

Providing Power to Alaska

Grant program offers opportunity to help member-owned utilities develop renewables

By Pam Blair

In January, Alaska Gov. Sarah Palin announced the most ambitious renewable energy goals in the nation, calling for 50 percent of the state's power to be generated by renewable resources by 2025.

That is double the national goal of 25 percent by 2025.

About 24 percent of Alaska's power already comes from renewable energy, mostly hydropower from the Alaska Panhandle.

In 2008, the Alaska Legislature—awash in funds from pipeline sales—established the Alaska Renewable Energy Fund. According to the legislation, the state will allocate \$50 million a year for five years to promote renewable resources in Alaska. To kick off the program, the Legislature budgeted \$100 million for 2009.

"I applaud the state for doing this," said Kate Lamal, vice president of power supply for Golden Valley Electric Association (GVEA). "In Alaska, renewables truly have the potential to decrease the cost of power."

The Alaska Energy Authority solicits applications for projects.

Palin energy adviser Steve Haagenon—who oversaw development of a guide listing alternative energy assets of every village in Alaska—unveiled the first 77 projects picked for grants from the Alaska Renewable Energy Fund.

Grant Helps CVEA Develop Hydro Project

The Allison Lake Hydroelectric Project holds the potential for increased hydro power generation, which could displace more than 20,000 megawatt-hours of fossil fuel generation and provide members of the Copper Valley Electric Association (CVEA) with long-term, sustainable, environmentally clean energy.

In 2008, CVEA received a preliminary permit from the Federal Energy Regulatory Commission to develop the Allison Lake Hydroelectric Project. Since that time, CVEA has conducted intensive field and office studies on a variety of environmental, geological, hydrological, economic and technical subjects. Presently, the project focus is to select a specific development alternative and to design the 2009 field studies program to move that alternative forward.

"We are very pleased that CVEA is in line to receive a grant from the Renewable Energy Fund created by the Legislature," said Robert Wilkinson, CVEA chief executive officer. "These funds will help us continue toward developing a FERC license application for an economically viable project." ■

The village report is a primer on alternative energy sources as well as an inventory for projects.

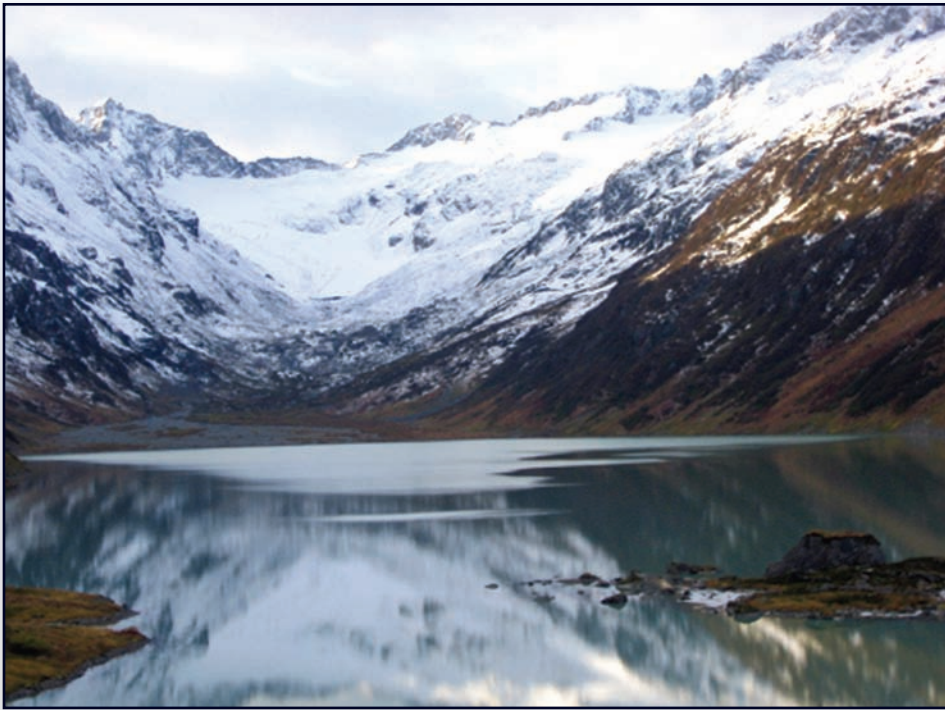
On February 16, the Legislative Budget and Audit Committee voted to award all 77 recommended grants.

Legislative leaders have cautioned that the precipitous drop in the price of crude oil—from which Alaska earns upward of 90 percent of its state revenue—could make it difficult to fund future renewable energy projects.

"This year, the budget is in trouble," said Meera Kohler, chief executive officer of Alaska Village Electric Cooperative (AVEC). "I'm not sure how much heart there is to develop renewable projects when the current cost of oil appears to make them moot. There is also some concern among members that certain projects will not be fruitful."

Among projects recommended for funding are the following:

- **Lake Elva Hydropower Construction, Nushagak Electric & Telephone Cooperative.** The hydro project would have a capacity of 1.5 megawatts (MW). "Over the course of 30 years with the hydro project, we have the opportunity to save \$100 million in fuel costs," said Michael Favors, project manager/engineer for the co-op. "Hydro is a prime power source, not variable. We are not going to save money until we can turn generators off."
- **Allison Lake Hydro Feasibility Study, Copper Valley Electric Association Inc. (CVEA).** The 4 MW project south of Valdez and west of the Solomon Gulch hydro project would produce 20 to 24 million kilowatt-hours of electricity, allowing



Above, the Allison Lake drainage looking south. Photo by Steve Hart, courtesy Hatch Acres. Background, Willow Lake.

CVEA to acquire up to 90 percent of its power from hydro.

- **Old Harbor Hydroelectric Final Design, AVEC.** The 300 kilowatt (kW) run-of-the-river hydroelectric plant would include a diversion structure, pipeline, powerhouse and electric line on Mountain Creek.

- **Quinhagak Wind Farm Construction, AVEC.** Three 100 kW turbines and new control modules would be installed.

- **Mekoryuk Wind Farm Construction, AVEC.** Two 100 kW wind turbines and new control modules would be added.

- **Toksook Bay Wind Farm Expansion Construction, AVEC.** A 100 kW turbine would be added to three others, powering not only Toksook Bay, but Tununak and Nightmute through interties.

- **Ambler Solar Photovoltaic (PV) Construction, AVEC.** The 50.4-kW system would be grid-tied

and battery-less.

- **Kotzebue Wind Farm Expansion Construction, Kotzebue Electric Association (KEA).** Installed wind capacity would increase from 1.14 MW to 4.59 MW.

- **Upper Kobuk Region Hydroelectric Feasibility Study, AVEC.** The objective is to examine at least 12 hydro sites in the Upper Kobuk River Valley and create conceptual designs for the most promising.

- **Kotzebue Wind Farm Red-Ox Flow Battery Storage, KEA.** Voltage stability and efficiencies of operating diesel generators would be increased. It also would capture excess wind energy during off-peak hours.

- **Eva Creek Wind Farm Construction, GVEA.** Fifteen turbines would produce 24 MW and offset.

- **North Pole Heat Recovery Construction, GVEA.** Waste heat would provide space heating for an adjacent building. ■

Guide Identifies Energy Options Across the State

Gov. Sarah Palin recently praised Energy Coordinator Steve Haagenson and the Alaska Energy Authority for the release of the comprehensive guide to energy in Alaska. The guide, *Alaska Energy: A First Step Toward Energy Independence*, identifies energy options for communities across the state.

“While lower crude oil prices are reducing the costs of energy today, we must remain committed to achieving energy security for our future economic wellbeing,” Palin said.

“This tool will focus each community on their relative options for generating electricity and heat through the use of locally available resources,” said Haagenson.

The plan calls for Alaskans, the Alaska State Legislature, local and regional governments, the University of Alaska, and the private sector to work together to ensure that by 2025 half of the state’s electricity comes from renewable sources.

A copy of *Alaska Energy: A First Step Toward Energy Independence* can be found at www.akenergyauthority.org. ■