

Lepquinum Center Ground Source Heat Pump

FY2016 Request: \$3,445,040
Reference No: 60790

AP/AL: Allocation
Category: Development
Location: Metlakatla

Project Type: Energy

House District:
 Ketchikan/Wrangell/Metlakatla/Hydaburg (HD 36)

Impact House District:
 Ketchikan/Wrangell/Metlakatla/Hydaburg (HD 36)

Contact: Sara Fisher-Goad

Estimated Project Dates: 07/01/2015 - 06/30/2020 **Contact Phone:** (907)771-3000

Appropriation: Alaska Energy Authority - Round VIII Renewable Energy Project Grants (AS 42.45.045)

Brief Summary and Statement of Need:

The Alaska Native Tribal Health Consortium proposes to design and construct a ground source heat pump system to provide heat for the Lepquinum Wellness Center in Metlakatla. The heat pump system would capture heat from the ground via a vertical bore loopfield and water-to-water heat pumps and tie into the facility's existing hydronic heating system, which would retain the oil-fired boilers for supplemental and backup heating. The heat pump system is projected to save the center 47,200 of the estimated 49,500 gallons of heating oil used per year.

Funding:	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>FY2020</u>	<u>FY2021</u>	<u>Total</u>
Renew Ener	\$3,445,040						\$3,445,040
Total:	\$3,445,040	\$0	\$0	\$0	\$0	\$0	\$3,445,040

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Prior Funding History / Additional Information:

The loopfield would be located under the existing parking area; each of the approximately 80 -6in boreholes would be drilled to over 300-ft deep and use a 1-in HDPE pipe loop and thermal conductive grout. The proposed system would be sized to satisfy 92% of the building's overall heat demand. The existing heating system would be modified to use the lower temperature water heated by the heat pump system. The application is based on a 2014 feasibility study completed by Alaska Energy Engineering.