

**Alternative Energy Committee
Regular Meeting
January 8, 2007, 6:30 pm
City Hall – City Manager’s Office**

Minutes

Meeting # 16

Attendance: John Sargent, Wayne Ogle, Willy Keppel, Jill Maynard, Jody Malus
Absent: Gene Peltola, Pete Christian, Dan Leinberger

Meeting called to order at 6:37 pm. Agenda approved. No people to be heard.

New Business

Election of Officers (Chair, Vice-Chair, Secretary)

A motion was approved to postpone the election of officers until more members of the committee were present. This item will be put on the agenda for the next meeting.

Update on Wind Energy Feasibility Study by Electric Power Systems, Inc.

The City met with Electric Power Systems (EPS) and worked out terms of the contract. EPS agreed to accomplish everything in their proposal for \$150,000, a reduction of \$2,153. New dates (milestones) were sent to the City. They plan to complete their work between January and May 2007.

The City Manager put a resolution approving the wind energy study and a copy of the contract in the packet for City Council. Council will vote on it tomorrow night.

Wayne entered the dates and respective completion portions and contract onto base camp, the City’s grant management software. Base camp is a good place for the City and contractor to share documents and communicate electronically.

Martina Dabo, Wind Energy Manager, Alaska Energy Authority

Martina introduced herself. She was born and raised in Germany, but recently moved to Alaska from Maine. She was involved with wind power development in the Lower 48.

The current Alaska Energy Authority (AEA) Request for Proposals is focused on large scale wind development projects, not residential projects. Independent power producers, like the City of Bethel, will be weighted equally with electric utilities as applicants. Martina agreed that our \$150,000 wind energy feasibility study project was of sufficient size and scope to put us in a good position to apply for funds in future grant announcements.

AEA has money available for projects they deem worthy of investment that does not have to be given out via the grant process. AEA also has bonding capacity that they can tap to provide additional funds to support a project. She suggested we investigate using tribal renewable energy grant money that is available. She considers Bethel and other hub communities a priority to serve as training and maintenance centers for surrounding villages. She wants information on Bethel and the progress we have made thus far in developing our wind resource. John agreed to provide her with information tomorrow.

AEA is looking into regional development of wind power, in which five or ten wind turbines would be ordered at once and installed throughout a region. This fits with the sales policy of many of the wind turbine manufacturers now that will only accept orders for five or ten machines at a time. Demand for wind power equipment is high, the lead time for wind power equipment coming off of the assembly line is long, and there are only a handful of suppliers in the market. Northern Power recently said that they too want orders of five or more and have a six month manufacturing lead time.

For one project, AEA compared the cost of a 100 kW wind turbines made by Fuhrlander and Northern Power and discovered that Fuhrlander machines were cheaper per kW produced. The Northern Power equipment was cheaper, but the Fuhrlander machine produced greater output.

A major focus of AEA is to establish a repository of trained technicians who can repair the machines in use. She encouraged us to develop a training program with our local college or vocational school. She suggested we tap tribal training funds to support it.

AEA is promoting the purchase of NEW wind power equipment instead of remanufactured equipment. She was dismayed to find out that Halus, the California vendor of remanufactured Vestas machines that were installed at Sand Point, offered no maintenance or parts service once installed. TDX, the buyer of the two 500 kW machines in Sand Point, promised to maintain the machines, despite not having a fully trained staff or parts on-hand. She wants maintenance and repair resources in Alaska, ready to go.

The results of the foundation test being conducted by AVEC, Northern Power, and others will be completed and released in May 2007. The reason: AVEC filed an extension.

Martina prefers that the City and others build wind farms over small isolated projects, but she liked the idea of our proposed City Shop project. She sees the advantage of one turbine serving as a training site for a program offering wind turbine installation, maintenance, and repair training. She suggested we buy ten Fuhrlanders and install one at the City Shop.

Martina does not have the use of Rueben's old computer and therefore must start from scratch. James, who took over Mia Devine, was similarly set back by not being able to access all of Mia's old computer files. This points up the need for the City to send her information on Bethel's progress in wind development thus far.

Wind Energy Feasibility Study (impromptu discussion)

A concern was mentioned that EPS consultants may not be able to get all the information they need from Bethel Utilities Corporation because BUC has not been kept abreast of the study nor have they been brought on board as a partner in it. Other committee members were confident that BUC would have to "play ball" or face sanction from the regulatory commission. Another member said that the City would deal with the BUC cooperation issue when, and if, it was needed.

The Bethel Native Corporation (BNC) can help us develop wind energy projects in town. They have land we can use. We might propose a land purchase or land lease arrangement to them. BNC has a land committee that meets periodically.

We, as the Alternative Energy Committee, must be ready to meet with the EPS consultants when they are in town. We might set up a noon meeting like we have done in the past. We also need to be prepared to give them feedback on their deliverables, the first of which could come as soon as the first week of February. We will have to do our homework and provide them with feedback every step of the way. We must insure that we get what we want out of the study. In order to give the consultants appropriate feedback, we need to get a list of people who we can send the parts of the study to for their review and comments.

We can involve the public in the wind energy feasibility study by having Jody speak with the consultants on her radio show. She would love to do two or more shows.

Other land that might be available for a wind farm is 20 acres around the White Alice site. Another idea is land north of the landfill. We could make a wind farm out of some of it and use the rest for landfill expansion. Downside is that the wind turbines might kill seagulls or ravens that frequent the landfill.

Once the study is completed, the City could form an enterprise fund to initiate the project. Then, a cooperative or non-profit organization could be formed. There is always the possibility that AVEC and/or other entities take it over.

A committee member felt strongly that one person needed to be assigned the duty of project manager/coordinator to follow through with all aspects of the study. The City Manager is currently the current point of contact for EPS. John and Wayne will tell Wally about the idea of assigning one project manager.

Next Agenda (Impromptu discussion)

Brent Petrie from AVEC should be on the next agenda in a teleconference call so that we can ask him about AVEC coming to town to set up a wind power equipment maintenance and repair facility. The City might be able to offer them land for such a purpose.

Teresa Jacobsson with the AVCP Realty Office will be asked to join us for the next meeting.

Nels Anderson, who holds an important position such as, state energy coordinator, should join out committee meeting next time by teleconference. He was on the rural energy committee formed by Governor Murkowski.

The Orutsararmiut Native Corporation might be asked to join our meeting. We should bring up the idea of having them help us develop wind energy at the next Joint Task Force meeting.

Next Meeting

The Alternative Energy Committee will continue to meet on the first Monday of the month at 6:30 pm in City Hall. The next meeting will be held on February 5, 2006.

**Alternative Energy Committee
Regular Meeting
May 7, 2007, 6:30 pm
City Hall Council Chambers**

Minutes

Attendance: John Sargent, Wayne Ogle, Willy Keppel, Jody Malus, Pete Christian
Guest: Council Member Middlebrook
Absent: Gene Peltola, Dan Leinberger, Tundy Rodgers

Meeting called to order at 6:37 pm.

People to be Heard

Eric Middlebrook voiced his preference for the Committee to consider solar thermal applications. The idea is that solar power would be used to heat water to 50°. An existing solar system might have to be adapted to fit Bethel's unique climate and large temperature differences. The American Solar Energy Association and Solar Energy Research Institute are two associations the might be able to provide information for us to use.

Agenda Approved

The agenda was approved as presented.

New Business

Wind Energy Feasibility Study by Electric Power Systems, Inc.

Committee members discussed the history of correspondence, communications, and interactions between the City of Bethel, Electric Power Systems, and Bethel Utilities Corporation in preparation for a teleconference with Ryan Mills at 7:00 pm.

A question that remains unanswered is: "Can we use some of the legislative grant money currently funding the wind energy feasibility study, to pay for legal costs?"

A recent court case compelled the Environmental Protection Agency to shut down a utility that was polluting the environment. Could the City do something similar by requiring a federal or state agency to shut down BUC for operating inefficiently?

The Committee discussed the idea of the City taking over BUC through eminent domain. Several challenges to this endeavor include: finding a sufficient number of reasons to justify an eminent domain action, the likelihood of success and results if the action failed, and the long-term consequences.

Ryan stated the project "was at the mercy of a positive working relationship with BUC and the City." A positive relationship will also make the project cost less. Creating a quality relationship between the City and BUC is a high priority for the development of wind energy in Bethel.

Ryan said that in talks with BUC, EPS could help by dispelling worries, answering questions, and providing technical information. He envisioned a sit-down session, possibly mediated by a

third party, in which the City, EPS, and BUC discuss wind energy development and try to reach agreement.

Committee members and Ryan reiterated the issue that BUC currently operates older model diesel generators and has “antiquated” power generation equipment. Any purchase of BUC by another entity like TDX Power or the Alaska Village Electric Cooperative would require a major overhaul, especially if a high penetration wind power system were installed. The idea was expressed that a buyer of BUC could pay the capital costs associated with a diesel-wind power upgrade and simply pass the costs on to consumers. The Regulatory Commission of Alaska would likely have to approve the proposed rate increase.

EPS would like to obtain diesel-generation system drawings from BUC. If these drawings are out-dated or not available, EPS could re-draw them with cooperation of Bethel Power Plant operators.

The City may only be able to develop a low penetration wind energy system connected to BUC’s grid. EPS suggested in one of their letters that the City could install 1,500 kW of wind energy without causing disruption to BUC’s system. One Committee member said that Meera Kohler, President of AVEC, thought that the current diesel system might only tolerate 300 kW of wind power.

The Committee agreed that Ryan Mills with EPS would write a letter to the BUC corporate office in Anchorage and request continued cooperation to perform the study as currently written. The Committee agreed that the Mayor, City Manager, and Public Works Director should visit the BUC power plant this week for a tour and discussion with the Plant Manager.

Jody handed out information for the Committee members on a new type of nuclear power generation. She thought it appeared safer than other nuclear power methods.

Mark Springer spoke to the Committee. He suggested that we solicit support for wind energy development in Bethel from neighboring communities in the form of resolutions. He also encouraged the Committee to ask BUC for their plan to upgrade their power generation equipment. He also suggested that the Committee get to know members of the RCA, learn how the RCA operates, and encourage RCA to persuade BUC to make appropriate upgrades.

Agenda item *B. Information from Alaska Rural Energy Conference 2007* was not addressed. The meeting ended without a motion to adjourn and without Council Member Comments.

Next Meeting

The Alternative Energy Committee will continue to meet on the first Monday of the month at 6:30 pm in City Hall. The next meeting will be held on June 4, 2007.

**Alternative Energy Committee
Regular Meeting
June 4, 2007, 6:30 pm
City Hall Council Chambers**

Minutes

Attendance: Dan Leinberger, John Sargent, Wayne Ogle, Willy Keppel, Pete Christian
Absent: Gene Peltola, Tundy Rodgers, Jody Malus

Meeting called to order at 6:35 pm. The meeting was adjourned at 8:10 pm.

Agenda Approved

The agenda was approved as presented.

New Business

Wind Energy Feasibility Study

The City Manager requested a recommendation from the Committee on whether to discontinue the wind energy feasibility study, scale back or make other modifications in scope, or continue on its present full-project course. This was the single agenda item for the evening.

Various committee members discussed issues surrounding the way Bethel Utilities Corporation (BUC) operates: the high price paid by Bethel Utilities Corporation for the diesel fuel they use in their generators, take-over of BUC through eminent domain, use of Regulatory Commission of Alaska (RCA) to pressure BUC to take certain actions, getting someone on the BUC board more akin to the needs of Bethel's citizenry.

Ryan Mills with Electric Power Systems, Inc. joined the meeting by teleconference at 7:05 pm. Ryan said that two documents were needed by the City to pursue a wind-energy project: (1) power purchase agreement, and (2) interconnection agreement. Banks and venture capitalists will not fund projects without these two documents in place. Ryan agreed that grantors wouldn't fund projects without these two documents either.

The study poses no technical hurdles from an engineering standpoint. The problem is the political issues between the City and BUC. EPS is willing to facilitate a meeting between the City and BUC and/or serve as a technical advisor to both parties. Once the political issues are resolved, EPS and the City can focus on the technical issues. EPS can complete the current wind energy study using assumptions, but prefers to have the actual information.

EPS recommended:

1. Put project on hold until City works out political issues with BUC.
2. Change scope of project to be a study to develop a 100 kW wind turbine project.
3. Discontinue with project and cancel the current contract.

Ryan suggested that the City use any approach at its disposal to work out political issues between the City and BUC. The letter that Ryan Mills sent to BUC four weeks ago asking for BUC cooperation received no response.

Willy said that appraised value of BUC is \$3.2 million and that a new law requires a public utility to be sold at the appraised value.

One Committee member expressed his desire to spend money to fight BUC.

What actions will help consumers? What are the laws that apply to the way BUC operates? The City needs a copy of applicable regulations and a full understanding of the tariff.

One Committee member suggested that Senator Lyman Hoffman and Representative Mary Nelson help the City solve some of the issues delaying this project. Chairman Dan said that he was going to see Lyman in two days and would be happy to discuss it with him.

A motion was made and passed that the Mayor, City Manager, and Wayne Ogle go to Anchorage to meet with Edward Tilbury, President of BUC to discuss the study and resolve any political issues hindering BUC from providing information to EPS. An agenda should be prepared that includes a discussion of the wind energy feasibility study and waste heat. Committee members agreed that the City representatives should go into the meeting with a positive attitude conducive to reaching a cooperative arrangement.

A motion was made and passed for the Mayor, City Manager, and Public Works Director to meet in Anchorage separately with Alaska Department of Commerce Commissioner Notti.

A motion was made and passed that the Mayor, City Manager, and Public Works Director visit the Bethel Power Plant and accept a tour offered by Plant Manager Lenny Welch.

A motion was made and passed that the City Manager contact EPS and freeze the contract currently in place. No more work would be done and no more cost to the project would be incurred until the City reinitiated it. Ryan Mills recommended this be done.

Thus far, the City spent about \$14,000 of the \$150,000 tied to the contract with EPS. The Committee expressed its intent to provide the City Manager with one recommendation that includes all three motions approved at this meeting:

1. Freeze contract so that no more work is being done and no more money is being spent.
2. Mayor, City Manager, and Public Works Director take Lenny Welch up on his offer of a tour of the Bethel Power Plant.
3. Mayor, City Manager, and Public Works Director meet with Edward Tilbury, President of Bethel Utilities Corporation and discuss the wind energy study and waste heat. A separate meeting in Anchorage should be arranged between the three City representatives and Alaska Commerce Department Commissioner Notti.

Next Meeting

The Alternative Energy Committee will continue to meet on the first Monday of the month at 6:30 pm in City Hall. The next meeting will be held on July 2, 2007.