**ALASKA STATE LEGISLATURE**
**HOUSE SPECIAL COMMITTEE ON ENERGY**
January 27, 2015
10:19 a.m.

**MEMBERS PRESENT**

Representative Jim Colver, Co-Chair
Representative Liz Vazquez, Co-Chair
Representative Benjamin Nageak
Representative David Talerico
Representative Cathy Tilton
Representative Matt Claman
Representative Adam Wool

**MEMBERS ABSENT**

All members present

**COMMITTEE CALENDAR**

PRESENTATION: AHFC WEATHERIZATION PROGRAM

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

JOHN ANDERSON, Director
Department of Research and Rural Development (R2D2)
Alaska Housing Finance Corporation (AHFC)
Anchorage, Alaska
**POSITION STATEMENT:** Responded to questions, during the overview of the Alaska housing weatherization program.

JIMMY ORD, Program Information Manager
Department of Research and Rural Development (R2D2)
Alaska Housing Finance Corporation (AHFC)
Anchorage, Alaska
**POSITION STATEMENT:** Presented the overview of the Alaskan housing weatherization program.

**ACTION NARRATIVE**

10:19:27 AM

**CO-CHAIR JIM COLVER** called the House Special Committee on Energy meeting to order at 10:00 a.m. Present at the call to order were Representatives Nageak, Talerico, Vazquez, and Colver. Representatives Wool, Tilton, and Claman arrived as the meeting was in progress.

## PRESENTATION: AHFC WEATHERIZATION PROGRAM

10:19:46 AM

CO-CHAIR COLVER announced that the only order of business would be an overview of the housing weatherization program, from the Alaskan Housing Finance Corporation (AHFC). He opined that the energy efficiency program is perhaps one of the most cost effective programs offered by the state.

10:21:25 AM

JOHN ANDERSON, Director, Department of Research and Rural Development (R2D2), Alaska Housing Finance Corporation (AHFC), said the presentation would provide an up-dated and in-depth view of the program.

10:21:48 AM

JIMMY ORD, Program Information Manager, Department of Research and Rural Development (R2D2), Alaska Housing Finance Corporation (AHFC), indicated his intention to provide a broad overview, as well as details on how the various programs work.

10:22:19 AM

MR. ORD said that Alaska Housing Finance Corporation (AHFC) is a public corporation that provides housing, finance and energy programs statewide. Established in 1971, AHFC's mission is to provide Alaskans access to safe, quality, affordable housing. In order to fulfill that mission, AHFC focuses on several key areas, which include: issuing bonds; providing residential loans; managing competitive grants to developers of affordable housing and special needs populations; operating public housing in Alaska by utilizing U.S. Housing & Urban Development (HUD) funds; and managing federal and state-funded energy-efficiency programs. He distinguished AHFC as being primarily focused on the demand side of energy, whereas, other agencies, such as the Alaska Energy Authority, is focused on the supply side.

10:23:18 AM

MR. ORD established the intent of the overview, to wit: outline the framework and tools used to maintain the infrastructure and programs; share information regarding the specific programs; address the tools offered to homeowners; acknowledge the partnerships in place with local organizations that assist in running the states program; and explore why an efficiency first approach is best.

10:23:43 AM

MR. ORD explained how, in 1992, legislation was enacted establishing the Building Energy Efficiency Standard (BEES), for new homes receiving AHFC financing. The agencies framework starts with BEES; created to promote the construction of energy-efficient buildings to set standards for thermal resistance, air leakage, moisture protection, and ventilation. He said that all residential homes constructed after January 1, 1992, using AHFC funds, are BEES compliant. The current building energy efficiency standard is comprised of the 2012 International Energy Conservation Code, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) ventilation standards, and the Alaska specific amendments to both documents. The updated BEES became effective July 1, 2013, requiring homes be built to a rating standard commonly referred to as 5 Star energy rated.

10:24:49 AM

MR. ORD described the infrastructure factors used to assess and oversee compliance with BEES. To accomplish this task, the Home Energy rating System (HERS) is used, which includes all steps necessary to evaluate and score home energy performance. This includes establishing a rating score from 1-6 Stars, cultivating a network of trained energy raters, and building and maintaining a comprehensive energy modeling software program known as AkWarm. He explained that AkWarm was first created in 1996, specifically for Alaska. It uses a wide range of statewide weather data, and is continuously updated to account for the variability of associated energy costs. AkWarm is free and the preferred energy modeling software for the state, offering easy onscreen inputs for accurate, accessible data. He pointed out that, although only authorized raters are qualified to issue an official energy rating certificate, anyone is able to visit the website and download the software for personal use. One of the

biggest benefits of the HERS, to AHFC and the state, is that it has created a recognizable, standardized rating system. The universal understanding of what a 5 or 6 Star rating means, avoids confusion and provides useable data. MR. ORD described how, behind the scenes, the database Alaska Retrofit Information System (ARIS) is used to collect valuable housing information from across the state; every time an energy rating is completed it is entered into this system. The ARIS system contains more than 75,000 unique records. One in every three occupied housing units in the state is listed in this database. Informational data points include: number of bedrooms, square footage of the home, heating system efficiency, tightness of the home, and many more. The valuable information collected provides answers to a variety of questions not only about the housing characteristics, but energy end use and program effectiveness. The largest and most in-depth study produced from ARIS data is the 2014 Housing Needs Assessment, released in the spring [of 2014].

10:29:03 AM

REPRESENTATIVE CLAMAN said he has not reviewed the 1,200 page report and asked for a brief explanation of any identifiable trends.

MR. ORD offered a couple of the outcomes from the report: 75,000 homes are cost burdened; 15,000 are overcrowded; and one in three households are overspending the federally suggested maximum of 30 percent of total income on housing costs. Programs and services are in place that may have a direct effect on some of these outcomes.

10:30:15 AM

CO-CHAIR COLVER inquired whether the reason that so many households spend over 30 percent total income on housing costs could be attributable to low incomes or high energy costs.

MR. ANDERSON opined that it represents a combination of low income and rising energy costs. He pointed out that an executive summary, to the voluminous report, may prove helpful in understanding these outcomes, and agreed to provide copies to the committee.

10:31:51 AM

REPRESENTATIVE CLAMAN asked about the progress being made in creating energy efficient homes, since the inception of the program.

MR. ANDERSON answered that, to date, over 40,000 retro-fits have been accomplished through both programs, reducing energy consumption on an average of 30 percent per unit.

MR. ORD offered an example of the housing stock in Juneau, stating that houses built pre-1940 are considered 1-Star status. All homes built post 2005 are constructed at a 4-Star efficiency level and is indicative of the increase in building standards throughout the state.

10:33:14 AM

MR. ORD introduced another energy saving measurement tool, under development by AHFC, known as the Building Monitory System (BMS). It is designed primarily for use in commercial and public buildings. The goal this system is to provide up-to-the-minute, real time data of energy use, as well as other details, to the facility managers. Efficient operations is the goal, and he provided an anecdote to illustrate how the device was used, at the Glacierview Apartment complex, in Seward, and ultimately resolved an energy use issue. He added that one of the simplest benefits of a BMS is that the public housing maintenance staff can remotely monitor how a building is functioning rather than physically visiting each complex. Reliable information is received at monitored via an office computer, or other internet connected device. The software has also been expanded beyond AHFC use and made available to other organizations. The Alaska Native Tribal Health Consortium (ANTHC), looking to maximize building efficiency, is utilizing the system in buildings throughout the state.

10:34:48 AM

CO-CHAIR COLVER asked whether the system can be used by any rental manager who has access to the internet.

10:35:19 AM

MR. ANDERSON answered that it is internet accessible and AHFC expects to make the program fully available; a step currently in the legal process. To a follow-up question, he said the monitored information can be accessed via any device with internet capabilities.

MR. ORD added that home use monitoring units are available for purchase.

10:36:51 AM

CO-CHAIR VAZQUEZ inquired whether a BMS is used, or planned to be used, in state buildings.

MR. ANDERSON reported that roughly 15 AHFC and 17 ANHTC buildings, are now on the system. It can also be custom tailored, as was done for the ANHTC to include specific water usage data. This feature makes it a very useful tool, and he opined that it is on track to become an industry model program.

10:37:55 AM

MR. ORD moved on to the home programs being offered, which provide weatherization and rebate opportunities. These successful programs are increasing home efficiency and comfort levels, as well as stimulating local economies. He said that the low income weatherization program was placed under AHFC, at about the same time BEES was established, in a cost saving consolidation effort regarding housing and energy conservation. Since that time, the program has been providing free energy efficiency improvements to income qualified applicants. The funding comes from state and federal sources, but primarily the state. He reported that AHFC does not directly install any of the improvements or handle day to day customer interaction. Rather the work is performed by 17 organizations throughout the state: 4 service providers and 14 housing authorities who act as regional contacts for program participants. There are several reasons the program excels beyond just energy savings, he opined, beginning with education. An example is how the interior weatherization service provider, in Fairbanks, establishes a working relationship with each client via a requirement to attend an agency sponsored class. The applicant gains an understanding of what changes may occur in their home and what they can expect from the program. He cited a health and safety factor included in the program, as the participating homes are fitted with smoke and carbon dioxide detectors, as well as receiving verification that any combustion appliance, such as a furnace or gas stove, is operating safely and efficiently. Mr. Ord noted that since 2008, the program has helped in excess of 15,000 homeowners and renters across the state to improve the energy efficiency, as well as health and safety standards of their homes. He pointed out that AHFC

distributes a monthly legislative program update, which includes statistics on unit completions, savings, and other valuable, up to date information regarding the current status of the energy programs. He assured that all new legislators have been added to the contact list and will be receiving the report at the beginning of every month.

10:40:45 AM

REPRESENTATIVE CLAMAN asked for a breakdown of the federal versus state funding receipts.

MR. ANDERSON responded that the federal support is a formula based on state population. Alaska receives roughly $1-1.5 million per year. The state contribution has been approximately $350 million, annually.

REPRESENTATIVE CLAMAN concluded that the federal funding equates to one percent of the funding and the state covers 99 percent. He also established that RurAL CAP (Rural Alaska Community Action Program, Inc.) is the service provider of this program in the western region of the state.

10:42:13 AM

MR. ORD provided a state map locating the 185 communities that have benefited from the weatherization program. Especially notable are the rural communities, he said, which pose logistical challenges. The benefits that are brought to each community include local training and hiring of employees. He reported that the average energy savings of program participants statewide is about $60.8 million BTUs per year, which equates to about 28 percent. To put a million BTUs in perspective, he said the average home in Juneau, that was built in the 1970's has an energy rating of 2 Star Plus and uses 187 million BTUs every year. The most energy efficient home that AHFC has on record, is a 6 Star unit with an annual energy use of just over 11 million BTUs per year.

10:43:18 AM

MR. ORD turned to the AHFC energy rebate program to state that it applies to existing homes and is open to all Alaskan homeowners regardless of income. The current program is modeled after one that was introduced in the 1990's. Today's program is widely successful and offers up to a $10,000 rebate for qualified energy efficient improvements. He explained the

various steps of the program beginning with the on-line application. An approved energy rater is then selected, AHFC approves eligibility based on the information that the homeowner provides and dispatches the project. Once dispatched, the homeowner schedules an as-is energy rating. The rater conducts a home evaluation, issues a home energy rating certificate, enters information into the state database, and provides the owner with an improvement options report. The homeowner chooses the items to upgrade, and is allowed 18 months to complete the work. A post energy rating is conducted. The difference between the as-is and post ratings is the determining factor for the rebate amount. MR. ORD said that a sister rebate program is offered by AHFC, which applies to new construction. The New Home Rebate offers $10,000 for 6 Star and $7,000 for 5 Star Plus rated homes. The rebate is available for homeowners who are the original owner of a newly constructed home that is not more than one year old. All participants must meet AHFC financing requirements, such as applicable building inspections and BEES.

10:45:15 AM

MR. ANDERSON, responding to a question posed by Co-Chair Colver, stated that the fiscal note does not distinguish the components for existing home versus new construction programs. However, new construction units have numbered about 2,700 since 2008. Upon application approval, AHFC encumbers the money for the expected rebate. To a follow-up question, he said this is a popular program with approximately $190 million spent, an obligation of encumbered funds for $33 million, and a remaining balance in the fund of roughly $28-29 million; pending review of the wait list.

10:46:59 AM

CO-CHAIR COLVER asked to whom is this program available.

MR. ANDERSON answered that units up to the four-plex size are eligible if one of the units is owner occupied.

CO-CHAIR COLVER asked about the mechanics of how the fund is accessed by contractors, building an energy efficient home for the housing market.

MR. ANDERSON clarified how a contractor built, speculation home, can be qualified; usually via the application of the purchaser. To a follow-up question, he said that, based on the current

building trends, the program funds are projected to last into the next fiscal year.

10:49:38 AM

MR. ORD continued, stating that the rebate program for existing homes requires both state and homeowner investment. Directing attention to the slide, titled "Home Energy Rebate Program; Program Snapshot," contained in the committee packet, he explained the monetary breakdown: $11,681 represents the overall average investment in improvements, less the average rebate of $6,389, and figuring the reimbursement amount allowed for the as-is, $325.00, and post, $175.00, ratings, the homeowner's investment would be $4,792.00. Considering these calculations, he said, the average homeowner will realize a simple payback period of 3.3 years. The payback time will be reduced, depending on location; Fairbanks averages 2 years. He then provided figures to illustrate the economic stimulus provided by the program. Based on 22,447 rebated homeowners, multiplied by the average combined state and homeowner contribution of $11,681, the result for the total energy efficiency improvement economic boost is $262 million, which, he stressed, represents a conservative figure. Summing up the savings, represented by the program, he said the average homeowner saves 34 percent, or about 100 million BTUs, annually.

10:51:35 AM

CO-CHAIR VAZQUEZ asked for specific information regarding waitlists for each rebate program to include the number, the estimated length of time for service, and the geographic area for those waiting. She asked if priority is being given to particular geographic areas that experience weather extremes and high energy costs.

MR. ORD responded that the home energy rebate program does not recognize location preference or priority. However, policy allows AHFC to sponsor an energy rater to any community that is lacking one, if a minimum of three homeowners request service. Regarding the waitlist, he said dispatches range from 80-100 per week, which currently keeps pace with the number of requests. Responding to a follow-up question regarding the weatherization program waitlist, he said, he would provide further information.

MR. ANDERSON added that AHFC relies heavily on the partnership agencies to maintain the waitlists and work plans. The partnership and outreach organizations are vital to the success

of the programs, considering the 300 communities being served. To a follow-up from Representative Claman, he said that at one time the waitlist was a lengthy two months, with 10,000 applicants on the docket, but the last couple of years have seen a leveling out.

10:55:37 AM

MR. ORD turned to the Alaska Energy Efficiency Revolving Loan Program (AEERLP), and said it was placed in statute in 2010. This AHFC program provides financing for permanent energy efficient improvements to buildings owned by Regional Educational Attendance Areas (REAAs), the University of Alaska (UA), the state, or state municipalities. He noted that AHFC was given the ability to loan up to $250 million. The funding source is the AHFC's bond authority, not state appropriation. Describing how the program works, he explained that borrowers obtain an investment grade audit, and energy efficiency measures are identified and listed. The borrower selects from the list, prioritizes improvements, and AHFC finances programs that prove an energy saving result. A 365 day completion is required. Currently, the AHFC board has approved two projects, both are pending developer commitment, and a third project application is under review. Outreach is ongoing by AHFC, to promote this program and general energy efficiency improvements of public facilities.

10:57:02 AM

CO-CHAIR COLVER asked what the fund utilization has been, since the bonding authority was adopted, and he asked for the number of energy upgrades to public buildings.

MR. ANDERSON emphasized that the AEERLP program is restricted to public facilities, excluding non-profit and for-profit organizations and businesses. To date there is no utilization, only the two loans awaiting borrower commitment. He indicated that at least twelve projects have been undertaken, using AHFC energy information but other funding sources.

CO-CHAIR COLVER asked for the interest rate and what it is based upon.

MR. ANDERSON responded that the $3.79 million loan, currently approved by the AHFC board, has an interest rate of 3.625 percent. He pointed out that this rate is based on the cost of doing business, as there is no intent for profit.

CO-CHAIR COLVER inquired whether it is difficult to find employees to do the energy ratings.

MR. ANDERSON indicated that Commercial Energy Auditors (CEAs) were scarce in 2010, when the program began; however, that number has increased to 60-70 throughout the state. The CEAs are accredited through the Association of Energy Engineers.

CO-CHAIR COLVER questioned the lack of program utilization and asked if that is due to the current process.

MR. ANDERSON responded yes, there is a direct connection primarily because the service providers are geared for large projects. He explained that the process is being modified to provide development service companies that address smaller projects, which should encourage more participation.

CO-CHAIR COLVER posed the possibility of including non-profits and the commercial sector, as a means to improve utilization of the program, and benefit from the energy use expertise of AHFC.

MR. ANDERSON said AHFC would be interested in having the discussion and then deferred.

CO-CHAIR COLVER said the discussion will continue as the goal of this committee is to provide energy conservation opportunities.

MR. ANDERSON agreed to provide further information on new concepts.

11:04:12 AM

REPRESENTATIVE CLAMAN noted the underutilization of the funds, and asked whether it may be attributable to the lack of a competitive interest rate, or the newness of the program.

MR. ANDERSON offered that commercial banks may provide better rates or loan funding structures; however, it is anticipated that the AHFC program will become more popular through continued promotion.

11:05:15 AM

CO-CHAIR VAZQUEZ expressed concern for the reported underutilization and asked for clarity on the inception of the

program, who the manager is, and noted that only $3.7 million has been thus far approved.

MR. ANDERSON responded that the program was initiated in 2010, under SB220, that he is the director/manager, and concurred with the members understanding of the amount of funding committed to date. He said the approved projects are a combination of airport equipment and building modifications.

CO-CHAIR VAZQUEZ asked to have a plan of action to increase participation of the program and suggested that a starting point could be a survey sent to department heads, with a follow-up and coordination via the governor's office. It is important to get this ball rolling, she stressed, and requested a report be made to the committee addressing these concerns, to be submitted in three weeks.

MR. ANDERSON agreed to provide the report.

11:08:00 AM

MR. ORD moving on, said that when the AEERLF was created, little was known collectively about energy use in Alaskan public facilities. Stimulus money was received from the American Recovery and Reinvestment Act (ARRA) [2009], and used by AHFC to benchmark more than 1,200 public buildings across the state. Benchmarked documents of a building include: ownership, uses, size, year built, and type of energy used. Of the 1,200 buildings, AHFC selected 327 candidates for an investment grade audit. At the time of the report [2012], the estimated energy cost to the public totaled approximately $641,245,000 per year. The projected savings was $25,000 per building per year, for a potential savings of $125 million. The benchmark audit resulted in about 50 energy efficiency measure recommendations, including the adoption and enforcement of energy codes; tracking energy use; and establishing a level of accountability for better energy use control.

11:09:52 AM

MR. ORD returned to the residential sector to describe additional programs available through AHFC to benefit savings from energy efficiency improvements. The corporation offers a low interest, home loan incentive that can be applied to the first $200,000 with a blended interest rate on the balance. Another tool AHFC offers homeowners is a second mortgage for energy conservation. The loan is up to $30,000 for energy

efficiency improvements. Borrowers apply through the Alaska USA Federal Credit Union. The program works in conjunction with the home energy rebate program, with the rebate going directly towards paying down the loan balance. The upfront financing allows homeowners a larger investment in energy efficiency improvements and realize better savings. He continued, stating that one of the largest AHFC components is for education for consumers, professional, and children. The Alaska Energy Smart curriculum teaches children how energy is all around them, why energy is needed, and how it can be used wisely; providing students with valuable insights to share with their family. The lessons are aligned to the Alaska Grade Level Expectations [Department of Education and Early Development]. For consumers, classes are offered several times a week in Fairbanks, South Central, and other parts of the state on topics ranging from basic building science of doors and windows to lighting and appliances. Participants of the classes, in line with the home energy rebate program, have been shown to have a higher energy savings, 9 percent, versus those who did not attend. Finally, AHFC offers classes for professionals, such as realtors, lenders, architects, and engineers.

11:12:43 AM

MR. ORD stressed the importance of the partnerships that are integral to the success of the program, and pointed out the list included in the committee packet.

MR. ANDERSON underscored the critical need for these partnerships.

11:13:45 AM

MR. ORD summed up by providing some key statistics to illustrate what can be accomplished by an investment in energy efficiency. He said there are more than 40,000 homes in Alaska that have improved their energy efficiency resulting in substantial use reductions. Not only does an investment in energy efficiency increase savings, it provides jobs and a boost to the economy. More than 5,000 jobs have been created due to the home energy rebate programs, over the last seven years. The 3.2 trillion BTU's saved is a rather hard number to comprehend, and he equated it to the image of every household in Anchorage and the Matanuska-Susitna valley driving to Key Largo for vacation every year.

11:14:42 AM

REPRESENTATIVE CLAMAN asked for dollar figures for the savings that the program provides per household on average.

MR. ANDERSON said a 20 percent savings should be realized.

REPRESENTATIVE CLAMAN indicated that his constituents would be better informed by numbers that relate to individuals.

MR. ORD offered that detailed statistics are available. On average, he estimated, homeowners can expect to save about $1,400 by participating in the rebate program and roughly $1,300 through the weatherization program.

11:16:44 AM

CO-CHAIR VAZQUEZ reviewed the information requested, during the presentation, and echoed the concerns of Representative Claman for relatable savings figures.

11:18:20 AM

REPRESENTATIVE CLAMAN asked to have a report submitted that provides per household averages for: annual savings, actual investment for new and existing programs, and the timeline for realizing the investment return.

11:19:34 AM

CO-CHAIR COLVER referred to the governor's State of the Budget speech, that money would be included for weatherization, and asked if that includes the AHFC programs.

MR. ANDERSON responded that the governor's resubmitted capital budget includes $3 million for the energy rebate and $6.6 million for weatherization programs and he detailed the allocation timelines.

11:20:58 AM

CO-CHAIR COLVER called attention to the technological improvements being made, particularly by the Cold Climate Housing Research Center, and inquired how the legislature can better work with HUD to incorporate these breakthroughs for use in the federal building projects.

MR. ANDERSON assured the committee that AHFC works closely with HUD and the energy standards are being met by the federal agency.

11:24:30 AM

CO-CHAIR VAZQUEZ requested further information to include a breakdown of grant details and what measures are in place to ensure quality assurance.

MR. ANDERSON said quality assurance is conducted on-site via physical monitoring as well as desk audit reviews of new building projects. Desk reviews are conducted on all three programs.

11:26:27 AM

CO-CHAIR COLVER thanked the participants and announced the next committee meeting.

11:27:42 AM

**ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:27 a.m.