

TO: Haines Borough Energy & Sustainability Commission
Haines Borough Energy & Sustainability Coordinator

FROM: Ron Jackson, Commission representative to the Wood
Energy Workshop, Sitka, Alaska, October 29, 30 2008

RE: Selected notes/comments from the SE Alaska Workshop, Sitka, Alaska,
October 29,30, 2008 – **Agenda Item 7 (b)**, November 25, 2008 meeting.

DATE: November 20, 2008

AEA will be coming out with an energy inventory of each community in January. This will describe various types of energy options for this area.

Sitka presented an excellent model for a community energy assessment of current use and where they planned to be in the future. It can be seen at www.tongassfutures.net/biomass Other presentations are also available at this website. They are experiencing more use of electric heat in homes as it is cheaper than oil now. They also put the breakeven price between oil and electricity in the paper so people can choose on a daily basis. (the shuttle bus driver told me this) UAF has a website with a cost calculator for people interested in comparing wood heating alternatives/stoves. See www.alaskawoodheating.com They also have developed a business plan blueprint for someone interested in getting into a firewood business.

The forestry speakers talked about the supply side of this issue. Our current industry is not oriented toward biomass and will have to be developed as the demand grows. If there is a known demand, the industry can invest as needed. One company spoke about an interest they had of building a pellet factory on POW island. Prince Rupert is a major exporter of pellets to the Far East. (50000 tons/year) Some foresters talked about the opportunity for second growth management as a result of the increased demand for biomass, providing better stand conditions for habitat and tree growth. Stewardship contracts to provide thinnings and biomass products were mentioned by one speaker. Sealaska Corp is looking at a possible wood brick plant in the near future. A panel discussion recommended starting small and growing the demand with a wood energy program.

A second panel touched on air quality, EPA certification of boilers, new EPA standards for PM-2.5 coming in 2009, pellets, fire bricks/logs, and increased efficiency of woodstoves. Libby, Montana has air quality problems and is offering incentives to phase out old woodstoves.

The Craig situation was discussed. It is the closest thing to what Haines is planning. The major difference is that they have an unlimited supply of chips just 7 miles away at a local sawmill.

Dan Parrent spoke about the elements of a viable wood energy program. A couple of the points he made were to have a project “Champion”, a simple payback period of less than

ten years, a reliable and consistent supplier of wood, Community buy-in and support, and the commitment of facility personnel.

One community had a “stump dump” similar to our Mt. Riley area and they were looking at ways to utilize that wood for energy. Another community was looking at their combustible recycling products, such as cardboard and paper, for use in a boiler rather than pay to export it.

A point was made by several speakers about the value to the community of using its own energy resources rather than send our dollars outside to purchase heating oil. Fairbanks, for example sends \$460 million dollars a year outside for energy. One researcher estimated that Haines residences used 680,000 gallons of heating oil. At \$5/gal that’s 3.4 million dollars, most of which leaves the valley. If even some of that could be kept here that would be significant.

The last panel was about funding alternate energy projects. There are lots of different agencies with funding help. One speaker emphasized to create jobs in the community as part of this process instead of sending the dollars outside-build this concept into any program proposal.

Bill Thomas made a point of getting an energy projects on the CIP list, make it a high priority, and make sure the community is on board with the project.

One speaker said “Don’t fall in love with a system until after the feasibility report”.

Some websites to visit:

www.tongassfutures.net/biomass

Contains papers from the SE wood energy conference.

www.fuelsforschools.info

Info and links about public building heating examples.

www.alaskawoodheating.com

UAF site with cost calculator, and more.

www.akenergyauthority.org

Info about renewable energy programs.

www.biomasscenter.org

Good examples of wood energy used for heating building complexes.

www.fleci.org

What We Are About?

The Flexible Energy Community Initiative is a non-profit effort designed to help you and your community prepare for a stable energy future. We focus on assisting public sector entities - counties, cities, towns and school districts – make sound investments. Our agenda is greater use of woody biomass and solar power in the heating and cooling of public spaces. We work to link programs, policies, resources, community activists, and decision makers to renewable energy technology.

Assistance Available

Technical Assistance: We work one-on-one with designers and decision makers to analyze the feasibility of renewable energy technology for a specific site based on location, size, budget, community values, and other factors.

Some considerations for a large-scale wood burning program in Haines.

- **Location of the boiler unit(s):**

A mid-sized boiler unit such as used at Craig, AK. (a similar situation to our school/pool proposal) will likely need to be located somewhere near the school. Some community discussion should take place early to help guide the planned feasibility study. Zoning aspects (if any), as well as aesthetics could be identified. (Stack heights of >2.5 times the building height are recommended) The boiler building typically has an adjacent chip storage bin. It would be fed by chip truck deliveries from a chip source.

Future expansion of the wood heating program to other buildings should be considered. These expansions would affect the size of boiler necessary.

- **Air Quality:**

Wood boilers, even EPA certified ones, put out more particulates than oil fired ones. EPA standards for particulates are getting tighter in 2009 with more concern for particulates below 2.5microns. It seems reasonable that some discussion should happen around potential airshed effects and public health associated with a program of expanding wood burning as a form of heating energy.

Some communities where airshed concerns exist have gone toward phasing out old wood burning stoves (the worst offenders) using incentives and/or state or local ordinances. Newer stoves burn up to 30 percent less wood for the same heat and emit less particulates and chemicals.

- **Financing Considerations:**

Many state and federal agencies have money for grants/loan programs to assist communities for alternate energy projects. Projects with a simple payback period of 10 years or less are more likely to be funded.

- **Fuel Supply:**

Hand feeding a boiler is an option for a smaller system, but a relatively low maintenance boiler system would have automatic feed. Chips or pellets would likely be the logical choice of supply for an automated feed system. There is no local supply of chips available at this time. To provide these would require import from another source or development of a local source. Chipping would

most likely be at some site near town. A storage area for logs to be chipped, the chipper, and a chip delivery system would be needed. This would be a fairly noisy industrial operation.

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Some Elements of a wood burning program in Haines

