

## AGENDA

### **Alaska – British Columbia Intertie Feasibility**

Work Group and Technical Group

Public meeting

9:00 AM

City of Craig Council Chambers

Craig, Alaska

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|--|--|
| Welcome and Introductions (10 min)   | Chairman JC Conley                     |
| Opening Comments (5 min)   | Jim Strandberg, AEA<br>Project Manager |
| 9:15 AM General Review of the Report   | Group                                  |
| 10:00 AM Consultant presentation of Development Modeling   |  |
| 11:00 AM Discussion of Modeling Results  | Group                                  |
| 12:00 to 1:00 PM Lunch - Discussion of Consultant recommendations for further work on the project  | Group                                  |
| 1:00 PM -2:00 PM Development of Work Group report review comments, and work group recommendations to AEA for any additional development work | Group                                  |
| 2:00 PM – 2:30 PM Comments by Work/Technical Group members   |  |
| Adjourn meeting for members scheduled to catch the 3:30 pm Promec flight out of Craig for Ketchikan  |  |

Public comment will be received at the conclusion of each agenda item, beginning with the 9:15 AM General Review Session. Each person limited to 5 minutes.

**AK BC INTERTIE MEETING  
MAY 8, 2007  
CRAIG, ALASKA – CITY OF CRAIG COUNCIL CHAMBERS  
10:00 AM – 3:00 PM  
AGENDA**

Mr. JC Conley convened the meeting at 9:15 AM. He thanked the group for making their way to Craig, for the review meeting.

The following people signed on the telephone connection:

Mr. Bob Grimm, CEO of Alaska Power and Telephone  
Phelan Straube, Work group member  
Nan Nalder, project manager for Hatch Energy  
Robert Griesbach, project director for Hatch Energy

Model demonstrators (Connected by teleconference)

Mr. Anabal Carias  
Clark Smith  
Bin Lian

Others present

Greg Mickelson, Alaska Power and Telephone

Work Group Members present

Chairman John (JC) Conley  
Robert S. Prunella, City Manager, City of Wrangell  
Steve Henson, Electrical Superintendent, City of Wrangell  
Jay Hansen, Electrical Superintendent, Ketchikan Public Utilities  
Dave Carlson, CEO, The Four Dam Pool Power Agency  
Dennis Lewis retired Electrical Superintendent, City of Petersburg  
Joe Nelson, General Manager, Petersburg Municipal Power and Light  
Paul Bryant, General Manager, Metlakatla Light and Power  
Jon Bolling, City Manager, City of Craig and Co-chair, Southeast Conference Energy Committee  
Jim Strandberg, AEA project manager

**MEETING MINUTES**

Mr. Conley said the purpose of the meeting was to discuss the draft final report and consider three actions:

- Whether to recommend to AEA the report is adequate for the task at hand.
- To formulate review comments on the report that should be delivered to AEA for inclusion in the final report.
- To recommend further actions AEA should take to further the project.

AEA project manager Jim Strandberg then expressed AEA's appreciation for participation by the body. He looked forward to hearing the group's comments and hoped they could provide written recommendations to AEA on the current report and whether additional development work should be done on the project, based on the current report recommendation for the export project of "it looks promising, but can't tell for sure."

Strandberg also noted on the agenda, that the Consultant had not yet delivered the computer spread sheet based model that is the basis for the Hatch analysis of the project alternatives. At AEA's request, Hatch had provided supplementary report text and preliminary copies of the model to AEA. This model was copied onto CDs and distributed to the work group for their review.

City of Craig IT people produced CD copies of the model. Mr. Strandberg asked that the copies not be distributed outside of the committee, or used for any other purpose other than the AKBC Export project, because AEA was working out the intellectual property aspects of the computer model with the consultant.

At 9:30 AM, the group began a general discussion of the report.

Mr. Conley led off the discussion. He said the report is thorough and generally treated the subject adequately. Mr. Conley and several members stated their support of the report conclusion and that the Swan-Tyee Intertie project demonstrates strong economic value to ratepayers in SE Alaska.

Mr. Conley also stated, in his opinion, that the business structure analysis should be expanded to consider a State of Alaska ownership option.

Ms. Nalder stated the present recommendation centered on a cooperative model, such as QWETICO. Hatch had not considered the State ownership scenario because of perceived statutory restrictions on AEA's ability to take on new projects and associated debt, and from comments made at earlier work group meetings against the concept of State ownership of transmission assets.

Mr. Conley stated the work group is configured to give advice to AEA, and the ownership question is subject to a wide range of opinion, and in his opinion state ownership may be a valid approach for intertie development. It was agreed that this would be discussed later in the meeting.

Mr. Lewis expressed concern over the potential FERC jurisdiction of the export project and how that could affect the tax status of the four dam pool. Ms. Nalder said that should not be a worry, and spoke briefly on FERC's limits to jurisdiction over municipalities and cooperatives.

Mr. Bolling expressed concern, that as we move forward AEA should give preference to local community energy demands and needs.

Mr. Grimm, during public comment, suggested that AEA review costs and technologies for DC power transmission as an alternative to high voltage transmission. He pointed out that an AP&T study on high voltage DC is

available on the AEA web page.  
([www.akenergyauthority.org/PDF%20files/HVDC\\_in\\_Southeast\\_Alaska.pdf](http://www.akenergyauthority.org/PDF%20files/HVDC_in_Southeast_Alaska.pdf))

Mr. Hansen said he was concerned with some of the accuracy of transmission line estimates. In particular, the Kake Intertie may be buildable along a public road right-of-way for the majority of its route at a lesser cost than was indicated in the study. Mr. Hansen related his experience in building the Klawock/Thorne Bay transmission line (designed for 69KV and operated at 34.5 KV), and the overall cost of the project which came in at under \$100,000 per mile.

Others, including Phelan Straube and Dave Carlson, spoke in favor of the report as a viable draft, but in need of some additional treatments of subjects.

#### Model Presentation

At 10:00 AM, the consultant group was asked to give a short presentation on the draft Intertie feasibility model that is the basis for the report analysis. Hatch employees Nan Nalder, Bob Griesbach, Anabal Carias, Chris Smith, and Bin Lian were connected to the City of Craig computer to allow the model to be projected on a screen, through WebX internet software. Teleconferencers were given web links to view the model presentation as well.

The Consultants first gave a short description that showed how the model inputs can be manipulated to alter development scenarios. The power point visual aid is included as an attachment to these minutes.

Mr. Hansen stated that the model may predict too much spill. Mr. Carais stated the model is flexible and it could be changed to accommodate actual conditions. It was agreed there should be further discussions on making sure this predictive model recognizes all system synergies.

#### Detailed Review of report

At 11:00 AM, Mr. Conley suggested we begin a detailed review of the draft final report. He distributed copies of section 9.3 Recommendations. The group used this as a framework for its discussions.

##### *9.3.1.1 Overarching Issues and Tasks*

- Assist AEA and SEC in developing a request for proposals for a SE Alaska Energy Policy.
- Assist State of Alaska in consultations with BC government and utilities in BC and PNW.
- Assist AEA in developing and negotiating agreements between Governments, utilities, and private sector developers.

The group suggests AEA undertake these tasks. (As a general matter, the group did not comment on whether or not AEA should ask the consultant to perform the tasks. It merely recommended whether the task should be completed.) As a part of this discussion, Messrs. Carlson and Conley stated the State needs to

develop an energy policy that recognizes regional differences, so that funding decisions can be made rationally. Specifically there is a need to recognize the special conditions that exist in Southeast Alaska.

Messrs. Conley and Bolling suggested that the contact with the Governor's office be to educate and then to offer to assist in the development.

Mr. Straube spoke of legislative methods to secure funding for different intertie segments, and spoke of a State School Maintenance funding process that is founded on real need as opposed to raw political power.

Mr. Lewis questioned what is meant by "Southeast Alaska." The group decided it should mean everything south of Yakutat, including Yakutat. Mr. Carlson asserted that renewable energy sources combined with new transmission infrastructure is especially important for SE Alaska. He said it is important that the State of Alaska play a role in this infrastructure development.

Mr. Conley then spoke of the need to link this export project with the overall Southeast Energy Plan. Further, he indicated it is important that AEA maintain relationships with Canadian counterparts. The group generally agreed with this.

Mr. Prunella stated it would be important not to lose touch with the contacts in BC that were made during the last administration.

- Assist AEA in obtaining additional expertise or resources as needed by AEA to oversee the project.
- Provide Project Management for a steering committee as may be requested by AEA.

The group suggested no action on these items now.

#### *9.3.1.2 Business Structure*

- Consult with AEA and AK-BC Work Group regarding implementation of the proposed Business Structure and refine proposal as stated in Final Report.
- Assist AEA and AK-BC Work Group in preparing detailed recommendations for adoption of the proposed Business Structures

Mr. Conley began the discussion by suggesting that additional work be done to consider state ownership of the transmission lines. Ms. Nalder asked whether this should include state ownership of the present four dam pool infrastructure. Mr. Conley said he was not suggesting that; rather, the concept of State ownership should be considered generally and system-wide.

Ms. Nalder asked to what extent Hatch Energy should develop a state ownership scenario, and queried whether this could include bringing the four dam pool back into state ownership. Mr. Strandberg suggested Hatch should consider all reasonable ownership scenarios, irrespective of statutory or regulatory constraints and bring forth rational development scenarios that could result in viable export commerce that is sustainable and in the public interest. He further suggested that Hatch could then identify any statutory or

regulatory barriers to the best fit ownership scenario. Finally he posited this approach could provide a valuable tool to policy makers in deciding the correct structure for the potential export scenario.

Mr. Carlson stated whether or not the State should own new assets are part of a policy question that the Administration and AEA must wrestle with.

*9.3.1.3 Southeast Alaska Market*

- Refine load forecast for SE Alaska utilities with focus on the potential for conversions from oil-based heating to electric heat. Customer surveys could be considered in order to obtain better information on the current heating infrastructure and customer intentions for the future.

*9.3.1.4 External Markets*

- Monitor implementation of policies set forth in BC Energy Plan to identify potential for projects in SE Alaska to provide energy to BC and the PNW. ( See Section 3.6 of Report)
- Monitor emerging market opportunities in BC & PNW and advise AEA & AK-BC Work Group, e.g. future BC Hydro & PNW utility RFPs for power.

No AEA action was suggested on these items.

*9.3.1.5 Regulatory Issues*

- Consult with RCA and FERC regarding regulatory structure for AK-BC Intertie. Note that legal counsel will be required to file the request for Declaratory Order with the FERC to determine interstate commerce jurisdiction.
- Monitor progress of RCA rulemaking to implement a State Small Hydro Licensing Program (5 MW or less)

No AEA action was suggested. Mr. Carlson commented that this is premature. If and when the project is better formulated and a decision is made to go-ahead with development, then AEA should begin the regulatory determinations and filings.

*9.3.1.6 Transmission Line Costs and Issues*

- Extend studies to develop more accurate capital and O&M cost estimates for planned transmission segments.
- Continue to monitor progress and consult with BCTC regarding the proposed NTL line and the segment from the NTL to the AK/BC border
- Consult with BCTC regarding contractual terms and related costs to achieve interconnection
- Monitor developments in SE Alaska and BC and propose a critical path for development of the transmission segments required to export power generated in Alaska to BC/PNW: AK-BC Intertie from Tyee Lake to AK/BC border; segment from border to interconnection with BCTC; and proposed line to connect potential new hydro projects at Thomas Bay to the FDPPA line segment from Petersburg to Tyee Lake.
- Develop and/or manage a process for choosing developers of state-sponsored transmission segments.

The group supports AEA going forward with these tasks.

9.3.1.7 *Power Generation Costs and Issues*

- The decision to proceed with a transmission system and institutional mechanism to enable the export of power from SE Alaska is heavily dependent upon the development costs for the three Thomas Bay projects including Scenery Lake, Delta Creek, and Cascade Creek projects. Accordingly, it is recommended that an independent evaluation of the energy potential and development cost of these projects be performed in a manner similar to a "Due Diligence Review" as generally required by banking institutions prior to approval of financing construction or acquisition of a major project.
- Monitor development of renewable resource projects including tidal energy, geothermal, and offshore wind energy. As proposals come forward, consider the "fit" of these projects to an overall energy portfolio for SE Alaska.
- Conduct studies to coordinate operation of the Swan Lake and Tye Projects with existing and planned hydro projects in Petersburg and Ketchikan to maximize power operation and related reservoir operations.
- Develop more accurate cost estimates for candidate generation projects.
- Develop more accurate calculation of monthly generation from existing and candidate hydro projects

The group supports AEA going forward with these tasks as well.

There were a number of comments on the need to better define the projects and to get better cost estimate and schedules for both the transmission lines and the hydroelectric power projects.

Mr. Griffith of Hatch Energy who dealt with the hydro power project costs indicated that Hatch had amassed as much existing information as possible on the Thomas Bay projects, and that these had come from the present development permit holder. These estimates were not at a level to allow for a determination of feasibility. The group agreed that the hydro/transmission projects should be further developed by accomplishing preliminary design for the hydro projects and route analysis and preliminary design for the transmission lines.

Mr. Carlson spoke of the intertie line between Thomas Bay and Petersburg. That link is presently budgeted at approximately \$60M, because of a very long submarine cable connect. This routing should be reviewed.

Mr. Lewis stated that the third bullet under 9.3.1.7 should be corrected so that Tye projects are defined as the third turbine installation.

There was also concern that the interconnections with Metlakatla and Kake be an integral part of the development. Mr. Bolling said a policy goal of export commerce must be directly linked with a financial benefit to the people of SE Alaska. Ms. Nalder noted that the Power Marketing function the team suggests be a State of Alaska function is designed to assure the flow of benefit back to the public.

Mr. Griffith warned that a public benefit charge applied directly to all export power that flows out of the state could dramatically affect the feasibility of export.

- Advise State of Alaska in opportunities to shape future hydro projects by active involvement in FERC license proceedings

The group discussed the status of the FERC development permits that are presently being held by a private entity. Hatch Energy stated that in order to give stability to the project going forward, development permits might best be in the hands of AEA, or with the communities of Wrangell and Petersburg.

The group suggested that this be a subject between AEA and the work group that should be thoroughly discussed at a separate setting.

- Assist the FDPPA and municipal utilities in identifying the benefits of integrated operation of existing hydro projects with the STI in place

The group discussed the interconnection that would be necessary between the new export intertie, and The Four Dam Pool Power Agency owned transmission/generation system. It was agreed this would be involved, and would generally provide additional benefits in system reliability, and better dispatch of generation resources. Mr. Strandberg stated that, if the project moves ahead into development, this would be a subject of discussion between the State of Alaska and The Four Dam Pool Power Agency, and the future owner and operator of the transmission backbone. The group suggested no further work at this time.

- Assist AEA and the AK-BC Work Group in participating in proceedings before the FERC for proposed Applications for License proposed to use the state-sponsored transmission segments (e.g. current proceedings for Thomas Bay Projects under FERC Preliminary Permit) to ensure that State interests are addressed and measures included in the license to ensure that projects will be constructed and operated to deliver power over a 50-year period.

No action by AEA was suggested for this task.

#### *9.3.1.8 Computer Model*

- Enhance the Regional Resource Planning Model (RRPM) developed during Phase I to include constraints of transmission line capacity.
- Develop and provide detailed user manual and conduct training seminars on the use of the planning tool developed during Phase I.
- Develop a method to quantify other benefits not included in the present analysis.
- Rerun the RRPM as updated energy and cost data becomes available from project proponents.
- Investigate additional scenarios and update the economic analysis performed on the scenarios developed in Phase II.

The work group was generally satisfied with the computer model, and suggested there was no need for training seminars. They suggest additional scenarios be considered that involve State ownership of the transmission and hydro-electric projects. Also they suggested further discussion on the model's ability to embrace synergies and yield accurate prediction of spill quantities from hydro power generators.

After completion of this detailed review process, the group developed the following recommendations:

1. First, with regard to the AEA administration of the project:

There is need for discussion of the project with the Governor's office and key legislators, to seek administration buy in to long term commerce between Alaska and British Columbia. (This is being accomplished by the Southeast Conference and other SE interests. AEA is not involved)

The AEA project manager should continue coordination with Canadian power utility officials on status of British Columbia plans for transmission line construction near the Alaska border.

The report should be accepted with the following review comments:

1. Develop additional scenarios for State ownership of the export transmission lines and the Thomas Bay Hydro Electric Projects.
2. Additional discussion and model tuning for spill predictions.
3. Complete the computer model and deliver final version, complete with user documentation.

The work group recommended to AEA that additional work should be accomplished after this final report is issued:

1. Further project definition work, including conceptual design and cost estimates for the Thomas Bay projects, and transmission line routes.
2. Establish project schedules for the export development, to harmonize the time line for hydro projects with timelines for the transmission lines.
3. Develop concept designs for the Kake transmission line, which likely can be constructed along a public road right of way. Develop the design of submarine cables more fully, and develop a route map, complete with ownership, terrain mapping.

Finally, Chairman Conley discussed the make-up of the Advisory Work Group and its continued role in the AKBC Export Project. He stated that the work group should continue to provide advice to AEA on the project, both in assuring that project data input is correct and in providing input to AEA on the way the development should continue. Mr. Carlson spoke in support of this.

Mr. Conley also suggested that the members of the technical group should be brought into the work group. Mr. Strandberg suggested that several new members could be added, to represent Kake interests and southern area private power interests. Ms. Jodie Mitchell, incoming general manager of Inside Passage Electric Cooperative (IPEC), and Mr. Robert Grimm, CEO, Alaska Power and Telephone (AP&T) were nominated and without opposition, Mr. Conley was asked to invite the two onto the Advisory Work Group.

With that, it was agreed the work of the committee on the agenda was complete and the meeting was adjourned.