

Increase energy efficiency and conservation behaviors among Alaska residents.

## **GOAL**

Increase adoption of five specific energy efficiency and conservation behaviors by Alaskans statewide.

## **STRATEGY A**

*Working with a \$600,000 budget, generate large-scale, statewide awareness and adoption of the five key practices identified in research to increase energy efficiency and conservation in Alaska.*

**TACTIC 1**                      Establish a brand/tagline for the campaign that communicates the idea that being energy efficient is socially desirable and cost effective.

**RATIONALE**                      It is important to create an umbrella theme for the campaign that incorporates all of the desired behaviors while remaining short and catchy. The current tagline being used by Alaska Energy Authority “It’s common sense” speaks to the monetary savings associated with efficiency but fails to evoke the social norming component that the research shows makes for a more effective message. Social norming messages tested well and should be incorporated into the overarching theme of the campaign. The message “You have the Power to save money” followed by a specific efficiency action, also tested very well and lends itself to an overarching campaign slogan.

**AUDIENCE**                      All statewide

**MESSAGE**                      Energy efficiency and conservation are cost-effective and socially responsible behaviors, a large number of Alaskans are already engaged in, and benefiting from, efficiency behaviors.

## **ACTION STEPS**

1. Brainstorm a tagline that incorporates social norming and monetary saving with help from your marketing/public relations team.

**TACTIC 2**                      Establish a social media presence for the Alaska Energy Authority’s energy efficiency and conservation programs and campaigns.

Note that social media is important but time intensive. Active and engaging presence on Facebook is a must for getting the message out but engaging in other more demanding social media such as Twitter which requires an even higher level of engagement is not recommended unless funds are available to pay for daily content.

**RATIONALE**                      The Alaska Energy Authority is not currently on Facebook although the Alaska Energy Efficiency Partnership with [www.akenergyefficiency.org](http://www.akenergyefficiency.org) does have a Facebook presence. Whichever page is determined to be most

feasible and appropriate the content on the page should be closely aligned with the campaign goals and strategies outlined in this report.

A Facebook page will provide a platform for a number of the recommended activities in this plan. Facebook and its advertising options offer an inexpensive means to reach hundreds of thousands of Alaskans. As of December 2011, there are 219,520 Alaskans between the ages of 35 and 64 on Facebook, and this older age bracket is one of the fastest growing demographics in Facebook usage. Ad campaigns on Facebook cost a fraction of what it takes to conduct any other form of advertising, including print, online, radio and TV advertising. Cutting-edge multimedia campaigns can be created using plug-in applications supported by Facebook, so establishing a single AEA energy efficiency and conservation page would go a long way toward a range of activity from basic to sophisticated, depending on available resources.

<b>AUDIENCE</b>	Alaska property owners/landlords, future property owners/landlords
<b>MESSAGE</b>	<p>The primary and most basic message promoted on the Facebook page would be about the five behaviors: switch to efficient lighting; installation and use of programmable thermostats; get an energy audit; replace appliances with Energy Star substitutes and make renovations to your home with energy efficiency in mind; and reduce hot-water heater temperature to 120 degrees Fahrenheit.</p> <p>The Facebook page is a perfect format to provide step by step instructions, making it easy for consumers to see next steps in implementing the desired energy efficiency measure/behavior. Facebook also offers a way to “remind” individuals of the desired behavior and to follow up on progress.</p> <p>The page could also serve as a resource for property owners/landlords by providing links to supporting organizations and additional information/research available online.</p>

#### **ACTION STEPS**

1. Set up Facebook account.
2. Determine account administrators.
3. Claim custom URL on Facebook, e.g., [www.facebook.com/AlaskaEnergyAuthority](http://www.facebook.com/AlaskaEnergyAuthority).
4. Create eye-catching graphics for the page that promote the five energy efficiency and conservation behaviors and offer links and resources for more information.
5. Ask AEA employees and Alaska Energy Efficiency Partnership members and contacts to “like” AEA on Facebook and to share with friends/professional contacts as appropriate to begin establishing a base of followers for the page.
6. Promote the page through Facebook advertising to establish a fan base.

<b>TACTIC 3</b>	Conduct high-impacts, statewide multimedia campaign to generate awareness and interest in energy efficiency and conservation.
<b>RATIONALE</b>	Multimedia and web-based communications, including social media, are the most cost-effective means to reach the largest audience. It also communicates a level of sophistication to audience members.
<b>AUDIENCE</b>	Property owners/landlords statewide
<b>MESSAGE</b>	Energy efficiency and conservation are cost-effective and socially responsible behaviors, a large number of Alaskans are already engaged in, and benefiting from, efficiency behaviors.

Two ideas for campaigns of this kind are outlined below.

***Concept 1 – “Cribs AK”***

Create MTV “Cribs”-style video spoof where prominent Alaskan homeowners showcase their personal home-energy efficiency by focusing on the five key behaviors (efficient lighting, programmable thermostats, an energy audit, appropriately renovated items and a hot-water heater temperature of 120 degrees).

Cribs is a popular show on MTV that showcases the homes and lifestyles of famous athletes, musicians and actors. In the show, famous people show off the high-tech custom features in their homes. The show ran for 16 seasons and is still running in syndication, so it is familiar to many.

A tongue-in-cheek approach to the energy efficiency and conservation message in this Alaska version of Cribs will keep viewers from feeling scolded or talked down to. The concepts will be presented in a playful manner that still conveys their value. The feel is youthful without alienating older viewers (and the bulk of homeowners) because it takes an established concept and parodies it in a way that will be recognizable to people even if they are not familiar with the MTV show. The videos will incorporate popular Alaskans and their homes from different regions of the state to add an element of “celebrity.” Possibilities include the Santa Claus House in North Pole or Ted Sadtler of the Mattress Ranch.

This concept translates easily to rural communities, offering an opportunity for regionalization to localize the campaign. For example, in the Northwest Arctic region a potential celebrity could include Iditarod champion John Baker and in Southwest is could be Olympic snowboarder Callen Chythlook-Sifsof. Videos will have a high production value that makes them look polished and suitable for airing on television. They will be uploaded to YouTube and can also be used on websites and social media such Twitter and Facebook. Facebook advertising will promote the series of several Cribs AK episodes to drive traffic to the video, to AEA’s Facebook page and to the Alaska Energy Efficiency Partnership website [www.akenergyefficiency.org](http://www.akenergyefficiency.org)

**ACTION STEPS**

1. Meet with video production teams to begin creative process of casting and scripting videos.
2. Reach out to mix of Alaska celebrities in communities around the state to identify candidates for the video series.

3. Post the videos to YouTube, on AEA's Facebook page, and on [www.akenergyefficiency.org](http://www.akenergyefficiency.org) at a predetermined rate, perhaps once per quarter.
4. Create Facebook ads promoting each video as it's released.
5. Write and distribute a press release that highlights the videos and gives an overview of other aspects of the campaign.

### ***Concept 2 – “Extreme Makeover: Alaska Energy Edition”***

Drawing on ABC's popular show “Extreme Makeover: Home Edition,” Alaskans will compete to win a full energy retrofit of their homes. Much like the ABC version, contestants will create digital videos featuring their outdated appliances and high energy bills while making a personal plea for why they deserve the retrofit. AEA will choose at least one winner from among the submissions for a complete home-energy makeover. The contest will be promoted using Facebook advertising that will simultaneously drive traffic to AEA's website and promote the contest and the five energy efficient behaviors targeted in this overall effort. As videos are uploaded, they can be shared on Facebook and an AEA YouTube channel. AEA could even let its fans choose the winner(s).

Partnerships and cosponsors could help elevate the contest. For example, a statewide retailer like Spenard Builders Supply would be an excellent choice to provide the materials for the renovations.

As anyone who has ever watched the ABC version of “Extreme Makeover” knows, the climax of the show is the “reveal,” when the giant truck that has been blocking the view of the house pulls away and the homeowner stands in awe of the wonderful work that has been done on their home. In AEA's case, this moment would likely be somewhat less dramatic, but would still provide great (and even possibly humorous) fodder for a possible short-duration TV advertising campaign. A video-production team could film the reveal and the explanations for each update that would be given to the homeowner as he or she is walked through their home.

### **ACTION STEPS**

1. Identify potential partners to execute the campaign, including private and nonprofit sector organizations like Spenard Builders Supply, Alaska Housing Finance Corporation, local utilities, etc.
2. Create a custom Facebook tab to promote the contest on AEA's Facebook page and begin soliciting submissions.
3. Explore inexpensive options for advertising the contest on local radio statewide.
4. Draft, edit and distribute a press release announcing the contest to media outlets statewide.
  - a. Pitch Eric Hughes, host of the weekly “How 2 Do It” feature on Anchorage's KTUU TV, to feature the contest and the five behaviors on his segment.
5. Post video submissions on Facebook and on an AEA channel on YouTube.
6. Allow AEA Facebook fans to help select the winner in each community.
7. Select the winners in each community and meet with homeowners to discuss the timing of the energy efficiency upgrades.
8. Conduct upgrades and hire a videographer and photographer to capture the process.
9. Prepare a “reveal” party for the homeowner to amp up the drama associated with unveiling the upgrades; film and photograph this process.

10. Announce the winners on Facebook and upload video and photo documentation to Facebook and YouTube.
11. If budget allows, edit the video footage for use in a statewide TV advertising campaign that highlights the five behaviors and the winners.
12. Cross-promote all campaign elements on the AEA website.

**TACTIC 4**                      Leverage the current home-refinancing boom to reach consumers interested in improving their homes by working with home-loan originators to promote the five energy efficiency and conservation behaviors.

**RATIONALE**                      Homeowners in the process of refinancing are a great target for energy efficiency and conservation education. They are interested in saving money and are willing to take action to accomplish that goal. Refinancing requires an assessment, giving homeowners current, market-tested information about their home’s value and prompting them to consider what they can do to increase it. Home-loan originators spend concentrated time with their clients developing a trust and education-based relationship and could be an excellent conduit for energy efficiency and conservation education. Interest rates are at an historic low, meaning more and more people are finding value in refinancing their homes; banks and credit unions are marketing this service aggressively.

**AUDIENCE**                      Property owners/landlords statewide

**MESSAGE**                      Improving your home’s energy efficiency increases its value and saves money.

**CONCEPT**

A new type of home-energy audit – a “mini-audit” or home energy snapshot – would be created and marketed to Alaska’s energy raters to focus on the five energy efficiency and conservation behaviors identified in this plan. Recognizing the raters’ trusted role in clients’ lives, and their opportunity to further educate customers once they are in the home, raters have a powerful role to play in improving Alaskans’ energy efficiency and conservation practices.

Loan originators would be incentivized to ensure their clients sign up for a free mini-audit of their home’s energy efficiency. Originators – or entire home lending departments at Alaska banks and credit unions – could be offered an incentive for every 25 homeowners who complete the mini-audit, for example.

Every homeowner who completed the mini-audit would be entered to win a full audit and up to \$5,000 (or other amount to be determined) in home energy improvements.

**ACTION STEPS**

1. Develop and train Alaska energy raters on this abbreviated energy efficiency and conservation audit; this mini-audit could be branded and marketed as a “Home Tight” audit if that tagline is adopted for the overall AEA campaign effort.

2. Work with home-loan originators and mortgage lenders to create an incentive package to get Alaskans in the refinancing process registered to receive the mini-audit.
3. Create supporting printed materials to promote the campaign in home lending offices statewide, including brochures, posters and pop-up displays.
4. Choose winners among those who complete the steps in the mini-audit to receive the full audit and up to \$5,000 in home energy improvements.
5. Promote the winners on Facebook and through other channels as budget allows, including radio, TV and print advertising.

**TACTIC 5** Work with real estate agents and brokers to improve awareness and understanding of what energy efficiency contributes to a home's value and buyer satisfaction.

**RATIONALE** Home listings frequently note if a home has a five-star or five-star-plus energy rating, and buyers, sellers and agents all seem to understand the desirability of owning a home with this level of energy efficiency. But ratings below five-star are rarely noted in listings, and there's a widespread lack of understanding about the difference between a one- or two-star rated home and a four-star home, for example. Current seller disclosure forms require sellers to include information about the past year's utility bills, but this may not translate to efficiency in the same way a rating does. Different owners will use different amounts of energy based on lifestyle and family composition, and the amount of energy used by a family of five is not comparable to what a single person or couple might use. By shifting the focus from energy bills to energy ratings, consumers will gain a greater understanding of a home's cost of ownership, and given the trusted consultative relationship agents have with sellers and buyers, a great opportunity for public education exists by tapping this relationship.

**AUDIENCE** Real estate agents and brokers; property buyers and sellers

**MESSAGE** A property's energy efficiency has a great impact on cost of ownership, and is both a powerful marketing tool for sellers and an important factor to consider when buying.

**CONCEPT**

Not unlike energy raters and contractors, real estate agents have a unique opportunity to educate clients about energy efficiency. Agents are required to take ongoing education courses in order to maintain their licenses, and while there is coursework focused on energy efficiency, this educational role is under-realized. Creating a set of marketing and outreach materials designed specifically for agents and agencies will help capitalize on this audience and opportunity.

**ACTION STEPS:**

1. Conduct informal outreach to agents in cities across Alaska to discuss energy efficiency with them and discover what tools they would find most useful and be most willing to incorporate in their client conversations.



2. Create collateral items (brochures, door hangers, posters or other graphics) designed specifically for the real estate agent market and distribute to agents statewide.
3. Issue a press release to news organizations statewide to promote the outreach program to real estate agents and identify agents willing to be interviewed about their experience in marketing a home's energy efficiency.
4. Consider working with the Alaska Legislature on changes to the Alaska Real Property Transfer Disclosure Statement to include a home's energy rating on the form.

**TACTIC 6** Create a certification program for contractors who specialize in home-energy renovations and create a searchable online database with business listings for these contractors. The Alaska Homebuilders Association and the Alaska Building Science Network both offer training and certification to builders. Their existing infrastructure could be used for certification.

**RATIONALE** By enrolling in the Alaska Housing Finance Corporation's Home Energy Rebate program, consumers are automatically paired with a certified energy rater available to rate their home's energy efficiency. However, once consumers receive the rating, there is a gap in connecting with contractors to get the repairs done. Additionally, many contractors do not have specific expertise in home energy improvements, but because consumer demand is so high, they often present themselves as such. In addition to perhaps not doing a good enough job to help consumers get the rebate, contractors can also inadvertently contribute to air quality problems in a home if they seal it up too tight. Developing a certification process will allow contractors to market themselves as experts in home energy efficiency repairs.

**AUDIENCE** Contractors; home owners/landlords

**MESSAGE** Connecting with a contractor certified to make energy efficiency upgrades is easy and their knowledge is sufficient to do the job well.

**ACTION STEPS:**

1. Create an educational/certification program for contractors, complete with a logo or designation they can use in advertising materials. Leverage existing training and certification programs.
2. Issue press releases in cities statewide announcing the new certification program availability and soliciting contractors to register.
3. Create an online database (to be hosted on the AEA website and elsewhere) with listings for currently certified contractors, searchable by city.
4. Conduct educational courses in cities statewide.
5. Conduct additional media outreach around story opportunities including: when the first hundred contractors are certified; when every city in Alaska has a certified contractor; or when the program passes other relevant milestones.

**TACTIC 7** Create a partnership with Rural Alaska Community Action Program (RurAL CAP) to provide support to and capitalize on the success of its existing Energy Wise program.



**RATIONALE:** RurAL CAP's Energy Wise program already successfully engages rural Alaskans and the organization is receptive to partnerships that would expand the program. The program uses community-based social marketing – a technique validated by the research conducted by Information Insights on this project – to elicit behavior change and home modification. The Energy Wise program utilizes locally hired and trained crews to educate community residents (both on a large scale with energy fairs and also through one-on-one full-day visits) and conduct basic efficiency upgrades in area homes. RurAL CAP reports that in 2010, 2,000 homes received energy use assessments, education and low-cost efficiency upgrades. It estimates the average cost per home is under \$2,000. Support could be offered in many forms, from production of collateral items, supplying housing materials or monetary donations.

**AUDIENCE** Rural Alaska homeowners/landlords

**MESSAGE** Efficiency upgrades are an easy way to save money for me and the whole community; information about the steps necessary is coming from a trusted and familiar entity in my community.

**ACTION STEPS:**

1. Meet with Energy Wise program managers to assess the feasibility of partnership.
2. Create collateral materials for use by RurAL CAP representatives.
3. Educate program representatives about AEA priorities for education.
4. Support community gatherings in targeted communities to introduce the initiative. Send staff or AEA representatives to participate if warranted.
5. Write and distribute a press release highlighting the collaboration between AEA and RurAL CAP. Target rural weekly newspapers and local public radio stations for coverage.
6. Purchase and distribute household repair items branded with the program name and slogan. Possibilities include basic tools or even custom-branded duct tape.

## **STRATEGY B**

*Conduct a comprehensive statewide advertising and public relations campaign to promote behavior change related to energy efficiency and conservation.*

A comprehensive plan will include all of the social marketing and other activities noted in Strategy A but with the addition of traditional media.

**TACTIC 1** Create TV, radio and print advertising concepts/themes and plan a media schedule that fits program goals and budgets.

**RATIONALE** Advertising for the campaign should be consistent in look and feel across mediums to make the maximum impact.

**AUDIENCE** Property owners/landlords statewide

**MESSAGE** Energy efficiency and conservation are cost-effective and socially responsible behaviors.

**ACTION STEPS:**

1. Working with the advertising agency that created the campaign branding, develop TV, radio and print advertising concepts, mockups and scripts and produce advertising.
2. Plan and purchase advertising on television and radio stations statewide and place print ads in newspapers and online.

**TACTIC 2** Establish a website for the campaign that explains the five behaviors and links consumers to additional online resources. The Alaska Energy Efficiency Partnership [www.akenergyefficiency.org](http://www.akenergyefficiency.org) could be used as a starting place for a campaign web presence.

**RATIONALE** Survey respondents identified the Internet as the top place they search for and gather information about energy efficiency.

**AUDIENCE** Property owners/landlords

**MESSAGE** Energy efficiency and conservation are cost-effective and socially responsible behaviors.

**ACTION STEPS**

1. Hire a web designer/programmer to design the site, if leveraging existing site staff will still be needed to maintain and update.
2. Write site content and produce graphics and photography based on job specifications.
3. Include a content-management system so site updates can be made quickly and efficiently.
4. Incorporate graphics and other advertising elements into site.
5. Include certified-contractor database in the new site.

**TACTIC 3** Create and execute a comprehensive public relations and media outreach plan to inform the public about the benefits of energy efficiency and conservation.

**RATIONALE** Generating earned media coverage in Alaska's various news outlets will help amplify the messages being delivered through advertising while providing greater credibility to the messages.

**AUDIENCE** Journalists and editors statewide

**MESSAGES** AEA representatives are credible authorities on energy efficiency and conservation and are interested in improving the lives of Alaskans by helping them save money and protect the environment.

**ACTION STEPS:**

1. Create media materials with in-depth information on each of the five energy efficiency and conservation behaviors.

2. Conduct media training for the campaign's designated spokesperson.
3. Conduct editorial briefings with reporters and editors statewide to explain the five behaviors and the purpose of the campaign.
4. Add a media section to the campaign website.
5. Throughout the year, issue press releases on relevant topics and milestones in the campaign.

**BUDGET – TRADITIONAL STATEWIDE ADVERTISING CAMPAIGN**

Advertising costs are highly variable, so it is difficult to describe in the abstract what a comprehensive statewide campaign would cost. Costs vary by the quality of placement (front section of the Sunday paper versus classifieds section in the middle of the week, for example, or a 30-second spot during KTUU Channel 2's 6 p.m. Newshour versus 30 seconds during sitcom reruns on statewide cable), time of year and even particular political or social events. During the Olympics, a presidential campaign season, sweeps weeks or other times, television advertising can become substantially more expensive than at other times of the year.

Generically speaking, however, AEA can expect to spend at least \$1.5 million to conduct a comprehensive statewide advertising, public relations and social media campaign similar in scope to what is proposed in this plan.

*Television advertising*

Production (three different ads)	\$25,000
Placement	\$700,000

*Radio advertising*

Production (three different ads)	\$5,000
Placement	\$250,000
Public radio underwriting	\$30,000

*Print advertising*

Production (three different ads, multiple sizes, photography)	\$10,000
Placement	\$120,000
Website design (including database design)	\$200,000
Public relations and social media	\$175,000

TOTAL	\$1,515,000
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## Discussion of an integrated model

A thoughtful social mobilization campaign demonstrates the power of integrating multiple elements, including social marketing tools, community engagement strategies and business skills. Applied to such sustainability challenges as the need for radical gains in energy efficiency, the end result for communities can be stable, robust networks of engaged citizens capable of achieving significant and measurable progress.

Social mobilization works because it integrates five strategies into a successful campaign, treating them as a system: sound bites, simple acts, service, education and leadership (see diagram). Each element has a different scale of “presence” in the system and requires a different level of resource support to implement, but all are critical to the success of the strategy.

This system rests on a foundation of *key gatekeeper engagement* and *integrated planning*. Identifying key gatekeepers (community leaders) and engaging them in a conversation helps to clarify what motivates a decision maker and to distinguish the differing goals of various communities (such as rural and urban) as well as the gaps between these goals and the goals of the campaign.

Integrated delivery of strategies is the second key to converting ideas and intentions into action. A clear, common *vision*, developed from stakeholder interviews, becomes the basis for an understandable, urgent and compelling rallying cry, bridging traditional political boundaries and embracing common goals such as health, prosperity and livable neighborhoods. *Identifying* all sectors’ existing plans, regulatory requirements and community needs relevant to energy efficiency enables them to be *integrated* into the social mobilization program. This integration and the common vision help to set the stage for *shared, integrated goals* and reduce the potential for competing messages.

Once a vision, plan and goals have been developed, an integrated implementation campaign with a mix of existing programs can be crafted to speak to the cultures of different communities. First, *soundbites* communicate what needs to be done and create an auditory sense of place that tells key constituents they are part of something they care about. Through repetition, soundbites become the glue that holds the different strategies in the campaign together.

Because a typical individual is exposed to as many as 3,000 media messages a day, soundbites need to be compelling and memorable, and need to be repeated often. Fortunately, they are relatively cheap to produce. Unfortunately, some campaigns succumb to the temptation to stop there. But soundbites are not enough by themselves, no matter how many are produced and distributed or how many “impressions” are registered.

Soundbites need a relevant context to create traction for a campaign. *Simple acts* help to build this context by actively engaging people in everyday actions that represent participation opportunities, such as turning off computers that are not in use—the familiar “50 Things You Can Do to Save the Earth” tactic. Participation can be broadened by lowering the barriers to it; for instance, if the goal is to encourage recycling, put recycling bins right next to trash cans and label the bins with images of the items acceptable for recycling.

Participation is extended and reinforced by encouraging further action—*service*—in groups. Service opportunities tangibly show people they are part of a larger movement and can foster a “band of brothers” kind of community. Neighborhood groups are a good example, but a community need not be oriented around a place; all it takes are shared values, a boundary that clearly defines who is a member (it can be permeable, of course, to encourage new members), and the chance for members to associate and work together periodically.

Assemble a goal-oriented group, of course, and someone will soon begin asking questions, such as, Why exactly are we doing this? *Education* alone will not lead to change, but Americans generally want to understand what’s being asked of them before they will commit to it. A successful campaign will recruit a critical minimum of accessible experts to answer technical questions and explain why the prescribed actions are important and if they are being performed correctly. In a carefully crafted campaign, the answers to the “why” questions will tie back to the soundbites.

The fifth element is *local leadership*, which is vitally important to ensure that at least one person notices problems, rallies people to implement actions, and keeps them pointed toward the target. These leaders can be neighborhood group leaders, small business department heads, non-profit managers or others. Identifying and supporting these leaders is necessary to implement a community campaign. Leadership falls at the opposite end of the resource/expense spectrum from soundbites; the resources to support them can be costly, and creating leaders from scratch can be very costly. On the other hand, only a handful are likely needed.

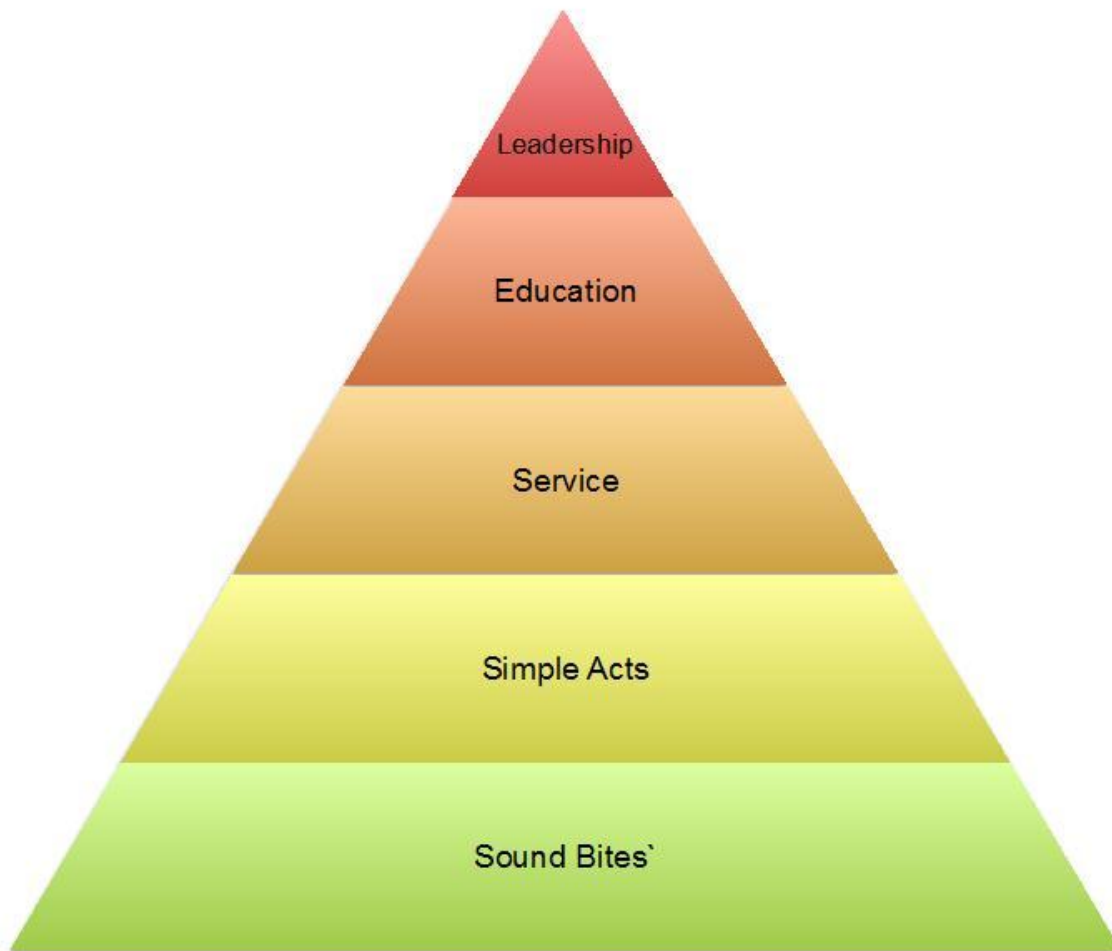
Each element of the system is linked synergistically with the others. Sound bites are the least expensive strategy, but without leadership the awareness generated will go unmobilized. Leadership is indispensable, but leaders operating in a context with no clearly defined issue, or zero constituent awareness about it, will not succeed in launching a movement. Sound bites and leadership will both be inadequate if constituents cannot get their questions answered and doubts addressed; hence the need for education. And if service is left out of the mix, individuals are less likely to feel they are part of a larger movement.

Some final considerations: It can be valuable to inventory other existing programs focused on similar goals, and to aim resources at the elements which they do not already fully address. This can extend resources and improve outcomes.

Closing the loop is essential, which is the point of the integrated model. A person can be educated about an issue and can care about its impacts, but unless he or she is coaxed into taking action—via peer-group pressure, social incentives or competition, perhaps—real behavior change is unlikely.

# Integrated Program Design

Compelling, Understandable and Urgent Goal



Feedback Loops and Transparency

# Appendix I

## Community Meeting Questionnaire Responses

EE&C Activity	Completed this and/or will continue to do this			Have plans to start doing this Or no plans but want to do it			Don't plan to do this			Completed this and/or will continue to do this			Have plans to start doing this Or no plans but want to do it			Don't plan to do this		
	Completed this and/or will continue to do this	Have plans to start doing this Or no plans but want to do it	Don't plan to do this	Completed this and/or will continue to do this	Have plans to start doing this Or no plans but want to do it	Don't plan to do this	Completed this and/or will continue to do this	Have plans to start doing this Or no plans but want to do it	Don't plan to do this	Completed this and/or will continue to do this	Have plans to start doing this Or no plans but want to do it	Don't plan to do this	Completed this and/or will continue to do this	Have plans to start doing this Or no plans but want to do it	Don't plan to do this			
Home Energy: Heating	Urban			Rural			Renters			Owners								
I have and use a programmable thermostat.	62%	26%	11%	42%	25%	33%	33%	37%	30%	76%	16%	8%						
I keep the temperature in my home between 60 and 65 degrees during the winter.	68%	2%	30%	38%	38%	23%	64%	4%	32%	59%	13%	28%						
I adjust the thermostat when I leave the house (both summer and winter).	83%	13%	4%	75%	8%	17%	71%	21%	7%	91%	3%	6%						
I keep drapes and blinds closed at night during the winter.	67%	23%	10%	69%	15%	15%	67%	20%	13%	67%	22%	11%						
I caulked and/or weather stripped my doors and windows.	64%	25%	11%	69%	8%	23%	38%	41%	21%	85%	8%	8%						
I increased the insulation in my house.	44%	35%	20%	46%	31%	23%	17%	45%	38%	66%	26%	8%						
I installed energy efficient windows/doors.	47%	25%	27%	58%	25%	17%	21%	36%	43%	69%	18%	13%						
Home Energy: Electric	Urban			Rural			Renters			Owners								
I turn my computer off at night.	70%	13%	17%	58%	33%	8%	61%	21%	18%	71%	13%	16%						
I wash at least half of my clothes in cold water.	77%	11%	13%	54%	31%	15%	72%	14%	14%	75%	13%	13%						
I dry at least half my laundry on a clothesline in the summer.	25%	36%	38%	46%	31%	23%	28%	41%	31%	31%	33%	36%						



EE&C Activity	Completed this and/or will continue to do this			Have plans to start doing this Or no plans but want to do it			Don't plan to do this			Completed this and/or will continue to do this			Have plans to start doing this Or no plans but want to do it			Don't plan to do this		
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Home Energy: Electric (cont.)	Urban			Rural			Renters			Owners								
I dry at least half my laundry on a clothesline in the winter.	25%	25%	49%	38%	23%	38%	17%	17%	66%	30%	30%	40%						
I cook efficiently (e.g., cover pots, cook several dishes at a time, use microwave).	85%	13%	2%	75%	25%	0%	81%	15%	4%	87%	13%	0%						
I either unplug or shutdown with a power-strip appliances and other electronics when they are not in use.	48%	39%	13%	69%	23%	8%	62%	24%	14%	48%	43%	10%						
I have replaced at least one incandescent light bulb with a compact fluorescent light bulb.	91%	7%	2%	77%	23%	0%	86%	14%	0%	93%	5%	3%						
I replaced most or all incandescent light bulbs with compact fluorescent light bulbs.	75%	20%	5%	62%	31%	8%	62%	31%	7%	80%	18%	3%						
I have changed my exterior light(s) to be controlled by a light sensor.	54%	26%	20%	15%	38%	46%	35%	27%	38%	50%	29%	21%						
I installed at least one energy efficient appliance.	70%	19%	11%	46%	31%	23%	41%	30%	30%	85%	13%	3%						
I installed an Energy Star refrigerator.	57%	25%	18%	46%	23%	31%	33%	22%	44%	68%	26%	5%						
Home Energy: Water	Urban			Rural			Renters			Owners								
I installed an insulating blanket on my hot water heater.	27%	30%	43%	22%	33%	44%	13%	30%	57%	33%	30%	37%						
I lowered my hot water heater to at least 120 degrees Fahrenheit.	45%	27%	29%	44%	22%	33%	38%	21%	42%	50%	29%	21%						

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Home Energy: Water (cont.)	Urban			Rural			Renters			Owners								
I installed a low-flow showerhead.	55%	22%	24%	40%	20%	40%	38%	17%	46%	62%	24%	14%						
I installed a low-flow toilet.	44%	29%	27%	22%	44%	33%	24%	28%	48%	56%	31%	14%						
I installed a low flow aerator (2.2 or 2.3 gallons per minute) in my bathroom/kitchen faucets.	37%	31%	33%	30%	10%	60%	17%	33%	50%	47%	24%	29%						
Home Energy: Transportation	Urban			Rural			Renters			Owners								
I take public transportation or carpool one or more days/week.	23%	26%	51%	20%	20%	60%	19%	30%	52%	19%	22%	59%						
I replace 5 miles of driving each week by biking or walking.	47%	22%	31%	50%	8%	42%	54%	21%	25%	41%	15%	44%						
I keep up with my car maintenance (e.g., I inflate my car tires properly, use recommended motor oil, and keep car well tuned).	93%	6%	2%	43%	29%	29%	81%	15%	4%	91%	3%	6%						
I minimize my air travel.	41%	20%	39%	31%	23%	46%	41%	17%	41%	37%	21%	42%						
I purchased a car with a fuel efficiency rating of 30 mpg or greater.	33%	57%	9%	0%	0%	100%	19%	58%	23%	35%	50%	15%						
I purchased a hybrid car with a fuel efficiency rating of 30 mpg or greater.	14%	50%	36%	0%	0%	100%	4%	31%	65%	13%	55%	32%						
I use a timer on my car plug-in.	49%	13%	38%	17%	17%	67%	48%	16%	36%	43%	11%	46%						
Actions at Work	Urban			Rural			Renters			Owners								
I print all my documents double-sided.	68%	23%	9%	27%	18%	55%	64%	18%	18%	58%	22%	19%						
I don't print e-mails.	78%	10%	12%	27%	27%	45%	70%	11%	19%	69%	11%	20%						

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Actions at Work (cont.)	Urban			Rural			Renters			Owners								
We have had an energy audit to identify where we can save more energy in our work place.	47%	35%	18%	38%	23%	38%	31%	42%	27%	53%	28%	19%						
I/my work place replaced incandescent light bulbs in the task/desk lights with compact fluorescent bulbs (curly tail bulb).	64%	26%	11%	23%	46%	31%	48%	33%	19%	59%	26%	15%						
Our office has replaced T-12 florescent fixtures with T-8's.	51%	37%	12%	18%	73%	9%	39%	48%	13%	48%	42%	10%						
We have sealed air leaks around windows with caulking.	52%	33%	14%	46%	31%	23%	32%	44%	24%	65%	23%	13%						
We have sealed air leaks around doors with weather stripping.	50%	35%	15%	31%	38%	31%	33%	42%	25%	53%	30%	17%						
We have changed our exterior light(s) to be controlled by a light sensor.	45%	29%	26%	23%	15%	62%	39%	30%	30%	36%	21%	43%						
We have installed occupancy sensors in our bathrooms or other rooms.	33%	48%	19%	15%	38%	46%	12%	48%	40%	35%	42%	23%						
I turn my computer off when I leave work.	66%	17%	17%	64%	9%	27%	64%	16%	20%	67%	15%	18%						
I either unplug or shutdown with a power-strip appliances and other electronics when they are not in use.	41%	41%	18%	38%	31%	31%	44%	41%	15%	40%	34%	26%						
My work place purchases energy star rated appliances.	58%	30%	13%	25%	42%	33%	38%	33%	29%	59%	31%	10%						

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Actions at Work (cont.)	Urban			Rural			Renters			Owners								
My work place purchases energy star rated computers.	66%	24%	11%	27%	27%	45%	46%	21%	33%	65%	27%	8%						
My work place has and uses a programmable thermostat.	60%	23%	18%	38%	15%	46%	44%	28%	28%	64%	11%	25%						
My work place keeps the temperature between 60 and 65 degrees during the day and is set to 55 in the evenings and weekends.	37%	34%	29%	25%	33%	42%	23%	41%	36%	38%	28%	34%						
My work place has made a decision to not allow space heaters under our desks.	43%	20%	36%	8%	25%	67%	29%	21%	50%	38%	22%	41%						
My workplace replaced our bathroom/kitchen faucet aerators with a low flow aerator (2.2 or 2.3 gallons per minute).	21%	38%	41%	11%	11%	78%	5%	33%	62%	26%	33%	41%						
We have upgraded our exit signs to be LED exit signs	24%	35%	41%	18%	27%	55%	5%	30%	65%	31%	35%	35%						
I don't have a personal electric heater under my desk.	79%	8%	13%	42%	0%	58%	73%	4%	23%	71%	6%	24%						

# Appendix II

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## List of Acronyms

- ABSN – Alaska Building Science Network
- ACA – Alaska Conservation Alliance
- ACHP - Alaska Craftsman Home Program
- AEA – Alaska Energy Authority
- AEEP – Alaska Energy Efficiency Partnership
- AHFC – Alaska Housing Finance Corporation
- ANTHC – Alaska Native Tribal Health Consortium
- BEES – Building Energy Efficiency Standard
- CEEP – Community Energy Efficiency Program
- CFL – Compact Florescent Lamp
- DOTPF – Department of Transportation and Public Facilities
- EE&C – Energy Efficiency and Conservation
- EECWG – Energy Efficiency and Conservation Working Group
- FWWI – Family Wellness Warriors Initiative
- GVEA – Golden Valley Electric Association
- HER – Home Energy Rebate
- LIHEAP – Low Income Housing Energy Assistance Program
- NANA – Northwest Alaska Native Association
- PCE – Power Cost Equalization
- REAA – Regional Education Attendance Areas
- REAP – Renewable Energy Alaska Project
- RHA – Regional Housing Authority
- RIC – Research Information Center

RurAL CAP – Rural Alaska Community Action Program, Inc.

SHG – Supplemental Housing Grant

USDA – United States Department of Agriculture

VEEP – Village Energy Efficiency Program

YKHC – Yukon Kuskokwim Corporation