



Alaska Energy Authority
BOARD MEETING
February 2, 2012
Loussac Library, Public Conference Room
Anchorage, Alaska

1. CALL TO ORDER

Chairman Short called the meeting of the Alaska Energy Authority to order on February 2, 2012, at 3:45 p.m.

2. ROLL CALL: BOARD

Members present: Gary Wilken (Public Member - phone); Robert Sheldon (Public Member); Ron Arvin (Public Member - phone); Wilson Hughes (Public Member); Hugh Short (Chair, Public Member), Susan Bell (Commissioner Department of Commerce, Community, and Economic Development - phone).

A quorum was established.

3. AGENDA APPROVAL

MOTION: Mr. Hughes moved to approve the agenda.

The agenda was approved as amended. Under Item 7, New Business, the order was changed to: Item A, Southeast Alaska Integrated Resource Plan (SEIRP) Overview; Item B, Susitna-Watana Project Update; and Item C, Round V Renewable Energy Fund Grant Recommendations. **Seconded by Mr. Sheldon. The motion passed unanimously.**

4. ROLL CALL: STAFF, PUBLIC

Participants present: Sara Fisher-Goad (AEA Executive Director); Brian Bjorkquist (Department of Law); Sandra Moller (AEA Deputy Director - Rural Energy Group); Peter Crimp (AEA, Deputy Director - AEEE); Wayne Dyok (AEA, Susitna-Watana Project Manager); Karsten Rodvik (AEA External Affairs Manager); Bryan Carey (AEA, Susitna-Watana Lead Engineer); Emily Ford (AEA, Susitna-Watana Public Outreach Liaison); James Strandberg (AEA, Project Manager); Shauna Howell (AEA Executive Assistant); Teri Webster (AIDEA Administrative Assistant); Rick Harris (SEIRP Advisory Work Group (AWG) Chairman); Kevin Harper, Myron Rollins and Arlin Mire (Black & Veatch); Robert Venables (Energy Coordinator, Southeast Conference) and Lara Brekken (Kiewit);

5. PUBLIC COMMENTS

Mr. Harris said the SEIRP AWG consists of 21 members, who are representatives from local utilities, tribes, Native corporations, conservationists, and anyone else interested in energy issues in Southeast Alaska. Meetings were held in most of the major communities in Southeast, with an extensive amount of coverage and an aggressive effort to include public involvement.

Mr. Venables said he was pleased to participate in the planning process and was thankful for the extended comment period. AEA and its staff should be commended for the public process used to create the draft SEIRP as it allowed interested citizens an opportunity to observe the project and to provide input, ask questions, suggest emerging technology, and critique the findings as the SEIRP developed. The SEIRP can provide us with the technical insights to make the correct choices in the future.

6. PRIOR MINUTES - November 10, 2011, and December 13, 2011

MOTION: Mr. Hughes moved to approve the November 10, 2011, and December 13, 2011, meeting minutes. Seconded by Mr. Sheldon. The motion passed unanimously.

7. NEW BUSINESS

A. SEIRP Overview

Ms. Fisher-Goad thanked the participants for their efforts in developing the SEIRP. The public comment period closes March 19, 2012. On February 9, there will be a House Energy hearing to review the Plan. During the Southeast Conference's Mid-Session Summit in March, a technical session will be held in Juneau to receive additional comments and meetings with Southeast legislators.

Mr. Strandberg said the SEIRP is a regional energy plan that considers heating and energy issues, electrical supply, as well as the potential for electrical transportation for Southeast Alaska. The executive summary is available on AEA's website. Staff will not take a position on the findings until all public comments are received.

Mr. Harper presented a PowerPoint presentation. (A printed version was distributed to the participants). He said the electric capacity needs of the Southeast region are about one-fifth the size of the Railbelt, which is considered a small utility by national industry standards. Eighty percent of the monthly energy costs in the region are due to space heating. Loads are uncertain due to the potential population increase or decrease. There is uncertainty and issues with regard to resources, transmission additions, and the level of state funding and assistance. We believe it is appropriate for the region to develop multiple options to maintain a balanced portfolio of resources and maintain the flexibility to develop different approaches in long-term energy. The Southeast region was divided into eight specific sub-regions for modeling purposes, based on existing and potential resources, as well as varying cost of power. There is a shortage of storage for hydropower. Space heating conversions from diesel to electric is occurring in the regions with low-cost electricity. While converting to electric space heating can be a rational and economical decision, it is causing significant issues for the utilities as it uses up low-cost hydropower. Of the hydro projects reviewed, 24 projects warrant consideration, but the majority of those projects do not have the analyses and information needed to estimate what the cost of power would be or whether the projects were buildable from an environmental standpoint. Many of the projects lacked information and had capital cost and output estimates that were plus or minus 50 percent. Therefore, the quality of information was not available to perform a definitive selection of projects for the region. That led us to consider two integrated pieces: adding more hydro and transmission exclusively and energy efficiency in biomass. We

propose a two-phased approach: Phase I would occur within the next four years, with the advancement of seven committed resources, energy efficiency, and biomass projects. The AWG approved seven committed resources, five hydro projects and two transmission projects by Resolution. There would also be significant effort aimed at improving the quality of information of potential hydro projects. Phase 2 would include a continuation of energy efficiency and biomass, as well as the addition of the next increments of hydro and other renewable projects.

In the economic case, we assumed the utilities and their customers would pay for the capital costs and the ongoing operating costs of the transmission line. In the public benefit case, it's assumed the State would pay 100 percent of the upfront capital costs and the local utility and customers would pay for the ongoing operating costs. In the economic case, the cost of transmission was greater than the cost of diesel in every segment. In the public benefit case, we looked at a sub-region's total savings over a 50-year period compared to the upfront capital cost and the cost-benefit ratios ranged from .1 to .3 - if the State made an investment in transmission, the savings would range from 10 to 32 cents per dollar invested based on the amount of electricity in the region.

Two analyses were done on importing and exporting of power within Alaska via transmission line through Canada. Based on market analysis and cost projections, we concluded that neither scenario passed our economic screen nor warranted an investment. Therefore, the AK-BC line should not move forward, but it is possible that a transmission line through Canada could possibly occur within the next 50 years. The State must continue to provide financial assistance and encourage private development of resources. To make the Southeast region more attractive to private development of power, we recommend maintaining open access to transmission and the development of standardized power sales agreements used as a starting point for discussion.

Based on our analysis, this will require a \$2 billion investment over a 50-year period and hydro projects are a significant part of this plan. The five hydro-based committed resources would produce about 19 megawatts. Other hydro projects in our recommended portfolio would produce another 50 megawatts. The current total megawatt capacity in the region is about 175. However, many of the hydro projects would not occur in the next four years, but that will have to be analyzed.

Three scenarios were reviewed: continue burning diesel, meeting future needs with new hydro projects, and initially focusing on energy efficiency and space heating conversions to biomass; then adding hydro or other renewable resources in the future. With the third scenario, compared to continuing to burn diesel, the total savings on an energy bill would be about 45 percent; whereas compared to a pure hydro future, the incremental savings is about 17 percent. A 45 percent savings in energy cost would be a significant benefit to existing residents and businesses in terms of economics and keeping people in the region. It would also free up existing hydro resources to attract new businesses. Since the future envisioned by this Plan is significantly different than what people of the region originally thought, a public outreach program is vital in the decision-making process. If the energy efficiency in biomass is going to be successful, it will require a significant commitment by the region, utilities, and the State in terms of funding and working to adopt the programs. The report also includes the dollars associated with each of the recommendations and more details on each.

In response to Mr. Wilken, Mr. Harper said the AWG recommended updating the SEIRP after four years. The study cost was discussed.

Commissioner Bell noted that there was a lot of confusion, misinformation and concern about this issue, which might be resolved as people become more familiar with the SEIRP. The Board should be aware there are public concerns.

In response to Mr. Arvin, Mr. Harper said there was an opportunity for cord-wood in the biomass plan, especially for larger projects that can withstand the greater O&M associated with the use of cord-wood for space heating, but that is a detail of the biomass plan implementation. Mr. Sheldon said that he would also like to know about pellet applications in the biomass plan.

B. Susitna-Watana Project Update

Mr. Short thanked Mr. Dyok and Ms. Fisher-Goad for their work in preparing for the meeting with the Governor and Chief of Staff on the Susitna-Watana project.

Mr. Dyok gave a PowerPoint presentation on the Susitna-Watana project. (A printed version was distributed to the participants.)

The 2011 activities and accomplishments were reviewed. In October/November, the project office was opened and staff members hired. The data gap analysis and a detailed LiDAR mapping of the Susitna River drainage area were completed. Geotechnical drilling was done in July and August. In October, the preliminary permit was filed with FERC. Public outreach was done with stakeholder consultation, public meetings, agency workshops, site visits, and presentation. At the end of December, the Notice of Intent and Pre-Application Document was filed with FERC. Public scoping meetings are tentatively scheduled as follows: Anchorage and Wasilla, March 27; Talkeetna, March 28, Fairbanks, March 29, and Glennallen, March 30. The primary goal in 2012 is to develop study plans on geomorphology/sediment transport, ice, project operation, water quality, fisheries, wildlife, botanical, cultural resources, and recreation. The 2012 engineering studies will include hydrology and power operations, load and resources modeling, feature layouts and optimization, transmission system reliability and stability modeling, geotechnical investigations, formation of Board of Consultants, update of construction cost estimates, and the feasibility report. The Susitna-Watana schedule, which was presented to the House Energy Committee in Juneau was reviewed. The Board will be updated on the progress of the project throughout the year. In January 2013, we anticipate requesting Legislative funding to complete licensing and final design. Assuming we continue on this path, we will be looking to AEA and the State for an appropriation early next year. We anticipate having the project online by 2023.

Mr. Carey discussed the project engineering. Several maps of the project were reviewed. Each of the corridors could have either road or transmission access, or both.

In response to Mr. Short, Mr. Dyok said AEA would need to work with the Governor's office in requesting appropriation to begin work on the highway access route. Meetings have been held with some of the landowners and more meetings will be required to reach an agreement on project use of their lands. An agreement will likely take until the end of the year or longer. The

Department of Transportation and Public Facilities is in the process of costing out the Gold Creek route and that information should be available in March. While we favor access road acceleration, we need to have other things lined up first. Mr. Short asked if it would be a good idea to request an appropriation for the feasibility and planning process for the access route to bank some dollars for that portion of the project. Ms. Fisher-Goad noted that a request from the Governor's office might not be looked upon favorably since the exact access route has not been established. However, a general appropriation that would provide access without a specific route might be possible. Mr. Dyok noted that more information, such as caribou migration information, needs to be gathered to hone in on an access route. All site access this year will be by helicopter.

In reviewing the project site map, Mr. Carey said the land on the south side of the river is owned by Alaska Native corporations, and the land on the north side is mostly owned by the State and partially by Alaska Native corporations. The conceptual site plan was reviewed. The primary operating objective is to maximize firm power generation from November through April, generate power while meeting minimum flows, and maximize power generation from May through October. The daily project operation chart was reviewed and discussed in terms of daily operational needs, as well as providing a safety net should a utility go offline.

Mr. Dyok said the most probable program cost is \$4.3 B, with a cost range from \$3.0 to \$6.5 B. This is a class four cost estimate. We plan to reduce the cost range by the end of the year through refinement of the construction cost estimate. A construction firm will be hired to independently review the cost estimate. We will also hire a Board of Consultants to assist in guiding the design.

In response to Mr. Hughes, Mr. Dyok said the project costs are in 2012 dollars and based on today's market conditions. Ms. Fisher-Goad reviewed outreach efforts that will be occurring soon. The Governor's office is supportive of and happy with the project progress.

C. Round V Renewable Energy Fund Grant Recommendations

Ms. Fisher-Goad said AEA would be testifying before the House Energy Committee on Tuesday on House Bill 250, which reauthorizes the Renewable Energy Program for another five years. The legislature appears to be very supportive of the program.

Mr. Crimp gave a PowerPoint presentation on the Renewable Energy Fund grant recommendations. He said we are currently in our fifth round of projects and in rounds one through four, \$177 million has been appropriated. AEA has recommended more than \$43 million in appropriation for Round V. The program sunsets after this round, but we are working with the Legislature to extend the program. 208 projects are being funded with 165 grants in place. If projects have not moved forward, grants are cancelled and the funds reallocated. The total appropriation is about \$177 million, with \$70 million disbursed to date. He said approximately 80 percent of the funding is in final design and construction projects. We are closely tracking the performance of projects that have been completed, as well as those under construction. As noted in the project status report included in the Board packet, in the 2009-11 period, projects supported by the Renewable Energy Fund displaced 3.38 million gallons of diesel and naphtha with a value of \$11.2 million. About 1.7 million gallons of diesel were displaced by projects during 2011. By 2016, we are estimating 11.6 million gallons of diesel

displacement per year. The Project Performance table tracks the amount of fuel being displaced, savings, the amount of funds going toward projects, payback schedules, and the projects performance toward their goals. In response to Mr. Short, Mr. Crimp agreed that a line entitled "Projects Completed" could be added to the Renewable Energy Fund Grant Status Chart.

In response to Mr. Sheldon, Mr. Crimp discussed hydrokinetic projects. Prior to the Emerging Energy Technology Fund, there was legislative direction for demonstration projects. Several AEA-funded hydrokinetic projects were discussed. There has been a lot of interest in hydrokinetic projects within the Emerging Energy Technology Fund and we expect to see many of those projects funded in the future.

8. EXECUTIVE DIRECTOR'S COMMENTS

Ms. Fisher-Goad said the Renewable Energy Fund Advisory Committee and the Emerging Energy Technology Fund Advisory Committee would like to schedule a joint meeting with the Board of Directors to discuss policy and energy issues.

AEA's 2011 Annual Report was discussed. AEA has not officially produced an annual report for about 10 years as financial statements have served as a statutory equivalent; however, they will be produced more frequently in the future.

A. Next regularly scheduled meeting

The next meeting will be scheduled at a later date.

9. BOARD COMMENTS

Mr. Arvin said the meeting was very informative and he thanked everyone for their presentations. Mr. Wilken, who participated in the meeting telephonically, thanked everyone for their patience. Commissioner Bell thanked Ms. Fisher-Goad for her efforts in communicating with the Governor's office. Mr. Sheldon said the meeting was very informative and he is looking forward to reviewing the SEIRP in detail. Mr. Hughes agreed that it was a good meeting.

10. ADJOURNMENT

The meeting adjourned at 5:48 p.m.



Sara Fisher-Goad, Executive Director/Secretary
Alaska Energy Authority