

AVCP Calista Region Renewable Energy Resources

**Testimony of Ron Hoffman, CEO
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Wind, hydroelectricity projects, biomass (wood and organic solid waste), and to some degree solar energy along with alternative fuels can provide the AVCP Calista region with energy sustainability, independence and rural community development. The recently completed Alaska Energy Authority Energy guide demonstrates the potential generation capability for renewable energy based upon location to potential hydroelectric power and wind class and other available renewable energy sources.

Wind

There is abundant wind energy resource available in the AVCP Calista region. The 2002 Nuvista study evaluated wind generation in those villages where there is sufficient wind resources to justify installation of wind turbines. The study assumed wind generation would be considered in areas where the Wind Power Class is 4 to 5 or greater as designated in the Wind Energy Resource Atlas of the United States. 16 villages are rated 7, 3 are rated 6, 5 are rated 5 and 2 are rated class 4.

There are two wind generation projects developed and managed by the Alaska Village Electric Cooperative. These are located in the communities of Toksook Bay on Nelson Island on the Eastern Bering Sea Coast, and Kasigluk which is 20 miles west of Bethel.

In recent years local utilities have become more interested in co-generation capabilities based upon the wind energy potential demonstrated by these projects. Four villages of the lower Kuskokwim River Bay area joined together under an organization called the Chaninik Wind Group whose aim is to develop wind generation capacity of the four villages in that area and reduce their dependence on fossil fuel generated electricity and heating. They are currently engaged in developing a wind development project to determine the feasibility of a subregional wind farm project to serve the four villages and will also determine the wind resource availability for expansion and possible build-out to other parts of the region.

Regional Hydroelectric Power

It has been estimated from previous studies conducted involving a potential Hydroelectric project in the Kuskokwim region that approximately

24 megawatts of power and roughly 130 million kwh of energy may be available for nearby Bethel villages from Tuluksak to Quinhagak located along the Kuskokwim River. This project has the potential of replacing diesel as the primary source of energy in this region. In today's dollars energy costs could equate to approximately 23¢ per kwh based upon conservative estimates of inflation costs. PCE reports indicate costs up to 60¢ per kwh without PCE adjustments for continued diesel power generation demonstrating greater potential savings per household with hydroelectric power. Additional savings to the state in the form of reduced PCE requirements provide added cost saving benefit to the state over the long term.

It is our strong recommendation for an Integrated Renewable Energy Solutions approach in rural Alaska for achieving energy sustainability and economic viability.

In our region we seek to:

- ***Expand Wind Energy Projects along the eastern Bering Sea Coast and the Bethel area***
 - ★ ***determine feasibility for integrated wind/diesel/solar/biomass heating and electric systems with community heat storage system.***
- ***Determine feasibility of Regional Hydroelectric Project (Lake Chikuminuk) to provide region-wide electricity and heat.***
- ***Develop and install Biomass projects: including wood fired boilers, heaters and wood chippers for community facilities and buildings.***