ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY
January 27, 2009
3:02 p.m.

MEMBERS PRESENT

Representative Bryce Edgmon, Co-Chair
Representative Charisse Millett, Co-Chair
Representative Kyle Johansen
Representative Jay Ramras
Representative Pete Petersen
Representative Chris Tuck

MEMBERS ABSENT

Representative Nancy Dahlstrom

COMMITTEE CALENDAR

OVERVIEW: AEA Statewide Energy Plan Presentation by Steve Haagenson, Executive Director, Alaska Energy Authority

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

STEVEN HAGGENSON, Executive Director; Statewide Energy Coordinator
Alaska Energy Authority (AEA)
Alaska Industrial Development & Export Authority (AIDEA)
Department of Commerce, Community, & Economic Development (DCCED)
Anchorage, Alaska
POSITION STATEMENT: Presented the Alaska Energy Authority (AEA) book titled Alaska Energy, January 2009.

ACTION NARRATIVE

3:02:23 PM

CO-CHAIR CHARISSE MILLETT called the House Special Committee on Energy meeting to order at 3:02 p.m. Representatives Ramras, Petersen, Tuck, Edgmon, and Millett were present at the call to order. Representative Johansen arrived as the meeting was in progress.

Overview; AEA Statewide Energy Plan Presentation by Steve Haagenson, Executive Director, Alaska Energy Authority

CO-CHAIR MILLETT welcomed members and visitors to the first meeting of the House Special Committee on Energy. [On the agenda was a presentation by the Alaska Energy Authority (AEA).]

3:02:42 PM

CO-CHAIR EDGMON anticipated working with committee members on comprehensive solutions for affordable energy for all regions of Alaska. He said there is an opportunity to meet and take testimony from all of the different organizations, such as private and public entities, currently involved in providing energy throughout the state. After [the forthcoming hearings], he offered his hope that the committee will come forward with a framework, or a decision, to develop a policy for a comprehensive and coordinated approach to an energy plan for Alaska. Co-Chair Edgmon announced that the decision has been made to have hearings throughout the session in Juneau, and to also travel to Kotzebue, Nome, Bethel, and Dillingham. The purpose is to hear how high energy prices and the energy crisis is affecting utilities, consumers, communities, and existing programs in rural Alaska. He listed some of the existing state and federal energy assistance programs and their cost; however, he concluded that there is more to be done as energy is now a core safety issue for the state.

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CO-CHAIR MILLETT observed that the committee will be meeting on Saturdays and during the interim in order to complete its difficult work. She invited opening comments.

REPRESENTATIVE RAMRAS noted that the House has reconfigured, for the 21st century, the House Special Committee on Energy from the old House Special Committee on Oil and Gas.

3:08:20 PM

STEVEN HAGGENSON, Executive Director; Statewide Energy Coordinator, Alaska Energy Authority (AEA), Alaska Industrial Development & Export Authority (AIDEA), Department of Commerce, Community, & Economic Development (DCCED), presented the Alaska Energy Authority book: Alaska Energy, A first step toward energy independence, January, 2009. Mr. Haggenson informed the

committee that the content of the book is not a plan, but looks at the "use of local resources to make local energy for local Alaskans." He pointed out that his agency wants to engage Alaskans in energy solutions and to stimulate the state's economy. The AEA determined [rates of] sustainable energy and the current use of energy by asking communities for their local sources of energy, what sources communities did not want to use for energy, and why those sources should not be used. These questions revealed potential local resources, such as the use of willows for biomass feedstock in Bethel. Energy use was determined by looking at power cost equalization (PCE) data, the cost of electricity and heating fuel, and anecdotal information. Community meetings and data from state agencies provided the information needed to create a matrix for each community and its resources. Technology teams were then formed to decide how the resources, such as wind, hydro, geothermal, solar, coal, coal bed methane, and natural gas, could be used and at what price.

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MR. HAAGENSON directed attention to the meter illustrated on page 14, and explained that the colors on the meter represent the price of a barrel of oil: $50 and below is green; $50 to $150 is yellow; $150 and above is red. He warned that the changing oil prices could divert the state's focus from the development of alternative sources of energy to the cost of current sources of energy. Using the meter helps [the reader] understand the cost of the alternative fuel relative to the cost of a barrel of oil. Page 15 illustrates the model for Akutan, a community of 859 residents in the Aleutians East Borough, and includes energy use estimates for electric, space heating, and transportation. Possible solutions for Akutan are shown on page 16, and include upgrades to the current power plant or the use of geothermal, hydro, and wind diesel hybrid sources of fuel. He discussed the costs associated with each resource, and how the projects must be properly sized for the region they will serve, versus the benefit to the community of new construction that will grow the economy.

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MR. HAAGENSON advised that the estimates provided do not include subsidies or grant funds but are 100 percent debt financed. He turned to the Railbelt region section on page 18 and explained that the Railbelt has unique needs that are separate from the rest of Alaska. An integrated resource plan for this region would consider all of the needs and resources up and down the

Railbelt, such as the Susitna Hydroelectric (hydro) Project, the Chakachamna Hydroelectric Project, the North Slope natural gas Bullet Line, and liquefied natural gas (LNG) trucked from the North Slope to Fairbanks. The AEA will develop short-, mid-, and long-term plans for Fairbanks, Anchorage, and Kenai. On page 23 a graph indicated that Alaska's total annual energy consumption of over a trillion Btu per capita per year is the highest in the U. S. As a final example of energy needs in Alaska, Mr. Haagenson stated that to generate the amount of energy needed by each Alaskan every day, the equivalent effort of 65 Iditarod sled dogs is needed. Page 24 illustrated Alaska's Energy Flow 2006 and listed the sources of energy imported to, and exported from, the state.

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REPRESENTATIVE RAMRAS asked Mr. Haagenson to talk about the information displayed on page 24, and further explain the anticipated future growth as the alternative energy projects are selected.

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MR. HAAGENSON opined that [the production of] hydro and biomass renewable electricity will grow.

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REPRESENTATIVE RAMRAS advised that Alaska is presently using 25 percent renewable energy and the administration's goal is to increase use to 50 percent renewable energy by 2025. However, the chart of Alaska's energy flow in 2006 does not reflect the present use of 25 percent renewable energy.

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MR. HAAGENSON explained that the illustration represented all of the energy use in Alaska but the [25] percent renewable figure typically refers to electricity only, including hydro in Southeast and the Railbelt.

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CO-CHAIR EDGMON clarified that the schematic does not factor in the reduced overall demand resulting from saving measures such as insulation and weather-proofing.

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MR. HAAGENSON said, "... this is basically a supply-side look, like the rest of this document, not a demand-side look." In response to a question, he noted that there will be a demand-side document issued at a later date.

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CO-CHAIR EDGMON ascertained that a document without the demand-side [data] can not be an energy plan; therefore, he stressed that the role of the committee and other entities must be to complete the plan.

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MR. HAAGENSON agreed that this document is the first step; its purpose is to provide clarity to Alaskans about what resources are available and their options to achieving energy independence. For historical background, he listed some specific factors that contributed to the previous failed efforts of alternative energy initiatives: state agencies did not develop strong management capabilities; state agencies lacked methods for assessing the technical and financial feasibility of projects; coordination among state agencies was often lacking; features of an alternative technology were often poorly matched with a useful rural application; unrealistic expectations existed about what an agency or technology could accomplish; and too much responsibility was delegated to contractors while the state often assumed the risk in the performance of the project. To learn from the past, AEA is taking a new path toward a public and private partnership with the state engaging municipalities, co-ops, utilities, and Native corporations in search of solutions. Mr. Haagenson turned his attention to the regional summary of round 1 proposals found on page 38. The proposals total $402,111,199; with the addition of round 2 proposals the total is $775,000,000 for 240 applications. Steps to the successful implementation of the Renewable Energy Fund are depicted on page 39; the next steps to be completed are the Least Cost Plan/IRP Feasibility for the Railbelt and the Renewable Energy Fund, round 2. Further issues to be addressed are [finding] outside methods of financing for projects and working closely with the Department of Natural Resources (DNR) to facilitate project site permitting.

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REPRESENTATIVE RAMRAS related his conversation with a member of the Yukon River Inter-Tribal Watershed Council who informed him of the Hydrokinetic Construction project in Ruby [ID number 84.] Representative Ramras assumed that AEA "[was] pushing hydrokinetic projects" and asked whether the village of Ruby may [hypothetically] decide to build four hydro projects at a cost of $2 million each. In this case, what would be required of Ruby to fund the projects and obtain permits, he asked.

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MR. HAAGENSON referred back to page 39 and opined that the best way to get a good project through is to begin with a business plan, and a good understanding of the project at the time of the application. During the project's evaluation by AEA, the goal is to "make sure we have good projects with good people that understand what they're doing in the project." He stressed that a great project must also have a knowledgeable team behind it. Permits from DNR must also be obtained to resolve possible Federal Energy Regulatory Commission (FERC) and "fish" issues. He described two different hydrokinetic turbines and their possible dangers to migrating fish.

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REPRESENTATIVE RAMRAS reiterated his questions about financing, the application for the project, and the mechanics of providing transmission lines for the transportation of power. Also, sometimes companion legislation is necessary to prevent state agencies from becoming mired at cross-purposes. He asked:

> How do you decide whether Ruby is capable of coming up with their 30 percent so that the state puts up their 70 percent and what do you do when the project goes 40 percent over budget? Who comes in then so you don't have a partially finished hydrokinetic project ... ?

3:38:37 PM

MR. HAAGENSON responded to the first part of the question and said that state financing will be [arranged] this year by a capital funds mechanism. The second part of the question relates to the strength of the project, and that is determined by a meaningful evaluation process. Ruby must submit an application for a good project with a financing mechanism in place. Regarding transmission lines [specifically] for the 2008 Ruby project, the turbine floats on top of the water and only

works in the summer, so transmission lines will not present a problem. He warned that construction of an underwater turbine may present a challenge during winter.

3:40:39 PM

REPRESENTATIVE RAMRAS requested Mr. Haagenson return at a later date and present a single, representative project from a small, rural area, complete with PowerPoint slides and a flow chart that explains the entire process from the beginning to "flipping a light switch." The importance of this, he said, is to learn the time frame for a project, including the possible issues with DNR, so the committee can make recommendations to expedite the permitting process.

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CO-CHAIR MILLETT stated one of her goals for the committee is to "pull together the resources, statewide and federally, that we have to make that puzzle come together."

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MR. HAAGENSON opined that the question put to him was how to guarantee success; in fact, previous failures were caused by poor coordination between agencies thus DNR and the AEA are working together.

3:43:59 PM

CO-CHAIR EDGMON turned attention back to the resource matrix and the dynamics of communities. He said that community leaders have their own estimates of energy use that vary wildly from the AEA book. He asked whether the technology teams actually visited communities to collect data or if the estimates were taken from other sources.

3:45:30 PM

MR. HAAGENSON responded that the electrical information was taken from PCE documents; however, in Unalaska there is a processor that is not "tied to the grid," and was not incorporated in the data. This raises the importance of talking to people on the ground to refine and update the document.

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CO-CHAIR EDGMON surmised that the matrices for individual communities are based on a snapshot. He remarked:

> The community of Unalaska is by volume the largest port in the United States for the last 20 years, and to not have been in direct contact with local officials there in that very sophisticated community with a large power base and a large demand ... what level of confidence can I then take and apply to other communities in this document?

3:46:41 PM

MR. HAAGENSON answered that the information from PCE is exactly the information that the utility reported that they sold; if there is self-generation in a community there is no way to know that until the sites are visited.

3:47:05 PM

CO-CHAIR EDGMON expressed his dissatisfaction with the response in terms of the larger issue of the accuracy for some of the other communities. The information in the document may not be wrong; however, there is a huge disparity.

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CO-CHAIR MILLETT asked Mr. Haagenson to discuss the methodology used to arrive at the inventory of resources for each community.

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MR. HAAGENSON explained that to develop the matrix, AEA talked with communities and explored the surrounding areas. All of the hydrological sites across Alaska were studied and reviewed, as were wind sites; in fact, modeling for wind sources was done in a five mile radius around each village. He assured the committee AEA has good data, although the data is not exact for cities like Craig, where sawmill waste makes fuel from wood less expensive; however, further details will be acquired for the models. Mr. Haagenson characterized the book as a "high level picture to say, 'These are things you should be looking at in certain areas.' It's not the final answer." He added that the Alaska Resource Inventory, DNR, and the U.S. Department of the Interior, Department of Geological Survey, will identify all of the geological sites in the state including coal, coal bed methane, and natural gas.

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REPRESENTATIVE RAMRAS referred to a wind energy project in California that utilizes fifteen hundred wind turbines and nine miles of transmission lines to transport power to the grid. He asked whether the 77 entities that were awarded grants included construction to provide for the transmission of power in their applications.

3:51:00 PM

MR. HAAGENSON confirmed that the applications are for "delivered cost, so it includes the transmission if it's a remote. So, we can do an apples-to-apples comparison with the alternatives today." He turned the subject to page 57 where there was detailed information on energy technologies, such as wind, hydroelectric, and solar, and also information on vendors who supply these technologies. Detailed case studies on Alaska are also included. The book concludes with the acknowledgment of participants and a compact disk that holds a copy of the document and four reference databases. Mr. Haagenson stated that the next step for AEA is to go to the communities and create a regional plan that includes solutions to financing questions, and that fosters cooperation between partners. He then provided a hand-out titled Alaska Calista Regional Example 1-09. As an example, he noted that in Bethel usages are around 39,000,000 kilowatt hours (kW-hours) per year, and its needs are about 217,913 [million] Btu (MmBtu). The book converts fuel needs to a common base and he described how the region would combine renewable sources of energy into a mini-grid to supply sufficient energy for all of the communities in the region.

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REPRESENTATIVE JOHANSEN pointed out that on page 97 there is a reference to a hydropower project at Mahoney Lake, which is near Ketchikan. However, the project is not listed in the inventory.

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MR. HAAGENSON acknowledged the omission.

3:59:02 PM

REPRESENTATIVE JOHANSEN noted that [Mahoney Lake] is a 9.6 megawatt project with federal authorization of up to $384 million in appropriations; its omission in an assessment of hydro power in Southeast is disconcerting.

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MR. HAAGENSON restated that there was not an oversight; in fact, the project was not considered because it involves transmission lines that connect Southeast and it is not a part of the local picture.

4:00:32 PM

REPRESENTATIVE JOHANSEN asked:

> If a project was not incorporated in a Southeast Conference plan or a Tlingit Haida plan for whatever reason, whether it be oversight or political exclusion or whatever, [would] that preclude you from looking at those projects?

4:00:40 PM

MR. HAAGENSON said no. The project will be included in the updated version of the book, along with more information about electrical usage by the Four Dam Pool Power Agency.

4:01:18 PM

REPRESENTATIVE JOHANSEN stressed that [the Mahoney Lake project] has a FERC license, is ready to go, and must be included, along with the Whitman Lake [proposed hydro project].

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REPRESENTATIVE RAMRAS asked for a definition of "postage stamp" in the context of the cost of kilowatts.

4:03:28 PM

MR. HAAGENSON explained that postage stamp is a utility statement that means "we all pay the same rate."

4:03:36 PM

REPRESENTATIVE RAMRAS further asked whether this reference applies only to Railbelt utilities or also to rural communities such as Ruby, Bethel, and Ketchikan.

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MR. HAAGENSON confirmed that the reference was to Railbelt utilities coming under one umbrella for the generation and transmission assets, and then providing postage stamp rates to the [communities] that they serve. In further response, he acknowledged that the book has flaws; however, in order to avoid "analysis paralysis," AEA took the first step and issued a "living document" that will be updated with current information. The next milepost is for the agency to talk to Alaskans and give them a chance to choose projects that they will support through completion.

4:06:07 PM

REPRESENTATIVE RAMRAS shared his observation that under any administration, state agencies have few decision-makers "at the top of the [organizational] chart." He asked whether the 77 projects will be prioritized, sanctioned, and funded simultaneously. Additionally, what affect will the hiring freeze [ordered by the governor to be effective through June, 2009] have on AEA's ability to provide the necessary attention to an extraordinarily long list of projects.

4:07:44 PM

MR. HAAGENSON clarified that the Renewable Energy Fund and the Alaska Energy document are tied together loosely. The Alaska Energy document is meant to engage Alaskans in the concept of renewable energy so they will own the solutions and support the construction of alternative energy plants. He agreed that processing applications for the 77 projects submitted to the Renewable Energy Fund is a sizeable workload for the staff at AEA. The next step by AEA involves the grants and grant manager assignments. He assured the committees that projects are ready to go forward independently and are offered by very strong and qualified applicants. If AEA has issues on project management it will bring in contract labor to go around the hiring freeze.

4:11:02 PM

CO-CHAIR MILLETT observed that there was great anticipation of the energy plan; therefore, there is frustration from [the

public] not understanding that the document is a matrix of inventory and not policy. In addition, representatives and the public need to understand the magnitude of writing a state energy plan. The committee would like to support the AEA in writing the plan and expediting the policy associated with it. She opined that Alaskans should not wait longer for leadership to develop state energy policy. Co-Chair Millett expressed her assumption that when AEA visits communities, there will be interest from the communities in further help with their current energy costs, and she asked for the administration's stance on additional state support.

4:13:19 PM

MR. HAAGENSON opined that help for communities should be in the form of "vision" and assistance in financing energy solutions. Because previous state energy plans have not produced results, a different approach was chosen. The document is not lists of projects recommended by state agencies, but choices so that communities will "buy into" a project and take it to completion. This approach will guarantee successful results. On the subject of policy, Mr. Haagenson expressed his interest in working with citizens and the committee to write high-level policy.

4:15:03 PM

CO-CHAIR MILLETT invited Mr. Haagenson to address House Bill 152(FIN) [signed into law on 5/22/08,] and the relevant attachment.

MR. HAAGENSON called the committee's attention to his letter of 1/21/09 to the senate president and the speaker of the house requesting a time extension for the Renewable Energy Fund Round 2 Application. He explained that the time extension, from 1/30/2009 to 3/3/2009, will allow AEA staff to complete the evaluations for the 115 second round applications for FY 10 grants. At this time, he discussed the evaluation process for FY 09 grants that were appropriated in the amount of $100 million. The evaluations began with a three-stage process looking at completeness, eligibility, and responsiveness of the application. The second stage considered technical and economic feasibility. The third stage ranked the application by region and recommended projects for grant funding. He then detailed the duties of the evaluation staff.

4:19:55 PM

MR. HAAGENSON advised that caps on the amount of money granted to a region were necessary to maintain "regional spreading;" one exception to this is in Southeast where Angoon, Hoonah, and Kake were designated a non-Southeast region. The cost of energy became the final demographic and was weighted at 30 percent of the total evaluation. He relayed the evaluators are pleased with the results [of the selection process]; moreover, an attempt was made to approve feasibility money, eliminate poor projects, and comply with the intent of the legislation. The AEA has 114 applications that will be put on the [World Wide Web] to share, including comments from the evaluation committee. The evaluation is a very open process, involving five or six meetings of the Renewable Energy Fund Advisory Committee. He then referred to the Proposed Grant Allocation Round 1 projects and noted that this list has not been officially submitted to the Legislative Budget and Audit Committee. The second round has about 114 applications requesting a total of about $200 million; however, the amount of the second round grant is $50 million, and the request [for funding] will go to the legislature on 3/3/09.

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CO-CHAIR EDGMON asked whether the list incorporated the $50 million that the governor has in her proposed budget.

4:25:02 PM

MR. HAAGENSON said, "... this list of 77 is for FY 09 money that was appropriated; $50 million in the original, and last, main, session and $50 million in the special session, last year. The amount included in the [governor's budget] of $50 million will be FY 10 money, which will be the second round."

4:25:17 PM

CO-CHAIR EDGMON affirmed that the evaluation process has not "leaped forward, then, to the $50 million that is in the pipeline in front of the legislature at the moment."

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MR. HAAGENSON concurred. In fact, AEA staff is working on round 2 evaluations now.

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REPRESENTATIVE PETERSEN referred to House Bill 152 and noted the intent of the legislature was that for each of the next five years, $50,000 million will be appropriated to [the Alaska Renewable Energy Fund.] He asked whether the committee is assuming additional funds will be budgeted in the coming years, and warned that future legislatures can not be obligated by the sitting legislature.

4:26:12 PM

MR. HAAGENSON expressed his understanding that $100,000 million of FY 09 money has been appropriated. A new process will begin to appropriate FY 10 money, based on the promise made by House Bill 152.

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CO-CHAIR EDGMON asked Mr. Haagenson whether changes need to be made to House Bill 152.

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MR. HAAGENSON suggested there are definitions and language that need clarification in the bill.

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CO-CHAIR EDGMON cautioned that there is no requirement in the bill for AEA to follow-up on the approved projects.

4:28:11 PM

MR. HAAGENSON advised that AEA will require, under the terms of the grant, the reporting back of data on the status of each project.

4:28:50 PM

REPRESENTATIVE RAMRAS indicated that he was troubled by the idea that agencies will "contract out" when a hiring freeze is in effect. He then reiterated his request for a PowerPoint presentation describing a typical project in a rural area and one in an urban area, complete from beginning to end. Though skeptical of the program, he expressed his appreciation for the concept of "good projects with good teams" and praised Mr. Haagenson's abilities and his passion for, and knowledge of, the subject of renewable energy.

4:32:49 PM

REPRESENTATIVE JOHANSEN agreed with the previous speaker and echoed other members' frustrations. Hydro is the obvious first solution for Southeast; in fact, there is a long history of support from local and federal government for hydro power. He pointed out that some projects listed in round 1 are unknown, but after years of analysis, the general understanding is that "hydro and interties connecting is the way to go in our neck of the woods." Nevertheless, a $25,000 million biomass gasification project was approved in round 1; this is a disconnect and this project should not be "in the mix," he said. Representative Johansen remarked:

> ... not a criticism, I just don't understand how the process worked and it's not meant to diminish any of the work that you guys did, but it's frustrating that there's not that policy direction ... .

4:35:52 PM

MR. HAAGENSON assured the committee that the gasification project in Ketchikan was not recommended for funding and would not move forward after its evaluation.

4:36:23 PM

REPRESENTATIVE JOHANSEN suggested that a policy that directed AEA to support hydro in Southeast could have prevented a waste of time.

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CO-CHAIR EDGMON appreciated Mr. Haagenson's answers, and stated his frustration is not with the effort, but for constituents who are hurting from energy costs. Although there will be further discussion he is interested, in addition to the long-term solution, the near-term term umbrella approach to keep communities alive. He anticipated that testimony from rural areas will emphasize that, even though the legislature funded existing programs in the amount of $1 billion, the state is not where it needs to go; moreover, state agencies do not seem to be pulling together in the same direction. Co-Chair Edgmon expressed his hope that the committee will have an opportunity to talk about fuel hedging, energy audits, weather stripping, energy-rated appliances, appropriately-sized furnaces, delivery

of fuel, and price differentials throughout Western Alaska. One question remaining is whether AEA has the staff, resources, and structure needed to administer the "tallest order in all of Alaska." Co-Chair Edgmon concluded by saying that fiscal constraints brought by lower oil prices must be observed as well.

4:41:01 PM

CO-CHAIR MILLETT thanked Mr. Haagenson for his testimony. She offered that the committee has made a commitment [to develop] the framework of an energy plan with the help of state agencies, the public, and business. She reminded the committee of the public's high expectations for the AEA, and stated that she was not disappointed in the work product. Co-Chair Millett announced that the committee will be meeting in Kotzebue, Nome, Bethel, and Dillingham in order to see first-hand the impacts of the high cost of energy on communities and to seek solutions.

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 4:43 p.m.