

**ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE**

January 25, 2017

3:30 p.m.

MEMBERS PRESENT

Senator Cathy Giessel, Chair
Senator John Coghill, Vice Chair
Senator Natasha von Imhof
Senator Bert Stedman
Senator Shelley Hughes
Senator Kevin Meyer
Senator Bill Wielechowski

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Senator Tom Begich

COMMITTEE CALENDAR

UPDATE: ALASKA STAND ALONE PIPELINE PROJECT (ASAP)

- HEARD

OVERVIEW: ALASKA AFFORDABLE ENERGY STRATEGY

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

FRANK RICHARDS, Sr. Vice President
Program Management

Alaska Gasline Development Corporation (AGDC)

POSITION STATEMENT: Provided a brief update of activities associated with the ASAP Project.

MIKE THOMPSON

Environmental, Regulatory, and Land Manager
Alaska Stand Alone Pipeline (ASAP)
Alaska Gasline Development Corporation (AGDC)
Anchorage, Alaska

POSITION STATEMENT: Commented on the ASAP Project.

KATIE CONWAY

Government Relations Manager
Alaska Energy Authority (AEA)
Department of Commerce, Community and Economic Development
(DCCED)

POSITION STATEMENT: Presented overview of the Alaska Affordable Energy Strategy (AkaES).

CADY LISTER, Chief Economist

Alaska Energy Authority
Department of Commerce, Community and Economic Development
(DCCED)

POSITION STATEMENT: Presented overview of the Alaska Affordable Energy Strategy (AkaES).

NEIL MCMAHON, Planning Manager

Alaska Energy Authority (AEA)
Anchorage, Alaska

POSITION STATEMENT: Answered questions regarding the Alaska Affordable Energy Strategy (AkaES).

ACTION NARRATIVE

[3:30:15 PM](#)

CHAIR CATHY GIESSEL called the Senate Resources Standing Committee meeting to order at 3:30 p.m. Present at the call to order were Senators Stedman, Coghill, Meyer, Wielechowski, von Imhof, and Chair Giessel. Senator Hughes arrived shortly thereafter.

Update: Alaska Stand Alone Pipeline Project (ASAP)

[3:31:13 PM](#)

CHAIR GIESSEL announced the first order of business would be the Alaska Stand Alone Pipeline Project (ASAP) update, which was created with the passage of HB 4 in 2013. She recognized Senator Begich in the audience and welcomed Mr. Richards to give his presentation.

FRANK RICHARDS, Sr. Vice President, Program Management, Alaska Gasline Development Corporation (AGDC), said he would provide a

brief update of activities associated with the ASAP Project. He said ASAP was initially charged with looking at an in-state natural gas pipeline to be able to deliver gas for Alaskans.

[3:33:28 PM](#)

The work effort that developed was a 36-inch diameter pipeline - the result of the Alaska Gasline Inducement Act (AGIA) project under contract with TransCanada. The project was to install a pipeline and a gas conditioning facility on the North Slope that would produce utility grade gas. The gas would essentially provide Southcentral Alaska with both home heating and power generation. In addition to the 36-inch pipeline was the requirement to also provide natural gas in a lateral to Fairbanks.

With the passage of HB 4, the state granted the Alaska Gasline Development Corporation (AGDC) a right-of-way (ROW) for the pipeline. The work that ensued through 2014 was the pre-front end engineering and design (FEED) and FEED level of effort that looked at engineering but also developed the cost of \$10 billion for constructing this project. A project execution plan was developed to accomplish the work.

[3:35:16 PM](#)

MR. RICHARDS stated that they have been following through with the Army Corps of Engineers (COE) for completion of a Supplemental Environmental Impact Statement (Environmental Impact Statement (SEIS)), because of design changes made after the work effort, because the premise had changed to provide gas to Alaskans at the lowest possible cost. Therefore, the design premise was changed from a very high-pressure line for natural gas liquids to a lower-pressure line with utility grade gas. This significantly reduced the facilities' footprints in terms of pressurization and number of compressor stations. The result would be a record of decision of a federal right-of-way grant to AGDC, which would give them a continuous right-of-way across both state and federal lands from Prudhoe Bay into Southcentral Alaska.

MR. RICHARDS said AGDC is using all the work efforts from the ASAP and the AKLNG project so that work efforts and costs are not duplicated.

[3:37:14 PM](#)

The Clean Water Act (CWA) Section 404 application essentially triggers the need for an environmental document under the National Environmental Policy Act (NEPA). The ASAP final

Environmental Impact Statement (EIS) was completed in 2012, but no record of decision was published. This is because the design premise was changed to be able to bring gas to Alaskans at a lower cost with lower-pressure, utility-grade gas. In the interim to optimize the project, Mr. Richards said, they worked collaboratively with former partners on the AKLNG Project to find common alignment between the two different projects, so work would not have to be duplicated.

MR. RICHARDS said the Army Corps of Engineers (COE) has a third-party contractor incorporating agency comments and AGDC responses into the draft SEIS chapters in preparation for its publication. The draft SEIS should be out to the public in the middle of this year with a final publication in December of this year, and a record of decision on March 15, 2018.

[3:41:09 PM](#)

Additional analyses and reports are required by the COE on very specific topical information from design premise for strain-based pipeline, to cost above ground versus below ground, to construction methodology. Initially, it wasn't believed that these additional proposed changes to the design would not trigger the need of an SEIS. However, it was through answering these questions that an SEIS was necessary. These questions are very similar to the ones the AKLNG Project will also be receiving with the resource reports they talked about Monday.

[3:41:29 PM](#)

MR. RICHARDS said the DNR granted ASAP a right-of-way in 2011. An amendment to it was necessary due to the land exchanges that were undertaken in the intervening years for the revised alignment; public comment closed on January 18, 2017 and DNR and AGDC will sign the amended right-of-way lease in the near future. In 2016, SB 70 allowed DNR to issue a right-of-way for a natural gas pipeline across Denali State Park and other recreation areas along the alignment all the way through to the proposed liquefaction site in Nikiski. The current right-of-way amendment will incorporate these provisions.

[3:42:53 PM](#)

The Pipeline engineering team continues to assist the Environmental, Regulatory, and Lands (ERL) team in addressing Requests for Information (RFIs) and comments from the COE, other agencies, and the public.

The Project Service group is tracking costs and schedules, but is also providing a robust electronic document management system

which now acts as the conduit to the library of all the information from TransCanada, the Alaska Pipeline Project, AKLNG, and the ASAP Project.

[3:44:11 PM](#)

Construction management and the facilities management groups have no activity on facilities.

[3:44:19 PM](#)

He presented the ASAP Project Schedule as follows:

- Feb. 20, 2017 - Corps of Engineers Prepares Complete Draft SEIS for Final Review.
- April 3, 2017 - Corps of Engineers initiates NHPA Sec.106 Consultation Meetings.
- May 12, 2017 - Public Notice of Draft SEIS and 404 Clean Water Act Application.
- May 15 - June 23, 2017 - Public Meetings for Draft SEIS.
- August 25 - December 12, 2017 - Corps of Engineers Prepares Final SEIS.
- December 15, 2017 - Public Notice of Final SEIS.
- March 15, 2018 - Record of Decision (Permit Decision).

[3:45:42 PM](#)

SENATOR WIELECHOWSKI asked if the SEIS and record of decision can be used, or at least be helpful, for the AKLNG project.

MIKE THOMPSON, Environmental, Regulatory, and Land Manager, Alaska Stand Alone Pipeline (ASAP), Alaska Gasline Development Corporation (AGDC), Anchorage, Alaska, answered that the purpose and need of the two projects are very different, but there might be a mechanism to pair the information from one project to the other. The NEPA process will need to be reevaluated.

SENATOR VON IMHOF asked if all the 500 cubic feet (mcf/d) of gas was for in-state consumption or would some of it be sold and, building on Senator Wielechowski's question, is there any way to use any of the ASAP permits for the AKLNG Project.

MR. RICHARDS answered that of the 500 mcf/d approximately 250 mcf/d is projected for in-state use, with the high of 3000 mcf/d with cold snaps such as the recent weather spell, leaving the same amount to be sold or to be used by other entities. That will be determined by the market and the willingness to buy the gas.

The Bureau of Land Management (BLM) right-of-way will come to AGDC and with it comes the contiguous right-of-way across state

and federal lands from Prudhoe Bay all the way down to Trapper Creek and across the Susitna River. That is a "very big prize" going forward for AGDC.

[3:48:42 PM](#)

MR. THOMPSON said another key permit that would be very valuable to the AKLNG Project if ASAP acquires it is the 404 permit involving analysis of impacts to wetlands. Determining what lands fall under the 404 jurisdiction is a very significant, time-consuming process, and once that evaluation is completed, the COE would be obligated to use that determination for another project.

SENATOR STEDMAN said the state has sunk hundreds of millions in incentives in Cook Inlet already and asked how the two regions will be worked together so as to not leave those hundreds of millions of dollars on the table.

MR. RICHARDS answered that the Cook Inlet incentives were successful and have resulted in some significant finds, but he didn't know how the existing fields will taper off and how future investments will replenish that decline. The ASAP project was started when Cook Inlet was in a steep decline and there was a projected need to displace that energy source, and it provides an opportunity to supplement the businesses in and around Cook Inlet that have been utilizing the additional gas resource: Agrium for fertilizer and gas liquefaction at the existing liquefaction plant.

[3:52:02 PM](#)

SENATOR STEDMAN said Cook Inlet has years of gas supply in front of it and it appears there is no shortage in the Anchorage area now or in the reasonably near future. At some point from a policy perspective a discussion needs to occur, so a well-intended project doesn't negatively impact other regions of the state as markets change.

CHAIR GIESSEL agreed and added that Furie is meeting demand for Homer electric and BlueCrest has a gas discovery offshore; they simply need a market to make it economic to develop. She referred to language on slide 3 and asked why they want to "quickly advance" the record-of-decision timeline. If this is a backup project, why the urgency?

[3:53:44 PM](#)

MR. RICHARDS answered that they want to conclude the environmental regulatory process so that they don't spend any more of their limited funds than necessary.

CHAIR GIESSEL referred to slide 5 and said very soon they will have a complete right-of-way for this project and asked why all of it is needed now if it is a backup project.

MR. RICHARDS answered that it is an asset that comes to AGDC under the auspices of ASAP and it could be used on any project.

3:55:20 PM

SENATOR WIELECHOWSKI said it seems to him that this project has become somewhat redundant and he wondered how much money was being spent on it at this point. In years past, and when this project was created, there were Cook Inlet shortages, but now the mean estimate of gas in Cook Inlet is 9 trillion cubic feet (tcf), an enormous reserve, more gas than has been used there in 50 years including historic use of Agrium and shipping LNG. To him the value is in the permits being transferable, but other than that, the project appears redundant. He wondered what the budget was for ASAP.

MR. RICHARDS asked if he wants the current year's authorized budget and future projections of expenditure for this project.

SENATOR WIELECHOWSKI said yes.

MR. RICHARDS answered that ASAP was given a budget of approximately \$10 million for FY17; \$3.7 million is committed to work contracts and approximately \$1.2 million has been expended, leaving approximately \$2.4 million for the remainder of the fiscal year.

CHAIR GIESSEL thanked Mr. Richards and said she appreciated the update.

Overview: Alaska Affordable Energy Strategy

CHAIR GIESSEL said the next item on the agenda was an overview of the Alaska Affordable Energy Strategy (AKAES). When SB 138 passed in 2014 there was a fundamental question of equity between folks on the Railbelt and folks far from the proposed pipeline. So, Senate Finance passed Section 75, which required solutions to be found for the rest of Alaska that would not directly receive energy from the project. The Alaska Energy

Authority (AEA) was instructed to create this report and that is what they will hear today.

3:59:19 PM

KATIE CONWAY, Government Relations Manager, Alaska Energy Authority (AEA), Department of Commerce, Community and Economic Development (DCCED), introduced herself and said they were very excited to present the Alaska Affordable Energy Strategy (AkAES) to the committee. She said the AEA is a public corporation whose mission is to reduce the cost of energy in Alaska. They could talk about the work they do to meet that mission, but today they want to focus on this two-plus year project. The presentation is in two parts; the first is background, which she would present, and Ms. Lister would present the actual recommendations. She said Neil McMahon, AEA Planning Manager, was on the phone and he was the principle investigator on this project.

4:01:49 PM

She noted a larger concentration of lights along the Railbelt (slide 2) and said that despite the small size of these communities and the remote locations, the fact is that they are isolated grids and are not connected to one another.

MS. CONWAY said it's easy to take for granted the ease with which people simply flip a switch and light homes and workplaces, but in reality the energy systems generating and distributing that power are complicated, require a lot of work to sustain, and unlike systems along the Railbelt, because they are not connected to a grid, they lack backup. Power and heat, is the backbone on which all the communities rely. Energy is not a luxury; it's a fundamental need.

4:02:43 PM

In much of Alaska, energy infrastructure is made up of bulk fuel tank farms (heat and electricity), power generation facilities, and electrical distribution. Energy infrastructure is critical and needs continuous improvement and replacement as old things reach the end of their expected useful lives; and Alaska's is aging.

For a sense of the capital cost associated with this infrastructure, they used the Rural Power System Upgrade Program which serves communities of only up to 2,000 people to estimate that the yearly capital costs to merely replace electrical generation and bulk fuel storage as they reach the end of their useful lives (about 30 years) is more than \$30 million not

including personnel, operations, and maintenance or the diesel stored and burned in these facilities.

[4:03:52 PM](#)

MS. CONWAY said over the last 15 years, approximately \$1 billion both federal (approximately three-quarters) and state dollars, has been spent on energy projects in non-Railbelt Alaska. Today the situation is different. While the need for continuing investment remains relatively constant, the availability of public funding to help meet that need is decreasing. So, communities and utilities have to find other ways to continue to deliver safe, stable, reliable and affordable energy services in programs. This transition will be difficult for some communities, so it is important to ensure a framework is in place to maximize federal dollars, encourage private sector investment, prepare communities and utilities for using debt financing rather than exclusively relying on public funding to implement projects, ensure proper project selection given the unique circumstances of any individual community, and provide technical assistance and consumer protection. This is what the Alaska Affordable Energy Strategy addresses and to think of the Alaska Affordable Energy Strategy (AKAES) as a framework for changing the way critical energy programs and services are provided, a weight that has been heavily dependent on generous state and federal grants.

MS. CONWAY said to accommodate the necessary transitions of Alaska's budgetary reality when making energy decisions, the whole community needs to be considered in determining which energy cost solutions make the most sense at that point in time, and the AKAES framework includes recommendations for doing that. It is a strategic plan to improve the methods by which the state works with non-Railbelt communities and utilities to identify, evaluate, develop, and maintain cost-effective energy solutions.

Though the Alaska Affordable Energy Strategy originated as a part of the gasline legislation in 2014, it has become a valuable effort that exists entirely independent of the gasline, Ms. Conway said, and SB 138, asks AEA to develop a plan of infrastructure that would deliver more affordable energy to areas of the state that are not expected to have direct access to a North Slope natural gas pipeline. AEA worked with AGDC to determine who would directly benefit from a gas pipeline, which will be consumers along the Railbelt, and the Affordable Energy Strategy therefore, applies to everywhere else including Southeast Alaska.

They were also asked to consider existing state energy policy, such as the 15 percent by 2020 and 50 percent by 2025 renewable and energy efficiency goals established in 2010.

MS. CONWAY pointed out a few key points about this project: first that only non-Railbelt regions make up the study area. This was a data and research-based project conducted over two years and this presentation is a very high-level summary of that detailed and dense information. She said some people may expect to see a list of capital projects, but they didn't do that. Given the uncertainty of funding a set list of projects, AEA focused instead on improving the decision-making process and expanding the availability of financing tools for energy projects.

[4:07:58 PM](#)

The recommendations will come in a linear format for ease of explanation, but it's better to think of them as a web because they are all connected to one another. Further, through the recommendations only target non-Railbelt Alaska and the benefits of implementing some or all of them could be state-wide, because every dollar they stretch allows more to be done with less. This means it's good for everyone no matter where they live.

A wildly variable set of circumstances was found to influence energy costs among study area communities which ranged from small, isolated villages relying 100 percent on diesel for power and heat to larger interconnected cities with nearly 100 percent renewable electricity generation. The median community size within the study area is 300 people, and 76 percent of those communities are not connected by road or marine highway. The median electric rate is 62 cents Kwh (before PCE) and heating oil cost is \$4.55/gallon (a gallon equivalent of natural gas in Southcentral costs less than \$1/gallon).

[4:09:01 PM](#)

MS. CONWAY said whether state dollars or federal, local utility or utility customer, the AkaES aims to ensure all those dollars are spent to maximize their value. Implementing these recommendations will:

1. Improve project selection ensuring the most cost-effective projects are those done first.
2. Diversify financing options, which removes at least some of the difficulty currently prohibiting some communities from developing some projects.

3. Encourage best financial, managerial and technical practices through requirements and incentives that will lead to stronger accountability and maximize the useful life of assets.

She said over the last two years, AEA considered more than 150 reports and studies from within and outside Alaska and the analysis of more than 3,000 potential energy infrastructure projects in Alaska, including projects from the Renewable Energy Grant Fund, the Rural Power System Upgrade Program, the Home Energy Rebate Program, Residential Weatherization, bulk Fuel, and other publically available feasibility reports. This project also incorporated the work of the recently completed Regional Energy Plans, and the community-vetted priorities developed through an extensive stakeholder engagement process. Finally, this project commissioned specific studies to fill in gaps of knowledge related to end-use efficiency, liquefied natural gas, fuel delivery and storage, utility management structures, and barriers to private investment in rural Alaska. The Alaska Affordable Energy Strategy looked at the entire energy system within the study area and not just specifically at programs AEA operates.

She said all this information was built into a model called the "Alaska Affordable Energy Model" to compare different energy infrastructure options that can be used to help communities or policy makers better identify the most cost effective next projects to consider.

[4:11:15 PM](#)

For this study and the following recommendations, the term "affordable" is interchangeable with "cost effective," meaning essentially the lowest cost option given the unique circumstances of a specific place at a specific moment in time. AEA found that it would be difficult to dramatically lower costs, but there are plenty of opportunities for improving cost effectiveness. Most noteworthy is energy efficiency for both residential and non-residential buildings and facilities. This is most cost common, has the highest expected savings and is consistently the most cost-effective opportunity across the study area. Many of the strongest opportunities for more affordable energy, such as non-residential efficiency, are difficult to capture within the current system of delivering energy programs and services and given the variability of cost-influencing conditions and the circumstantial nature of affordability there are no one-size-fits-all solutions.

[4:12:24 PM](#)

CADY LISTER, Chief Economist, Alaska Energy Authority, Department of Commerce, Community and Economic Development (DCCED), introduced herself and continued the presentation. She said the AkaES proposes an evidence-based management framework to guide decision-making. The recommendations are built on a foundation of collaborations, stakeholder engagement, and comprehensive research and are organized into four categories or pillars (slide 14). They are:

1. Identification of cost-effective projects
2. Project financing for those cost-effective projects
3. Creating systems of accountability and sustainability
4. Funding of programs

She said these pillars all support the goal of providing safe, stable, reliable, and affordable energy. Building off the successes of Alaska's many past and current energy programs, and recognizing that the levers available to state government to influence local actions are limited, all the recommendations employ at least one of the following:

1. Direct financing, such as grants, loans, or incentives
2. Technical assistance, such as the collection, analysis and sharing of data, information, evaluation, and consultation,
3. Requirements, such as mandates, regulations, and standards.

[4:13:56 PM](#)

MS. LISTER said in order to recommend ways to improve the status quo, they examined the entire energy system to identify "pain points" where barriers and risks were leading to higher-cost energy. She explained that historic state and federal funding for infrastructure has in some communities created an expectation of grants, which can lead to delayed implementation of beneficial energy projects and to the under-development of administrative and financial capacity needed to be able to access traditional debt financing. Helping energy project developers, like utilities in communities, to be able to meet the standards to access debt financing will save the state money in reduced capital expenditures into the future.

Additionally, she said, the way in which state and federal funding has been granted in the past has in some cases led to communities making project-development decisions based on funding availability rather than on what is best for the community energy system as a whole. The expected performance and/or economic life of some of the energy projects is not always realized. Maintenance and operation of energy systems require a certain level of technical and managerial expertise that isn't always available at the local level.

MS. LISTER said the team put together a menu of options to consider for implementation and there are synergies between many of them, but benefits can be found in each of them individually, as well. Everyone should be able to find something that resonates. Not all the forthcoming recommendations will be relevant in every single community, but collectively the AkaES offers meaningful, realistic, and achievable solutions for the entire study area.

[4:15:48 PM](#)

CHAIR GIESSEL asked if the slide 14 framework had been proposed before.

MS. LISTER answered no. The last major effort to develop a state energy plan created more of a list of available resources by community and that, as a component, informs the analysis tool. But this is framework for making decisions and bringing projects through the evaluation process that result in better and more sustainable projects at the other end and that has not been recommended before, to her knowledge.

CHAIR GIESSEL said slide 15 alludes to funding-driven decisions and asked her to identify specific projects that were driven by funding that didn't pan out as expected.

MS. CONWAY said she would do that and get back to her.

CHAIR GIESSEL said she is particularly interested in the Watana Dam project which is part of the state's goal to achieve 50 percent renewable energy by 2025, and of course the appropriateness of that.

SENATOR COGHILL remarked that outside of the Railbelt there were a whole range of grant-driven projects meant to help communities in kind of extreme circumstances as the price went up. So, they need to know what the fall-out of that is, because some of them were for five years, some were for eight years, and some were test projects that were supposed to come with conclusions and studies from the University. A list of those that are in the middle of the project is needed, because before moving forward with this strategy they have to understand who is being left behind and if they are left hanging, and if they can lend themselves back into this process to retool.

CHAIR GIESSEL added that meshes with her concern.

MS. LISTER said the Renewable Energy Fund (REF) produces a status report that will be delivered to the legislature on January 27 that will provide an update on the performance of the REF projects that are currently operating and some information about the projects that applied for funding in round 9.

SENATOR COGHILL said that would be very helpful, but they are left hanging with how to start this process and where that leaves them.

[4:20:33 PM](#)

SENATOR STEDMAN said it would be nice for the report to break down the regional distribution of grant awards either by Senate or House district. That would allow for some regional comparison, because right now the map highly distorts the reality by grouping the blocks by multiple Senate districts.

MS. CONWAY said she would need some clarification and then she would follow up on that since it is not totally related to their presentation at the moment.

SENATOR COGHILL said he lives in the Railbelt, outside of what they are trying to do, but they are trying to do the same thing. He wanted her to be prepared to answer questions about the Railbelt district, which has a road system (Richardson Highway and Alaska Highway), which is quite often treated differently than any other rural area, because of that road system. That geography deserves a different look, because their grid runs up to Glennallen down to Delta Junction and sometimes Delta is included in it and sometimes it is excluded. Valdez to Glennallen is a very different grid that would love to be able to measure those projects similarly, and then everything in between those two are "kind of left to their own."

[4:23:23 PM](#)

MS. LISTER said current state energy goals include energy efficiency and renewable energy targets, in-state gas - using the Power Project Fund Loan Program as a primary financing tool in renewable and alternative energy. AEA recommends that state energy policy be amended to include a goal that formalizes the commitment the state already works toward every day in delivering critical energy programs and services to ensure safe, stable, reliable, and affordable energy to all communities by 2030. The following recommendations outline how to achieve this goal despite having limited availability to state funding.

She said the first pillar of this goal is identification of cost-effective projects. The three recommendations under this pillar support access to better community-level data necessary to make good decisions about energy projects and programs, improved data collection and analysis, the sources of which include the Alaska Energy Data Gateway, the Alaska Retrofit Information System, data collection from the Power Cost Equalization Program (PCE) and the Renewable Energy Fund, performance report from the Alaska Affordable Energy Model, the on-line, reconnaissance-level, analysis tool that was developed as a part of this project. Building off these existing efforts, AkaES recommends formalizing responsibility to collect and have publically accessible community-level, energy data and to have publically accessible data for all state energy programs, and to regularly update the Alaska Affordable Model, which can provide guidance regarding the cost effectiveness of energy infrastructure opportunities.

MS. LISTER said the AkaES also recommends codifying and clarifying the work already done at the Alaska Energy Authority and other state agencies to help ensure the most cost-effective energy systems are being identified and built. The state will work with communities seeking assistance to reduce energy costs, and help them to identify, plan and finance energy projects and programs. They will start by targeting high-cost PCE communities, providing immediate relief to consumers in those communities, reducing costs to the PCE Program, and provide assistance with technical scoping for all phases of project development.

She said this recommendation builds on the work that the state already performs and aims to clarify responsibility outlined in HB 306 from 2010 for "working to identify and assist with development of the most cost-effective, long-term sources of energy for each community, statewide."

[4:26:48 PM](#)

SENATOR COGHILL inserted that the first two points go closely together and asked if she is asking for statutory provision that outlines responsibilities. He wanted to know if they were going to ask agencies to do a lateral or horizontal sharing of responsibility along with the communities and if they had worked on language to that effect.

MS. LISTER said they had not developed statutory language around any of these recommendations.

MS. LISTER said recommendation A-3 is to establish building energy codes for new residential and non-residential construction and major renovations. Building to an efficient standard is cost effective, saves energy and money throughout the life of the building, and is less expensive than retrofitting later. It just makes sense that new buildings should be built with lower operating costs in mind. This recommendation also builds on extensive research done by the Alaska Housing Finance Corporation (AHFC) and will provide savings to the PCE Program and the Alaska Heating Assistance Program should it be refunded, as well as potential benefits to public health, safety, and the environment.

[4:28:40 PM](#)

She said the financing cost-effective projects pillar (slide 23) includes five recommendations that aim to improve access to and expand the types of financing tools available to communities to better leverage non-state dollars and to connect potential investors and lenders to bankable projects. Additionally, because new financial instruments don't work by themselves, they need to make sure that projects and entities are bankable and have a skilled workforce to both build and maintain those projects.

[4:29:01 PM](#)

The next recommendation relates to the Bulk Fuel Loan Program, which is currently administered by the Division of Community and Regional Affairs in the Department of Commerce, Community and Economic Development (DCCED). It offers communities an easy-to-use, low-cost financing tool to purchase large quantities of petroleum product, thereby reducing the per-unit cost and reducing the risk to distributors of non-payment. As bio-mass projects become more frequent and larger in number throughout the state, the same mechanism to purchase non-petroleum bulk fuels, such as cord wood or pellets, would be a benefit to many communities.

She said the AkaES found that many communities and utilities are in a position to take on more debt for cost effective projects, but the communities need more flexibility in their funding options and they need assistance in accessing those opportunities. In some circumstances, administrative capacity can be the limiting factor in successfully securing existing financing options. What is needed is a way to make it easier for utilities and communities to access financing in the form of both grants and loans.

MS. LISTER said they have already seen the ability of dynamic capital stacks to bring energy projects to fruition. A good example is the Water Fall Creek hydroelectric project that is just about to come on line in King Cove, Alaska. That project first used the Renewable Energy Fund grant funds and then the Power Project Fund loan program through the State of Alaska. Then it bonded through the Alaska Municipal Bond Bank and had local cash match. Putting that funding stack together was complex and difficult. Not every community has that kind of capacity and access to a one-stop shop financing assistance would play an important role for them. They are calling this one-stop shop the Community Energy Fund for Alaska (CEFA).

The CEFA would act as both a funding source and a match maker with other financiers. It would be accessible to utilities, municipalities, boroughs, cities, tribes, and non-residential facilities. It would be available for generation, distribution, transmission, and demand-side efficiency projects. She said the use of CEFA funds would require that the state decide that the project is a cost-effective strategy for meeting community energy needs and thus is improving the quality of projects that are developed.

MS. LISTER said access to financing assistance is important, particularly now. It maximizes leveraging of state dollars; it can provide financial flexibility to serve the actual needs of communities; it reduces the transaction costs for both the borrower and the lender; and it helps with the transition from grants to loans.

[4:32:00 PM](#)

Another recommendation creates a loan offering with refund provisions that rewards project performance. Portions of a loan for energy infrastructure would be refunded if the borrower meets objective standards for performance and reporting. Standards are set to help maintain that asset for its economic life. Project type, phase, and applicant attributes can be used to determine what percentage of state loans are eligible for reimbursement or forgiveness. This loan would be an alternative to straight grant funding creating a mechanism for stretching dollars farther and providing an incentive for communities to maintain infrastructure and project performance.

[4:32:47 PM](#)

Another recommendation is to statutorily allow voluntary on-bill financing. Commercial Property Assessed Clean Energy (C-PACE) has been re-introduced this session as SB 39 and HB 80. It is a

financing mechanism that allows a voluntary tax assessment to finance energy efficiency in building level, renewable projects. C-PACE programs exist throughout the U.S. and provide a number of benefits: the debt stays with the building not the borrower, which allows for long terms in financing (up to 20 years) thus reducing impacts on cash flow, and C-PACE debts are off-books, so there are no negative impacts on the borrowers' balance sheet.

MS. LISTER said on-bill financing works in much the same way; the repayment is through the utility. Both mechanisms allow for less risk to the lender and more attractive terms to the borrower. These tools can save energy and money and create business opportunities in both the construction trades and the financing industry, great tools for economic development. Within the study area, C-PACE would be particularly valuable in the more urban Southeast communities, larger hub communities or boroughs with property tax. On-bill financing could work throughout the study area.

[4:34:09 PM](#)

The next recommendation has two parts; the first is to stabilize funding for low-income, weatherization-assistance programs. Of all government programs, she said residential weatherization generally has the best return on investment for energy savings to consumers.

MS. LISTER said AKAES recommends maintaining a baseline funding level of \$10 million per year, enabling the continuation of this important program and capitalizing on the trained workforce that has been built up since funding for this program increased in 2008.

The second part of the recommendation is to modify the rules of the Home Energy Rebate Program so that should this program receive funding in the future it is better able to serve rural areas of the state as well as those households that may exceed the limit for low income weatherization, but aren't high enough that they have the cash on hand necessary to participate in the Home Energy Rebate Program as it's currently structured.

[4:35:13 PM](#)

The six recommendations in the accountability and sustainability pillar are focused on creating a system of requirements and incentives that maximize the operational life of infrastructure and provide for financial and management standards that will increase ability to access debt financing.

The first recommendation under this pillar is to strengthen business and financial management assistance to PCE-eligible utilities. Reducing the non-fuel cost of power through efficient business operations could save millions of dollars per year for both consumers and the state, Ms. Lister explained. In PCE communities, non-fuel costs make up a little bit less than half of the total cost per kilowatt hour and that varies from year to year given the cost of fuel in any given year. But creating more efficient business and management practices will translate into direct savings through reduced PCE expenditures. Good business management also includes the operational practices that ensure equipment is properly maintained such as the scheduling and budgeting for operations and maintenance.

Improved financial management will also assist communities to better access financing and secure it at more attractive terms. AEA already does some of this work through the PCE Program and through Community Assistance, but there is a much greater need than can currently be met. Codifying this commitment is what is being recommended.

[4:36:53 PM](#)

MS. LISTER said the second recommendation builds off successful existing regional activity and recognizes that the state cannot and should not do everything, and that regional entities often know community needs better and are quicker to respond. Non-state, regional, and statewide entities, such as Tanana Chiefs Conference and Alaska Native Tribal Health Consortium are two good examples of organizations that are already doing this work. They are creating economies of scale for service provision and providing technical assistance to communities to meet their needs in certain geographic areas and/or disciplines. Some examples of the types of assistance that might be provided where appropriate include management of utility finances and accounting, expansion of regional utility cooperatives and fuel purchasing cooperatives, management of building efficiency programs or projects, operations and maintenance of both buildings and generation systems, and electrical emergency response.

Under the current system an entity must meet the standards of being fit, willing, and able in order to obtain or be issued a Certificate of Public Convenience and Necessity (CPCN) that allows it to serve a defined service area. Once it has been issued, a utility does not have to provide evidence at any

future time that they are still fit, willing, and able to provide the services that are required by the CPCN.

4:38:02 PM

Requiring that PCE-eligible utilities continue to demonstrate their financial, managerial, and technical fitness will help ensure that assets are maintained for their entire economic life and ensure the financial and managerial health of utilities, minimizing non-fuel costs and improving access to debt financing.

4:39:05 PM

Another recommendation is that all community buildings that receive the PCE subsidy and are greater than 5,000 square feet be required to have an energy audit and to implement the findings of that audit and to perform a retrofit that provides net savings within 10 years. Having efficient community facilities allows communities to spread their allocation of PCE-subsidized community facility kilowatt hours over a larger number of buildings. It lowers community facility operating costs freeing up funds to perform their core service and it helps to ensure that the PCE Program is not subsidizing more kilowatt hours than are necessary.

4:39:40 PM

Currently, Ms. Lister said, the Regulatory Commission of Alaska (RCA) makes a determination on the eligibility of new energy infrastructure development after it has been built. Research performed by the AkAES found that this is a barrier to private investors as it is the source of uncertainty. Siting authority could reduce this uncertainty and at the same time add a layer of consumer protection.

4:40:01 PM

SENATOR COGHILL commented that smaller communities with island-type grids are outside of RCA regulation and asked how many would fall into that category in her target areas.

4:40:26 PM

NEIL MCMAHON, Planning Manager* Alaska Energy Authority* Anchorage, Alaska, replied that generally, all utilities must have a CPCN. So, they all are technically regulated by the RCA even if they are not economically regulated, which would be the distinction that Senator Coghill is making. He would have to do a little bit of research to determine the exact number.

SENATOR COGHILL said if this is going to find its way into statutory language they need to know that number.

CHAIR GIESSEL instructed Mr. McMahon to send that information to her office and she would distribute it to committee members.

[4:41:41 PM](#)

MS. LISTER explained that the next recommendation [enact a 1 percent per year fuel reduction target for electric utilities until cost effective gains have been realized] is designed to provide a requirement for utilities to do continuous quality improvement - seeking out and implementing cost effective opportunities to reduce fuel consumption. Having a fuel reduction target allows for a wider range of program or project possibilities than an efficiency or renewable target, though both, if cost effective, could contribute. Other types of projects that might contribute are diesel generation efficiency and the lowering of line loss.

This recommendation supports the 2010 state energy policy of 50 percent renewable and 15 percent improvement in energy efficiency in Alaska statute pertaining to cost minimization, which requires that PCE-eligible utilities to "cooperate with appropriate state agencies to implement cost effective energy conservation measures and to plan for and implement feasible alternatives to diesel generation." The cost-effective portion of this recommendation is important; they are not recommending that any utility move forward with a project or program that would increase cost to consumers.

SENATOR COGHILL commented that the cost-effective part of this caught his attention. For example, the regulation for stack emissions on a lot of those communities drove their costs way up, and yet ways were found ways to do things that were cost effective like cogeneration water heating.

MS. LISTER continued that the statute that created the affordable energy strategy had two distinct requirements for program funding recommendations; the first was to suggest potential revenue sources for funding state energy programs and projects recommended by the study, and the second was to recommend a means of directly underwriting energy costs or providing a direct subsidy.

[4:44:21 PM](#)

The first funding option is to use the Alaska Affordable Energy Fund (AS 37.05.610) when it becomes available. The same

legislation that created the mandate for this study effort included creation of the Affordable Energy Fund, which was to take 20 percent of royalties off a future gasline and use them to build projects and programs to create energy affordability in the study area. At the time it was passed, this fund was estimated to generate \$80 - \$160 million annually. However, with completion of the gasline project at least a decade out and the need for continued investment in energy infrastructure present today, alternative revenue sources will need to be identified for different projects and programs should they be implemented.

[4:45:03 PM](#)

One potential revenue source for a very small subsection of energy programs and services is the PCE Fund. She emphasized the importance of maintaining the endowment in perpetuity and was only suggesting a small increase in the allocation from earnings to administer it and the directly related critical support services. For many years, Ms. Lister said, the full administrative cost of the PCE Program has been subsidized with General Fund (GF) dollars, and lacking these GF dollars, they recommend using existing statutory authority to fully cover the cost of administering the program.

In addition, Ms. Lister said, some energy programs have a logical critical connection to the effectiveness and success of PCE-community utilities. These programs could potentially be paid for with earnings from the endowment. These programs are: Circuit Rider, Operator Training, and Community Assistance. These three programs contribute directly to the energy, safety, stability, and reliability, and without which some small utilities may see increased costs or increased risk of failure.

[4:46:21 PM](#)

Ms. LISTER said a number of energy policy reports done in Alaska over the years have identified a per-unit energy surcharge generally referred to as a systems benefit charge (when talking about the electric industry) or a universal service charge if you're talking about the telecom industry. These charges which are common in Lower 48 utilities help create revenue streams to fund cost-effective, energy projects and programs.

[4:46:50 PM](#)

She said that AEA was required to come up with a way to directly underwrite the cost of energy in communities without cost effective infrastructure options. They recommend the continuation of the PCE Program and to revive the Alaska Heating Assistance Program, which was unfunded last year.

The PCE Program is the largest and most broad-based consistent source of energy funding in the study area. There are two significant points related to the PCE Program that she wanted to emphasize. First, the opportunities presented in the AkaES are expected to reduce costs, but not enough to eliminate the need for the PCE Program. And secondly, it is extremely important to maintain the integrity of the PCE Endowment Fund to ensure the sustainability of the PCE benefit to rural Alaskans.

[4:47:50 PM](#)

Finally, one additional idea for consideration: a state entity with the authority to consolidate and manage consumer energy to the extent that is reasonable would increase efficiency of delivering state energy programs to communities. This is not a new idea, but one that perhaps merits renewed consideration. Consumer energy is such an important issue in Alaska that it is imperative that efforts to address those challenges be coordinated at a high level to be both efficient and effective.

Implementation of the previous recommendations could potentially spread those services across a half-dozen agencies. This would be further complicated by institutional gaps in competing agency mandates. Developing a coordinated strategic plan to best assist communities may become problematic without a consolidated authority. This state entity would coordinate all aspects of these recommendations except for the RCA, which would remain independent.

[4:48:56 PM](#)

She concluded that keeping the lights on and buildings heated requires investing in energy infrastructure and ensuring that those investments are protected over the long term. Despite the state's current budgetary challenges, it can act to encourage stronger and more affordable community energy systems through policy, regulatory, and statutory change and AkaES provides guidance for that change.

SENATOR MEYER directed his question to Senator Coghill and asked if the Healy Clean Coal-Burning Plant up by Fairbanks is running yet.

SENATOR COGHILL answered yes; it had a failure and now is under restart. He understands that the rates are going to go up because of it. It is a work in progress and has been a painful project from its outset.

SENATOR MEYER asked if it was correct that the state had spent over \$1 billion in the last decade on energy projects.

MS. LISTER answered yes; though three-quarters of that \$1 billion spent was federal funding.

SENATOR MEYER asked if they keep track of any efficiencies that have been gained or energy costs lowered by spending that amount of money.

MS. LISTER answered that different programs report in different ways, but the short answer is yes. The Renewable Energy Fund reports on performance of projects and all utilities that are part of the PCE Program (most of rural Alaska) report their generation, costs, efficiencies and line loss in an annual report.

SENATOR MEYER asked if they know in total how much money was saved.

MS. LISTER said some of that money was spent on infrastructure that doesn't necessarily provide a measurable savings on an ongoing basis. For example, bulk fuel facilities cost a certain amount of money to build and the cost could be amortized over the life of the project; operations and maintenance of the facility are added to get to a dollar per gallon figure. Then through modeling they would know how much that community is saving through the availability of grants to pay for that asset. That's one part of it and then there are the types of programs that are easier to measure where, for example, a community was 100 percent diesel and they built a renewable energy project and its performance is being tracked. So, the cost per kilowatt hour is more measurable on an annual basis. Some of the infrastructure that has been developed doesn't necessarily create efficiencies that are measurable outside of modeling. It's a mixed bag.

[4:53:43 PM](#)

SENATOR MEYER thanked her for the explanation and asked her to provide energy costs that have been saved. Is that in her report?

CHAIR GIESSEL said it is posted on line.

MS. CONWAY said Ms. Lister may have referenced the longer report - the research, methodology, and findings on which the short

report is based, and that should be on their website within a week or two.

SENATOR COGHILL said most of communities are surrounded by federal lands and asked if the state asked federal agencies how they could collaborate on a strategy like this. For example, the Denali Commission was very significant in helping with bulk storage, but the cost drivers of running power lines almost exceeded the value of what was done in bulk storage in some places, because of having to run through federal lands. One of the recurring themes he sees is the need for a horizontal collaboration between state and local agencies and this can also be true with the federal agencies.

MS. CONWAY replied that AEA works closely with many federal agencies, in particularly the Denali Commission, which is very important for a lot energy programs like bulk fuel and rural power systems.

MS. LISTER added that they do collaborate and work closely with their federal partners: the Denali Commission, the Department of Energy, the Office of Indian Energy, and the Environmental Protection Agency. A lot of the projects that were funded by federal agencies were evaluated, because the state has had some small part in them.

SENATOR COGHILL said most of those dollars were administrative intensive and the federal agencies should be enlisted as part of the solution.

SENATOR HUGHES said one of the recommendations involved a universal service charge and she assumed that it would be on a consumer's utility bill, and asked if she envisioned that to be statewide or for where the consumers live. Also, the question was asked whether they would be proposing statutory language and the answer was no; so, what is going to happen next with the proposals.

[4:58:25 PM](#)

MS. LISTER said they envision collection of the universal service charge would be at the local level; for electricity it would be from the utility, for heating oil and natural gas it would be from the retailer. None of the recommendations apply to the Railbelt. They are only recommending that this be done as a means of generating revenue for energy projects within the study area. To evaluate that as a statewide option would require more analysis and a lot more stakeholder engagement that was not done

on the Railbelt. She explained that these types of programs are implemented in a number of ways in the world and they are quite common in the United States. In Canada, cross subsidies are common between areas that have legacy hydro-projects and areas that might be diesel- reliant to equalize the cost of power. In most of the U.S. the money that is collected within a service area stays within that service area. Those details would need to be worked out during a public deliberative process should a policy maker decide to move forward with that recommendation.

[5:00:12 PM](#)

MS. CONWAY added that their hope is that putting a lot of this on the table will inspire a conversation among lawmakers, which will hopefully lead to implementing some or all the recommendations now or into the future.

[5:01:27 PM](#)

CHAIR GIESSEL thanked them for the excellent report and commented that when SB 138 incorporated this requirement she anticipated something about propane on the rivers and LNG around the coast recommendations and they had gone much broader. Then she adjourned the Senate Resources Committee meeting at 5:01 p.m.