

**HAINES BOROUGH
ENERGY AND SUSTAINABILITY COMMISSION
REGULAR MEETING**

NOVEMBER 25, 2008

1. Roll Call - 6:00pm

- a. Members Present: Melissa **ARONSON**, Leonard **DUBBER**,
Danny **GONCE**, Scott **HANSEN**, Andy **HEDDEN**, Frank **HOLMES**,
Gary **LIDHOLM**, Dan **WACKERMAN**, Stephanie **SCOTT**, Steve
VICK (Assembly liaison)

- b. Members Absent: Tom Moody (excused)

- c. Visitors: John Hunt (KHNS), Dave Disbrow, Ben
Kirkpateick, Jim Studley, Nancy Berland, Scott Carey,
Tom and Sally McGuire, Matt Hawthorne (CVN), Pam
Randles, Mike Case, Ron **JACKSON**, Rob Goldberg (Borough
Planning Commissioner), Ray Staska, Tim Shields, Roger
Maynard, Barb Maynard, Bruce Messerschmidt (APT), Nick
True, Jan Hill (Borough Mayor), Pat **PHILPOTT**, Stan
SELMER (APT), Glen **MARTIN** (APT), John Floreske Jr.,
Jim Van Altvorst, Heidi Robichaud

2. Approval of Agenda

M/S **HANSEN/HEDDEN** to amend the agenda by adding "Pickens
Plan" to Old Business.

Motion carried unanimously.

3. Approval of Minutes

- a. October 21, 2008

M/S **HOLMES/WACKERMAN** to amend the minutes to reflect
technical changes from **GONCE**.

Motion carried unanimously.

4. Public Comment

Pat **PHILPOTT** recommended that the Commission endorse wind
power generation options on his property near but outside
the Bald Eagle Preserve.

5. Commissioners' Reports

WACKERMAN said that he'd enjoyed visiting Chena Hot Springs and seeing their geothermal heat recovery system. He said that their system requires 3-5 kW of electrical power to move fluid around the system, but the energy recovered is impressive. He said that geothermal power recovery in operation in Fairbanks indicates that the technology can apply in lower latitudes. **ARONSON** noted that Ned Rozbicki will be bringing a geothermal presentation before the Commission early in 2009.

6. Coordinator's Report

SCOTT referred to her paper submittals, for which there were no questions. Commissioners indicated a desire to see community fuel prices comparable to Haines in meeting packets as an FYI item.

7. Old Business

a. Wood Energy Workshop - Ron **JACKSON**

JACKSON said that there is much enthusiasm over biomass energy, and a number of small communities are availing themselves of this resource. Pellets, cordwood, chips, and briquettes are being manufactured and used at some level in many areas. Cordwood is immediately available, but non-automated systems require much more labor. Wood chips for large-scale use would require an expansion of the chip production market to be feasible. **HANSEN** noted that wood boilers are undergoing a public image transformation as high-efficiency gasifying models are coming to the forefront of the private and public sector. **JACKSON** said that EPA air quality regulations limit low-efficiency outdoor wood boilers (OWB) in many areas, but high-efficiency models comply with those regulations.

b. Connelly Lake Hydro Project in Upper Chilkoot River Watershed

Stan **SELMER**, Alaska Power and Telephone (APT) Regional Manager, and Glen **MARTIN**, from their Port Townsend office, showed a Powerpoint presentation of the Connelly Lake hydro project, which has a slated startup date of 2014. The project aims to alleviate peak power demands of Haines and Skagway, provide Haines electrical power independent of a

submarine cable from Skagway, and also correct cruise ship volume air quality impacts. Cruise ship pollution is approximately the same as that from 100% diesel electrical generation, and if cruise ships were to connect to shore power they would turn off their high-output diesel electric generators. Partnerships in the project are greatly desired, particularly at the municipal level. The Yukon may be interested in purchasing power through an intertie with Skagway. Also, if a portion of the gas line is served by the Haines Highway this project would also anticipate the added electrical loads. **MARTIN** reviewed former projects in Southeast Alaska and explained engineering, materials, and production processes. He described APT's hydro projects as being high quality and designed to ensure that communities served stay off diesel power with its associated costs and operational challenges. Power generation is always very important to a community, so a high priority is placed on finding solutions to problems presented by the project in a manner satisfactory to the community.

The proposed project recently began public reviews with the Federal Energy Regulatory Commission (FERC), Alaska Coastal Management Program (ACMP), and the Army Corps of Engineers (ACOE) permit, each with their separate public review periods.

A road construction plan, including bridges and culverts, is not yet engineered, but a number of obstacles would need to be responsibly addressed, such as areas where the river has eroded the existing right-of-way. Typically Fish and Game Habitat Division oversees road construction and culverts and intends to avoid adverse impacts to wildlife and the valuable fishery. Underground power will be used as much as possible along the road corridor. Construction impacts are often avoided or minimized using creative methods like helicopters or tramways. A bridge, also used for APT access, is planned to cross the river at the turbine site.

It was noted that dam construction needs to be engineered responsibly because of the dangers from catastrophic structural failure. Contingency plans for possible catastrophic failure are typically built into an engineering plan, not afterwards. Few correctly-engineered dams fail. One method to avoid water hammer is to have penstocks shut down automatically under certain hydraulic

change levels. State inspectors also oversee this type of dam construction. **SELMER** describe specific excess water overflow contingencies for an older project in Skagway.

Working with habitat concerns is a routine portion of hydroelectric projects. **SELMER** noted that a streamflow analysis has been performed on the creek and lake, and no fish exist in either. Construction sediments are typically addressed with silt fencing. If necessary, past projects have employed a compliance monitor onsite for the entire project. Water level and flows can be monitored and adjusted to protect important fisheries. Nitrogen in the water column has been observed in other systems. It is a scientifically-observed physical occurrence and will be addressed in the engineering design. Hydroelectric projects eventually need to address habitat and viewshed issues, and specific solutions are often discovered through negotiation through the public process.

Visual impacts are also managed in various creative ways relative to the needs presented.

An alternative was suggested to constructing another hydroelectric facility - adjust power rates to force users to turn off more expensive power at peak times and use it when rates are lower. Additional components would be purchased and installed by users to turn off power during more expensive peak times, documented as being between 4:00pm and 7:00pm of any given day. In this way existing power use levels would be maintained. APT said that this is a reasonable option used in many places, but it doesn't anticipate future power use increases. With current local trends power use increases are reasonable to expect.

Walker Lake has been investigated for hydro power along with Connelly Lake. Both cost about the same to construct, but their capacity differs significantly. The Connelly Lake project would generate 30 GW/year, while Walker Lake would generate 5.4 GW/year, or 18% of Connelly Lake.

It was noted that many renewable energy sources have electrical backup systems, and it was recommended that the grid have excess potential for this purpose.

SELMER said that electricity rate increases could happen, but the amount depends on the source of funds for the project. APT is interested in partnerships, particularly

with municipalities, as those partnerships will result in better support overall and also the potential for more grant funding opportunities. The more financial participation the less user rates bear more development costs.

A ten-year-old submarine power cable with a life of 30+ years currently connects Haines and Skagway. Cables are replaced when they fail, and the cable linking Haines to Skagway is insured. If Haines' power is dependent on the cable and it breaks then Haines must use its existing diesel backup system. **SELMER** noted that in 1967 an underwater slide broke a cable in Skagway. If the Connelly Lake hydro project were completed Haines would need no electrical connection to Skagway for constant power.

Legal road access is not yet confirmed for the project, particularly through a Native Allotment. This will need to be managed through the public process. After construction is complete road access for maintenance will likely be once per week to the hydro site. It may be possible to limit access up the roadway with the cooperation of the State Parks department. If the RS2477 right-of-way guarantees access there would be no limit to accessing the Chilkoot River corridor.

8:20 recess

8:30 reconvened

M/S **HANSEN/DUBBER** to table the rest of the agenda, by reason of the late hour, until the next regular meeting on December 2, 2008, at 5:00pm.

Motion carried unanimously.

8. New Business
9. Public Comment
10. Commissioners' Comments
11. Next Meeting
12. Adjourn

M/S **WACKERMAN/HEDDEN** to adjourn.

Motion carried unanimously at 8:37pm.

Respectfully submitted,

Scott **HANSEN**

Recorder

Haines Borough Energy and Sustainability Commission

Approved December 2, 2008