

Village Biomass



A Network Initiative

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An example of the biomass available after forest fire burned out the roots of these trees. This is a 500,000 acre burn adjacent to the river and could supply wood for 6 to 10 years for many communities along this river system.

Village Biomass



Goals

- ❧ Replace petroleum (\$-7 to \$11/ Gal) with biomass
- ❧ Start small with heating single building
- ❧ Progress to combined heat and power for village
- ❧ Retain funds in community
- ❧ Provide employment (unemployment 40% to 80%)
- ❧ Encourage resource management
- ❧ Keep villages viable
- ❧ Even at break even there are advantages to biomass



Fire wood is delivered by community members. Originally there was fear, nobody would be willing to supply the wood now there is a rotating list of who gets to supply wood next. Currently most wood is Acquired from the Yukon River (Tanana River wood is too full of silt). Wood is delivered to these racks at the rivers edge for measurement and payment. The Village transports racks from the river to the boilers by Forklift.

Village Biomass Managing by Network



Network Goal / Vision

Community driven

Partnership

Community /Champion

Native Corporations

Village & Regional

Alaska Energy Authority

Alaska DNR

BLM

Cooperative funding and support

Feasibility studies

Equipment selection

Grant funding

Long term contracts/ agreements

Network Objectives

- ❧ Bring Community together with Agencies and Corporations
- ❧ Build community support
- ❧ Develop business plans
- ❧ Encourage local employment
- ❧ Community based energy dependence



Two Garn Boilers heat approx 3,000 gallons of water that is used for heat and hot water in the Washateria. The boiler burns hot with recirculation of smoke to clean up particulates and reduce pollution. Round wood or split logs are used for fuel.

Formal and Informal Networks to be Developed



➤ **Partners with Volunteers Agreements**

- Local School Districts
- Local Village

➤ **Partners With Assistance Agreements**

- Native Village
- Native Regional Corp
- Extension
- Native Non-Profit Corp

➤ **Partners Under Contract**

- Local Community

➤ **Partners With MOU**

- Alaska Wood Energy Task Group

➤ **Intra/Inter Agency Partners**

- Alaska Energy Authority
- BIA

➤ **Partners With MOU**

- USFS State & Private

➤ **Informal Partnerships**

- Job Corps
- Forest business
- Biomass

➤ **Potential Partners**

- Galena Technical High School



Local Operator, BLM Forester, City Manager. Heat exchange in washateria. Most villagers bring laundry to washateria/ community building. Showers are also available here. City Manager Bear Ketzler is a leader in the larger native community in promoting the use of biomass through his own network connection. Tanana will install one more boiler this year to heat the city offices and the teacher housing and 3 more next year to heat the school. Biomass power for the school will be next.

Stage of Network Development



What's the status of your network development:?

- ✓ Visioning - Some Communities are just in the preliminary stages
- ✓ Conceptual - Some Communities have embraced the concepts and are thinking about projects
- ✓ Research and Development - Some Communities Are doing feasibility studies
- ✓ Implementation Planning - No Community in my group has gotten this far
- ✓ Active
- ✓ Evaluating

What are you doing at this stage to manage the network and move to the next stage?

Each Community is different and since this is community driven.

Working with others to encourage participation and get the word out about available funds

Mailings to all communities on Opportunities

Responding to requests for additional assistance.

Promoting cost share assistance and stewardship programs

Promoting youth education and employment

Promoting forest management and local jobs



Exhaust from Garn Boiler is clean and cool. City Manager, BLM Field Manager. Bear is a key player with other communities to promote biomass use and the benefits of networking to other Native Villages.

Network Geography

Communities of Place, Identify and Interest



Where does your network operate?

The bigger network is statewide in Alaska

Each community then develops it's own network focused on their needs

Who benefits from the development of your network?

Local communities and other agencies



Sleetmute (Norton Sound, AK) Community meeting BLM (WO, FO, Public Affairs, Resource staff), Native Alternative Energy, Local Champion. Some communities haul wood 50 miles by snowmobile (1/4 to 1/3 cord per load) to heat houses. Each Community needs a Champion.

Benefits of the Network



Present

Expanding the knowledge of biomass opportunities for Villages

1. Local jobs
2. Resource values (wood for petroleum)
3. Fire hazard reduction
4. Funding opportunities

Future

1. Communities will begin to learn from each other
2. Cooperatives for harvesting and management
3. Villages will have local employment, retain funds and may remain viable
4. Improved forest health and land management
5. Native people involved in managing the lands where they live.



Water tank must be maintained at 42° year around. (winter -50°) Biomass residual heat is ideal

Evaluating Network Potential and Performance

	Evaluation Criteria	Comments
1	Advance strategic priorities of the agency	This may increase knowledge of resources, increase demand for forest products, and support an increase in program funding
2	Leverages funding	Cooperative funding opportunities and outside grants will benefit all parties involved in the network
3	Demonstrates big-picture thinking	Keeping funding for energy in the community may provide employment and keep villages viable
4	Demonstrates entrepreneurship	New businesses will necessarily be created to supply and run the new biomass operations in inventory, harvesting, construction, transportation, operations and maintenance
5	Management of formal agreements and contracts	Many will be required throughout all phases of biomass
6	Demonstrates effective external and internal communication	Implementation of projects with multiple agencies and cooperators will demonstrate external communication
7	Demonstrates accountability	System successfully operate for many years into the future
8	Potential as a network management model	The step down process may be a model in future years but not at this time



Vast forest resources are available. Harvesting and transportation are easiest in winter

Lessons Learned About Network Management



- Even if the agency is a minor player in the resource field we can be a leader in initiating networking opportunities.
- Local champions need someone to support their ideas and provide guidance along the way
- Be there but be ready to give away the network management to the local community as soon as possible

- In working with Native communities, meeting face to face is important but decisions are not often made at public meetings.
- Talk to partners before the meetings about the issues and what types of decisions are needed

