

**ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY**

February 3, 2011
3:05 p.m.

MEMBERS PRESENT

Representative Neal Foster, Co-Chair
Representative Lance Pruitt, Co-Chair
Representative Bob Lynn
Representative Dan Saddler
Representative Pete Petersen
Representative Chris Tuck

MEMBERS ABSENT

Representative Kurt Olson

OTHER LEGISLATORS PRESENT

Representative Les Gara

COMMITTEE CALENDAR

PRESENTATION(S): ALASKA ENERGY AUTHORITY ON ENERGY EFFICIENCY AND CONSERVATION EFFORTS; THE ALASKA HOUSING FINANCE CORPORATION ON ENERGY EFFICIENCY - ENERGY REBATES - AND WEATHERIZATION PROGRAMS

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

SEAN SKALING, Program Manager
Energy Efficiency and Conservation (EE&C)
Alaska Industrial Development & Export Authority (AIDEA) and
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development (DCCED)
Anchorage, Alaska

POSITION STATEMENT: Participated in the PowerPoint presentation titled, "Energy Efficiency and Conservation Efforts at the Alaska Energy Authority," dated 2/3/11.

KATIE CONWAY, Assistant Program Manager
Energy Efficiency and Conservation (EE&C)
Alaska Industrial Development & Export Authority (AIDEA) and
Alaska Energy Authority (AEA)
Department of Commerce, Community & Economic Development (DCCED)
Anchorage, Alaska

POSITION STATEMENT: Participated in the PowerPoint presentation titled, "Energy Efficiency and Conservation Efforts at the Alaska Energy Authority," dated 2/3/11.

CARY BOLING, Deputy Director
Governmental Relations and Public Affairs
Alaska Housing Finance Corporation (AHFC)
Department of Revenue (DOR)
Anchorage, Alaska

POSITION STATEMENT: Participated in the PowerPoint presentation titled, "AHFC Energy Program Rebate and Weatherization Update," dated 2/3/11.

JOHN ANDERSON, Weatherization Program Manager
Alaska Housing Finance Corporation (AHFC)
Department of Revenue (DOR)
Anchorage, Alaska

POSITION STATEMENT: Participated in the PowerPoint presentation titled, "AHFC Energy Program Rebate and Weatherization Update," dated 2/3/11.

DAN FAUSKE, CEO/Executive Director
Alaska Housing Finance Corporation (AHFC)
Department of Revenue (DOR)
Anchorage, Alaska

POSITION STATEMENT: Answered questions during the PowerPoint presentation titled, "AHFC Energy Program Rebate and Weatherization Update," dated 2/3/11.

ACTION NARRATIVE

[3:05:27 PM](#)

CO-CHAIR LANCE PRUITT called the House Special Committee on Energy meeting to order at 3:05 p.m. Representatives Pruitt, Petersen, Lynn, and Foster were present at the call to order. Representatives Tuck and Saddler arrived as the meeting was in progress. Representative Gara was also present.

[3:07:03 PM](#)

CO-CHAIR PRUITT announced that the order of business would be presentations by the Alaska Energy Authority (AEA) on energy efficiency and conservation efforts, and by the Alaska Housing Finance Corporation (AHFC) on energy efficiency programs.

3:07:20 PM

SEAN SKALING, Program Manager, Energy Efficiency and Conservation (EE&C), Alaska Industrial Development & Export Authority (AIDEA) and Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), began the presentation with a brief history of AEA. The agency has been involved in several projects such as the Bradley Lake Hydroelectric Project, rural tank farm replacements, powerhouse upgrades in rural areas, the rural energy fund, and various village energy efficiency programs. The agency's mission is to reduce the cost of energy for Alaska, especially by the least expensive path of energy efficiency, which is more effective than generating additional energy. He advised that energy efficiency is AEA's short-term goal and developing more sources of renewable energy is its long-term goal, although both of these goals must be pursued hand-in-hand. Mr. Skaling clarified that energy efficiency refers to the technology that will reduce the amount of energy needed, and conservation refers to "the human behavior aspects of it." He recalled that the legislature tasked AEA with taking steps toward improving energy efficiency 15 percent by 2020, and the agency has begun the groundwork needed to reach that goal. For example, the industrial audit pilot project addresses energy efficiency for the industrial sector such as seafood processors. With the University of Alaska Fairbanks (UAF) Institute of Northern Engineering and the Sea Grant Marine Advisory Program, AEA is using technical and fishing expertise working together to conduct audits of seafood processors. So far two audits have been conducted, both with positive results, and he displayed a slide that showed the energy loss from an industrial oven that could be modified to save the processor an estimated \$10,000 in two months. Mr. Skaling described other energy efficiency programs managed through AEA. The Small Cities Energy Efficiency and Conservation Block Grants (EECBG), funded by the American Recovery and Reinvestment Act of 2009 (ARRA), provided money to the 10 largest cities and the 10 largest boroughs in Alaska. Additionally, \$5 million was made available to pass on to smaller communities; in fact, 97 eligible applications for these funds have been received and work is underway to improve the efficiency of the public buildings in these communities. Funds

from ARRA also support the Village Energy Efficiency Program (VEEP), which grants funds to villages and rural areas for improvements to their public facilities.

[3:14:47 PM](#)

MR. SKALING further explained ARRA funds are also used for the Whole Village Retrofit concept to demonstrate how much energy efficiency potential there is in a village, and what kind of economic impact is possible. The agency attempts to simplify the retrofit reporting process for cities by offering regional technical assistance providers. He provided a Light-Emitting Diode (LED) light bulb for members to examine and pointed out LED bulbs are less affected by extreme cold, are more durable, easier to dispose of, and are longer-lasting than are compact fluorescent light bulbs, thus may be a better choice for replacement bulbs in villages. In response to Representative Tuck, he said LEDs do not generate heat, and some are dimmable.

[3:17:43 PM](#)

REPRESENTATIVE TUCK then asked for the price difference between LED and compact fluorescent bulbs.

[3:17:50 PM](#)

MR. SKALING estimated LEDs are five times more expensive, but last five-to-seven times longer. In response to Representative Foster, he surmised small LEDs surpass compact fluorescents in value and are becoming more readily available. As a matter of fact, streetlights that are 100 lumens per watt will soon be available. Addressing the issue of return on investment, Mr. Skaling advised that the abovementioned programs are producing an average payback of about three years. For example, the estimated community savings from all of the programs is about \$3 million per year, and after the estimated lifespan of eleven years, will result in \$33 million in savings from a federal investment of \$8 million, and a state investment of \$600,000. Mr. Skaling furnished a map that indicated the location of projects funded throughout the state. To give an example of a Whole Village Retrofit, he displayed a slide of the Emmonak Washeteria, and noted that after the installation of new dryer controls, and a boiler tune-up, 6,070 gallons of diesel fuel and \$21,000 are being saved per year. In Napaskiak, streetlights were replaced with 48 LED streetlights saving 1,770 gallons of diesel fuel per year. Finally, he described the \$600,000 commercial energy audit program that began about four weeks ago.

As there are no existing programs or services for commercial businesses, AEA has put together a program to provide energy audits for commercial buildings. The program has already attracted over 80 applications for 125-150 audits and one-half of the available funding is obligated. He concluded that commercial building owners are very interested in opportunities for saving energy.

3:26:15 PM

KATIE CONWAY, Assistant Program Manager, Energy Efficiency and Conservation (EE&C), Alaska Industrial Development & Export Authority (AIDEA) and Alaska Energy Authority (AEA), Department of Commerce, Community & Economic Development (DCCED), explained that the Energy Efficiency and Conservation Working Group (EECWG) is one of the primary components of AEA's public education and outreach initiative for energy efficiency and conservation. The group has been working since January 2010, in an effort to coordinate independent efficiency improvement efforts. She opined the common bond among the working group members is education and outreach; in fact, members range from university programs, the conservation community, federal and state program offices, tribal organizations, utilities, and private businesses. The 30 member organizations of the working group share information and are moving forward with efficiency projects. The underlying philosophy for the EECWG is: Collaborating will be a much more efficient way of reaching our efficiency goals. Ms. Conway described a symbol designed and adopted by the working group to represent energy efficiency and conservation in Alaska and to raise public awareness.

3:29:44 PM

MS. CONWAY recalled at its first meeting EECWG recognized a need for better coordination between state agencies and all who work for energy efficiency. The working group also called for an update to the 2008 Policy and Recommendation report produced by the Cold Climate Housing Research Center (CCHRC) and paid for by AEA and AHFC, which addressed the need for baseline energy data. Also, EECWG found a need for a "one-stop shopping information source" for energy efficiency and conservation information, and created a virtual energy resource: www.ak.energyefficiency.org. The website will reach audiences all over Alaska and will broadcast events, jobs advertisements, and contacts for commercial energy auditors. Ms. Conway displayed a slide of the website.

[3:32:51 PM](#)

MS. CONWAY continued to say EECWG won a \$700,000 competitive grant from the U.S. Department of Energy (DOE) offered to the states with the worst performances in energy efficiency. The title of the grant, which will be funded in two phases, was "Biggest State to Biggest Saver," and embodies one of the goals made by the working group which was for Alaska to become the most efficient state in the nation. In addition, EECWG announced Energy Awareness Month - an integrated, sustained, outreach initiative - and hosted an event in Anchorage at a privately-owned, commercial Leadership in Energy and Environmental Design (LEED) certified building. Ms. Conway returned to the details of the DOE grant and opined the projects funded by the first phase of the grant will make 2011 a year of research and information gathering to determine a clear path and recommendations for energy efficiency programs. For example, one project is a community-based needs assessment to be paired with a best-practices inventory and which will reveal, community-by-community and region-by-region, where the highest needs are. Other projects are: a greatly expanded rewrite of the aforementioned CCHRC report study looking at heat, power, and the regulatory environment thereof due 4/11; an end-use data study to obtain baseline data regarding statewide residential and non-residential power and heat energy use due 2/12; an interface to link successes of energy efficiency and conservation to the website. In conclusion, Ms. Conway indicated that the second phase of funding from the grant provides opportunities for direct engagement with the public to encourage efficiencies.

[3:38:27 PM](#)

CO-CHAIR FOSTER asked whether there are guidelines for the use of the logo.

MS. CONWAY said there are none. In further response, she acknowledged AEA would not encourage random use of the symbol; however, she assumed any organization working towards a "15 percent by 2020 goal" can use the logo.

[3:39:59 PM](#)

CO-CHAIR FOSTER expressed his support.

[3:40:14 PM](#)

CO-CHAIR PRUITT asked whether all ARRA funds have been spent.

MR. SKALING responded that ARRA funds are all spoken for, but not all are spent. For example, the commercial energy audit rebate is still in the application period, and no rebates have actually been done.

[3:41:29 PM](#)

CO-CHAIR PRUITT surmised that with the expenditure of the federal stimulus funds, future programs developed by the working group will wait for the completion of research.

MR. SKALING assured the committee his agency will move forward with other programs; however, AEA is taking full advantage of the free federal funds to complete research, set a baseline, try some new things, and determine "a better sense in the future of where the best money is to be spent."

[3:42:16 PM](#)

CARY BOLING, Deputy Director, Governmental Relations and Public Affairs, Alaska Housing Finance Corporation (AHFC), Department of Revenue (DOR), provided background for the rebate and weatherization programs. In 2008, energy prices in the state were very high because the price of oil was approximately \$140 per barrel. In response, the legislature provided relief for residents and appropriated \$200 million dollars for an existing income-based weatherization program for homeowners and renters, and \$160 million for a rebate program for homeowners who choose to make energy improvements. He explained that for the rebate program energy ratings are required before and after the improvements are made, to determine the amount of the rebate, up to the maximum of \$10,000.

[3:47:16 PM](#)

MR. BOLING, in response to Co-Chair Foster, acknowledged that at the beginning of the rebate program there were only 38 raters in the state, so AHFC added a rater-training component to the program. Presently, there are about 100 raters; however, because it is difficult for each small community to have a local rater, AHFC subsidizes travel costs for "roving" raters to go to rural areas. Additionally, fourteen regional housing authorities joined five existing agencies providing weatherization ratings and improvements.

[3:48:44 PM](#)

JOHN ANDERSON, Weatherization Program Manager, Alaska Housing Finance Corporation (AHFC), Department of Revenue (DOR), added that AHFC's training component is ongoing; in fact, housing authorities are still encouraged to continue with its sponsored training for them - the Building Performance Institute - and become authorized energy raters. In fact, about one-half of the housing authorities new to the program have that certification. On the other hand, he expressed his frustration that training an energy rater for each small community is not fiscally responsible.

[3:49:55 PM](#)

CO-CHAIR FOSTER noted the opportunity to improve the weatherization of homes is very important for rural areas.

[3:50:42 PM](#)

MR. BOLING recalled the "\$360 million flood" of money was appropriated in April 2008, and the program was to begin the following summer. In fact, AHFC launched the program in May 2008, and three years later the results are: 37,264 ratings completed; 11,376 rebates paid to homeowners in an average amount of \$6,200; 941 newly constructed 5-Star Plus home rebates paid in the amount of \$7,500; 5,003 homes weatherized. Since 2008, this is a total of 17,320 homes which are now more energy efficient. Mr. Boling compared the new program to the existing energy rating system called AkWARM, which was begun in 1996, and pointed out that under the AkWARM program, 25,557 ratings were performed and 10,704 homes weatherized during the 12 years prior to 2008.

MR. BOLING informed the committee AHFC has a valuable database of energy and carbon dioxide (CO2) savings resulting from the home energy rebate program throughout the state. For example, total energy saved averages out to about \$1,535 per year per home. Carbon dioxide reductions average to 12,000 pounds per year, and most homes move from an energy rating of 2-Star Plus to 4-Star. Furthermore, a total of 978 billion British thermal units (Btus) are saved, reducing the average energy use by 33.15 percent. He equated the annual savings to 168,766 barrels of crude oil, 7 million gallons of fuel oil, or 717 gallons of fuel oil per home. Mr. Boling also furnished a chart which indicated statewide average savings per home by fuel type: 770 kilowatt hours of electricity (kWhs); 999 therms (one hundred cubic feet)

of natural gas; 642 gallons of number 2 oil; 93 gallons of propane; 2.2 cords of wood. He returned to the energy rater training component and estimated at least 2,500 jobs were created from a combination of the weatherization and rebate programs.

MR. ANDERSON stressed the difficulty in tracking job creation or retention because of the number of vendors, such as mechanical contractors, electrical contractors, and suppliers affected by this "brand new industry that sparked up because of the rebate and weatherization program." A study by the University of Alaska Fairbanks (UAF) Institute of Social and Economic Research (ISER) is expected to be available in June.

[3:58:08 PM](#)

MR. BOLING advised the weatherization program received \$200 million and \$74 million was obligated in 2008-2009, \$63 million was obligated in 2010, and \$63 million is projected to be obligated in 2011. The number of homes weatherized: 1,864 in 2009; 3,139 in 2010; 4,000 are projected for 2011.

[3:59:59 PM](#)

MR. ANDERSON, in response to Representative Saddler, said AHFC encourages residents to continue to apply for the programs. Regardless of the sources of the funding, the agency anticipates continuation of the programs; in fact, the U.S. Department of Energy (DOE) contributes an average of \$1.5 million to the weatherization program each year.

[4:00:49 PM](#)

REPRESENTATIVE SADDLER surmised all of the allocated money is obligated at this time.

MR. ANDERSON indicated yes. It is known that Anchorage has 600 potential weatherization clients on a waiting list.

[4:01:35 PM](#)

REPRESENTATIVE PETERSEN observed there is a growing demand, and he asked whether additional funding is needed from the legislature.

MR. ANDERSON related that the program is in the governor's budget for \$25 million. The presentation has shown what has

happened over the past four years; however, the projections for next year are without a plan for the future.

[4:02:54 PM](#)

MR. BOLING displayed a chart which indicated the number of communities served: 56 in 2008, 90 in 2009, 100 plus in 2011, and 100 plus estimated in 2011. He concluded the weatherization program has attained "a sustainable capacity." Turning to the home energy rebate program, Mr. Boling said the \$160 million appropriation to this program is fully obligated. He explained the process begins with an energy rating of the home which recommends improvements. The homeowner is reimbursed \$325 for the cost of the rating, and then has an 18-month period to complete the work and submit paperwork for the remainder of the rebate. Thus money is held for 18 months for each applicant.

[4:04:36 PM](#)

CO-CHAIR PRUITT asked for the action that begins the 18-month period.

MR. BOLING clarified that the time period starts with the home energy rating. In further response to Co-Chair Pruitt, applications are still being received; in fact, it is a mistake to wait to send in an application once the rating is done.

[4:05:51 PM](#)

REPRESENTATIVE LYNN shared his personal experience with the program.

REPRESENTATIVE PETERSEN reported he has completed the process, and increased the energy rating on his home from 2-Star Plus to 4-Star Plus. He cautioned that some residents believe the program is over.

[4:08:08 PM](#)

REPRESENTATIVE LYNN said he wanted to be present during the energy rating.

MR. BOLING recommended that the homeowner be present for the rating because "it has been a very good learning experience." He also recommended that homeowners attend classes sponsored by AHFC to help them make their own improvements.

[4:10:03 PM](#)

MR. ANDERSON assured the committee there is a procedure to deal with people who have extenuating circumstances.

[4:10:28 PM](#)

CO-CHAIR PRUITT asked whether has there been feedback from members of the public.

MR. BOLING opined some homeowners believe there is no funding, and there is a long waiting period now, which is discouraging.

[4:11:19 PM](#)

DAN FAUSKE, CEO/Executive Director, Alaska Housing Finance Corporation (AHFC), Department of Revenue (DOR), acknowledged that there are 3,000 homeowners on the waiting list, which proves there is still interest in the program. He provided his personal experience with people who are very satisfied. The program is unique and the response has been very good. The agency did not advertise heavily, but he guaranteed there will be a strong response to the next appropriation.

[4:12:59 PM](#)

MR. BOLING reiterated \$160 million is fully obligated and \$88.6 million has been expended. He continued to explain that 24,956 applicants have completed the as-is rating and received their reimbursement for the cost. The completion rate has consistently been nearly 63.3 percent for one year. Mr. Boling informed the committee that when the program first began in the fall of 2008, many residents were unable to get an appointment with a rater. Since there was a shortage of certified raters, a centralized call list was developed to dispatch raters more efficiently, and as a result the waiting list dropped from 9,492 in December 2008, to 463 one year later. Currently, 3,548 homeowners are on the waiting list, not because raters are unavailable, but because new applicants must wait 18 months to know if previously obligated funds are available.

[4:16:04 PM](#)

MR. ANDERSON added that about 100 applications per week continue to be dispatched.

[4:16:38 PM](#)

MR. BOLING, in response to Representative Lynn, agreed that the average wait now is about eight months.

[4:16:53 PM](#)

REPRESENTATIVE PETERSEN asked whether certified raters will be lost to other jobs.

MR. ANDERSON indicated yes, due to the lack of demand. He added that most of the energy raters came from the home inspection and energy industry.

[4:17:47 PM](#)

MR. BOLING displayed a chart which showed the average homeowner spends about \$11,000 on energy efficiency improvements and the average rebate is \$6,287; thus the average investment by the homeowner is about \$4,582. Furthermore, the average annual energy savings is about \$1,535, or about a three-year payback on the homeowner's investment.

MR. ANDERSON noted the homeowner investment component of the original legislation was inserted by Senator Hoffman, and has proven effective.

[4:19:01 PM](#)

MR. BOLING turned attention to another AHFC program that provides second mortgage loans for energy conservation improvements. This program assists homeowners who may not have the cash for energy projects and loans up to \$30,000 for 15 years at a fixed rate. At this time 93 loans have been paid off, and there are 33 active loans. When used in combination with the rebate program, the rebate is used to pay down the loan.

[4:20:00 PM](#)

CO-CHAIR FOSTER asked how the loans are serviced in small communities.

MR. ANDERSON assured the committee AHFC "will make it happen" for qualified applicants.

[4:20:28 PM](#)

MR. BOLING summarized: 17,320 homes completed; reduced energy costs of 30 percent and energy savings of 32 percent; a minimum of 2,500 new jobs; annual capacity of 4,000 weatherization program homes; all funds obligated.

[4:21:15 PM](#)

REPRESENTATIVE SADDLER asked whether the program has been replicated.

MR. ANDERSON said the rebate program has been shared with many entities, including the DOE. As a matter of fact, the weatherization program has been an ongoing national program since 1978, although the additional money that was appropriated by the legislature allowed the income threshold to rise to 100 percent of median income, thus many more residents in Alaska qualified.

[4:22:59 PM](#)

MR. ANDERSON, in response to Co-Chair Pruitt, explained that \$25 million in the governor's budget is directed to both programs. In further response, he said those funds would cover "on the rebate program, roughly 2,000, and on the weatherization program, roughly 1,000."

[4:23:06 PM](#)

MR. BOLING recalled last session the legislature approved \$220 million for the Alaska Energy Efficiency Revolving Loan Fund (AEERLF) to be used toward energy efficiency improvements for regional educational attendance areas (REAAAs), the University of Alaska (UA), state facilities, and municipal facilities. The intent is to promote energy efficiency performance contracting, wherein guaranteed energy savings from energy efficiency improvements are used to pay off the loan. Prior to loan approval, a Retrofit Energy Assessment for Loan (REAL) is done to evaluate the payback for certain conservation measures. Also prior to the loan there is an initial project evaluation, energy audits by nationally certified engineers, and the execution of energy performance contracts (EPCs). The performance contracts are between AHFC, energy service companies (ESCOs), and the Department of Transportation & Public Facilities (DOTPF). Mr. Boling noted that retrofits can be managed by ESCOs, or in some cases, the owner of the facility.

[4:25:11 PM](#)

MR. ANDERSON elaborated on the program, noting that it is in its final phases of development; for example, contractors have been selected, and AHFC is working closely with school districts, municipalities, and DOTPF.

[4:25:59 PM](#)

REPRESENTATIVE SADDLER asked for examples of ESCos.

MR. ANDERSON responded that national associations reflect on the building-science abilities of some companies such as Siemens, Ameresco, Johnson Controls Inc., and Honeywell International Inc. Federal agencies have been working with ESCos for years and DOTPF has completed about 17 buildings in the state using this model. The National Association of Energy Professionals provides the accreditations for ESCos and AHFC will add cold climate specific requirements of its own.

[4:27:37 PM](#)

REPRESENTATIVE PETERSEN pointed out the popularity of the programs that were presented and asked what kind of funding is necessary to continue "at the current rate."

MR. ANDERSON estimated that AHFC has the capacity to administer \$100 million per year through these two programs.

[4:28:31 PM](#)

CO-CHAIR FOSTER praised AEA and AHFC on their critically important contributions to the wellbeing of the state and its residents.

[4:29:44 PM](#)

MR. FAUSKE reminded the committee that energy efficiency improvements lengthen the lifecycle of people's homes and enhance the quality of life. He said, "What started out a few years ago has turned into just a valuable program around this state."

[4:31:11 PM](#)

CO-CHAIR PRUITT asked how many years an appropriation of \$100 million would fund.

MR. ANDERSON estimated the programs would continue until 3/13. In further response to Co-Chair Pruitt, he explained AHFC estimated that the original allocation of \$300 million in 4/08 would take care of about 10 percent of the state's needs. With the additional \$60 million for the rebate program, the estimate of improved homes rises to about 12-13 percent.

[4:33:02 PM](#)

REPRESENTATIVE SADDLER asked whether construction codes require new homes to comply with 4-Star or 5-Star energy ratings.

MR. ANDERSON confirmed that new buildings receiving AHFC funding have to follow the Building Energy Efficiency Standard (BEES) requirements. He understood that most other financing agencies are requiring the same.

[4:33:44 PM](#)

MR. BOLING said BEES is equivalent to a 4-Star Plus home rating.

[4:34:17 PM](#)

REPRESENTATIVE PETERSEN expressed his pride in the program and said it would be shortsighted not to continue to help Alaskans make their homes more energy efficient.

[4:35:10 PM](#)

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 4:35 p.m.