

**ALASKA ENERGY AUTHORITY  
BOARD OF DIRECTORS  
October 15, 2003 – 10:47 a.m.  
Anchorage and Juneau, Alaska  
Teleconference**

**1. CALL TO ORDER**

Chairman Barry called the meeting of the Alaska Energy Authority to order on October 15, 2003, at 10:47 a.m. A quorum was established.

**2. BOARD OF DIRECTORS ROLL CALL**

Directors present in Anchorage: Mr. Mike Barry (Chairman/Public Member), Commissioner Mike Barton (Department of Transportation and Public Facilities), Mr. John Winther (Public Member), and Deputy Commissioner Bill Noll (Designee for Department of Community and Economic Development).

Directors present in Juneau: Deputy Commissioner Tom Boutin (Designee for Department of Revenue).

**3. PUBLIC ROLL CALL**

Staff present in Anchorage: Ronald W. Miller (Executive Director), James A. McMillan (Deputy Director-Credit), Valorie Walker (Deputy Director-Finance), Mike Harper (Deputy Director-Rural Energy), Brenda J. Fuglestad (Administrative Manager), Sara Fisher-Goad (Financial Analyst), Lynn Kenney (Development Specialist), Chris Mello (Program Manager), Peter Crimp (Development Specialist), and Kris Noonan (Program Manager).

Others attending in Anchorage: Brian Bjorkquist (Department of Law), Jim Walker (Matanuska Electric Association), and Becky Gay (Alaska Energy Task Force).

**4. PUBLIC COMMENTS**

There were no public comments.

**5. PRIOR MINUTES – August 8, 2003**

The August 8, 2003 minutes were approved as presented.

**6. OLD BUSINESS**

There was no old business.

## 7. NEW BUSINESS

There was no new business.

### 8A. Director's Status Report of AEA Programs and Projects

- **Rural Power Systems Upgrade Program**

Mr. Harper said that the Rural Energy Group has approximately \$92 million in funds from the Denali Commission for various projects. The state's main goal is to move toward efficiency and reliability of power generation in the rural areas of Alaska. Project funding for 2003 has been received and approximately 70% of the funding for 2004 projects has been received from the Denali Commission.

In response to Board questions, Mr. Noonan stated that the powerplant in the community of Buckland was designed approximately 10-15 years ago. Since that time, the community has grown beyond the capabilities of the powerplant. There are three generators that are currently running and in the winter two run in parallel to keep up with the power demand and their powerhouse will not house larger equipment. The load increases, which have overburdened the existing plant, have been due in part to the construction of a new school and multiple housing units, and the installation of lighting on the airport runway. Before the design of the new powerhouse, staff will look at the overall growth of the community and tie it to a projection of where they may be 10 years from now.

A more recent technology that is being used at the powerhouses is automated switchgear. This switchgear allows the communities to monitor the powerhouse 24 hours a day without an operator being present. The plant is designed with 2-3 different sized generators in the powerhouse that are efficient in the operating range that they run. The switchgear automatically starts and stops units as it monitors the demands of the community.

In response to Board questions, Mr. Noonan said the projects are selected through the use of a database. This database gives a ranking of the conditions of the powerhouses, equipment, etc. in communities throughout the state. The powerplants are designed around a 10 year life cycle but the switchgear will be designed for larger facilities, therefore the building will be able to handle larger equipment.

Mr. Noonan said Buckland's load demand is around 400kw. Staff will be looking at between 400-500kw projections for the future. That community will have approximately four generators. Staff will install load monitoring equipment in the community and will monitor the site one year prior to construction so there will be sufficient load data from the community to tell where the dips are and how long they stay down in those areas in order to size the generator equipment to fit the need.

Ms. Fisher-Goad stated that there has not been any state general funds appropriated to the RPSU program since 1998.

- **Alternative Energy and Energy Efficiency Program**

Mr. Harper briefed the board as to the Wind program. He said there are approximately 10 wind turbines in Kotzebue and last year they generated about 8% of the load, which produces approximately 1.2kw of power. There is also a wind project in Wales, Alaska that is producing 30% of the load.

Mr. Crimp briefed the Board stating that meteorological towers need to be in place for approximately one year before enough wind data is received to predict the feasibility of any project. AEEE recently purchased 20 meteorological towers and are beginning a loan program to lend them out to rural communities. Based on the data received, staff would do a concept design and feasibility of wind turbines. The criteria will be a least cost.

Chairman Barry said the Energy Task Force will get to wind probably after the railbelt portion is done. But, we will get into the economics of it so you will need to have as much data as you can get, that is real data. That is a big question. People are looking at this electricity generation and some people are not counting the capital investment because it is grant money so they think it doesn't count. We don't have an unlimited source of grant money; we have to start counting it. Mr. Barry asked, "On your basis so far, how does the all end cost of the wind compare to the diesel in Kotzebue?"

Mr. Crimp said that was an anomaly in that government money funded the first wind farm in Alaska, but based on the rural energy plan analysis somewhere in the 20 cents per kilowatt hour was bar cost of that power, so it compares favorably with diesel. There appeared to be around 30 communities where the life cycle cost of wind would potentially compare favorably.

Chairman Barry said that you are in the low 20 cents and that is amortizing the capital costs?

Mr. Crimp said yes over 15 years. There is a lot of assumptions you would need to make for the operation and maintenance costs.

In response to board questions, Mr. Crimp said that for short term load fluctuations they have NiCad battery system in Wales, where it is a high penetration system where they are trying to displace a large portion of the diesel. In Kotzebue, where it is a low penetration system it is not enough of a factor to affect the system. You are looking at 10 percent or less of the overall energy is coming from wind in Kotzebue.

Chairman Barry said one of the things the Energy Task Force will be looking at will be the cost of distributing electricity in the rural areas. If the coal does get developed, you can look at a much lower cost of generation, but then what is the distribution cost going to be as those villages are not close together.

Mr. Crimp said that Alternative Energy program is a catchall for all of the non-diesel projects or efficiency projects.

Chairman Barry said that there is an increased awareness of and affection for geothermal as an alternative source.

Discussions ensued as to geothermal use in rural Alaska.

## **8B. NEXT MEETING DATE**

The board will be polled as to the next meeting date.

## **9. BOARD COMMENTS**

There were no Board member comments.

## **10. ADJOURNMENT**

There being no objection and no further business of the Board, the meeting was adjourned at 11:17 a.m.

A handwritten signature in black ink, appearing to read "Ron Miller", written in a cursive style.

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Ron Miller, Secretary