

Upper Kobuk River Biomass

Grantees	City of Kobuk (Local Government), Northwest Inupiat Housing Authority (Government Entity - Housing Authority), Northwest Arctic Borough (Government Entity - Housing Authority)
Technology Type	BIOMASS
Region	Northwest Arctic
AEDG Project Code	10061

REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
1	59	Kobuk River Valley Woody Biomass Feasibility	2195397	402031	Feasibility	8/20/08	12/31/11	Closed
4	668	Upper Kobuk River Biomass	7040028	402031	Feasibility	7/1/11	12/31/14	Closed
5	840	Kobuk Biomass Design & Construction Project	7050840	402031	Construction	7/1/12	9/30/15	Closed

Grant 2195397: Kobuk River Valley Woody Biomass Feasibility

Project Scope: The feasibility study will include the following milestones.

Resource Assessment will determine the sustainable level of biomass harvest in the Upper Kobuk (Ambler, Shungnak, and Kobuk villages) and utilize Geographic Information Systems (GIS) for future harvest planning. Harvest System Assessment will assess a harvest cost delivery model based on two different scales: small individual village scale or a regional harvest scale to service all three villages. Wood Yard Conceptual Design that links production of wood product chips or cord wood with appropriate boiler configuration and a wood processing cost model. Boiler Feasibility and Conceptual Design will determine the most cost effective and best fit for chip or round wood boilers and the amount of annual wood usage, determination with a level one feasibility cost summary, the type of boiler locations and potential for district heating major buildings or houses. Preliminary Business Models will determine the initial appropriate organization and ownership of harvest systems, wood yards, and wood energy utilities and basic costs and cash flows for each village. Many sources will be utilized including the Cold Climate Research Center in Fairbanks. Communication Process will fully involve the communities in supporting, empowering, and making the decisions on the appropriate structure for sustainable wood utilization in the region. Final Presentation will inform project partners and especially villages of the wood energy feasibility, business model, and key pros and cons of moving forward with program construction and implementation.

Project Status: The Conceptual Design Report is complete and this project is in close-out.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$231,606.00	\$231,606.00
Other State Funding	\$0.00	\$0.00
Total State	\$231,606.00	\$231,606.00
Required Local Match	\$257,212.00	\$257,212.00
Federal Grant Funding	\$0.00	\$0.00
Total Project Costs	\$488,818.00	\$488,818.00

Grant 7040028: Upper Kobuk River Biomass

Project Scope: The Northwest Inupiat Housing Authority, in partnership with NANA Regional Corporation, Maniilaq Association, WH Pacific, Inc., and Kobuk, Shungnak, and Ambler Native Villages, will complete the design and permitting for a thermal biomass system. The system will be located in Kobuk, Shungnak, or Ambler based on the recommendation of the feasibility Conceptual Design report funded by Round III of the Renewable Energy Fund. This project will deliver project scoping and contractor solicitation, permit applications, and approvals, environment assessment and mitigation plans, resolution of land use and right of way issues, final system design, engineering cost estimate, economic and financial analyses, power sales agreements with approved rates and the final business/operational plan. Prerequisites for AEA grant reimbursement are acceptance of Resource Management Plan including resource assessment and harvest plan/costs, Preliminary Business/Operational Plan, and Boiler Feasibility and Conceptual Design Report and Drawings.

Project Status: The Conceptual Design Report is complete and this project is in close-out.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$185,867.00	\$185,867.00
Other State Funding	\$0.00	\$0.00
Total State	\$185,867.00	\$185,867.00
Required Local Match	\$10,254.00	\$10,254.00
Federal Grant Funding	\$0.00	\$0.00
Total Project Costs	\$196,121.00	\$196,121.00

Grant 7050840: Kobuk Biomass Design & Construction Project

Project Scope: This project will deliver final design and construction for a wood burning boiler system in Kobuk. The intent for this project is to increase the use of locally available, biomass energy for thermal heating. This project includes system design (must include metering and monitoring equipment and instrument), right of way and survey requirement, construction permitting, installation of a wood burning boiler system (Garn unit proposed), construction of a covered wood splitting and storage shed, gravel pad/foundation, perimeter fencing, hydronic piping and other mechanical components, electrical controls, harvesting and processing equipment (saws, wood splitters, etc.), and freight and travel costs.

The city must coordinate with NWIHA and their consultant in developing the project. AEA must accept final design before construction funding is disbursed. Wood supply contract for 5 years must be in place before construction funding is disbursed.

Project Status: This project operational and the grant is closed.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$356,424.00	\$354,193.95
Other State Funding	\$0.00	\$0.00
Total State	\$356,424.00	\$354,193.95
Required Local Match	\$45,449.00	\$45,449.00
Federal Grant Funding	\$0.00	\$0.00
Total Project Costs	\$401,873.00	\$399,642.95