Tenakee Inlet Geothermal Resource

Grantees	Inside Passage Electric Cooperative (Utility-Cooperative)
Technology Type	GEOTHERMAL
Region	Southeast
AEDG Project Code	10285

REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
4	632	Reconnaissance Study of Tenakee Inlet Geothermal Resource	7040073	406018	Feasibility	7/1/11	6/30/13	Closed

Grant 7040073: Reconnaissance Study of Tenakee Inlet Geothermal Resource

Project Scope: Inside Passage Electrical Cooperative will use this Renewable Energy Fund (REF) Round IV grant to investigate the potential of using the known geothermal resource at Tenakee Inlet (approximately 57 59' 24" N, 135 56' 20" W) to produce power and evaluate alternative uses of the source.

The springs near the head of Tenakee Inlet have the highest recorded surface temperature (176F) of any of the numerous geothermal springs tested on Chichagof Island and listed on the Geothermal Resources of Alaska Map. Geochemistry of the spring waters indicates a maximum subsurface temperature of 243 F. The surface flow rate of the spring has been measured at 90 L/min and the convective heat discharge estimated at 0.5 MW.

The project area will be approximately 2 square miles, although the exploration is constrained by the fairly steep ridges to the west, south, and east, and will thus be focused on the valleys and southern portion of the area. The grant funded phase will include mapping, remote sensing, aerial and ground based geophysics, and geochemical sampling of soils, rocks, and surface waters. If this work is successful and promising, future work would include drilling necessary to confirm and develop the resource, necessary permitting, and power plant and infrastructure construction.

Project Status: In the fall of 2011, the contractor HDL conducted shallow temperature surveys, collected rock, water, and soil samples, and mapped geological strata.

In the spring and summer of 2012, the team completed a thermal imaging survey, collected additional shallow temperature data, and conducted a stream cross-section survey to estimate flow rates. Soil gas surveys were performed in the fall of 2012.

Results have been compiled into a final report which includes an economic analysis and recommendations for next steps to confirm the resource.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	$568,729.62	$568,729.62
Other State Funding	$0.00	$0.00
Total State	**$568,729.62**	**$568,729.62**
Required Local Match	$0.00	$0.00
Federal Grant Funding	$0.00	$0.00
Total Project Costs	**$568,729.62**	**$568,729.62**