



FOR IMMEDIATE RELEASE

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ALASKA ENERGY AUTHORITY, BP LAUNCH HYBRID POWER PROJECT IN LIME VILLAGE

A small electric generation project in a remote village in southwestern Alaska could play a major role in determining whether solar power could have a bright future in other areas of rural Alaska.

Alaska Energy Authority (AEA) and BP, in conjunction with McGrath Light & Power Co. and the U.S. Departments of Housing & Urban Development and Energy, have launched a demonstration project to power Lime Village with a hybrid solar and diesel fuel generation system. Hybrid systems use more than one power source to meet energy needs.

Performance data and results will be evaluated to assess whether solar power, in combination with diesel generation and battery storage, can be used effectively to reduce power costs and enhance electrical efficiency in other rural areas of the state.

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Lime Village has 50 residents and is located on Stony River about 100 miles south of McGrath and 200 miles west of Anchorage.

The village was chosen because of its high energy costs, low per-capita power consumption, latitude, weather and an existing, poorly performing hybrid power system. It wasn't electrified until 1998, and power costs have averaged about 85 cents per kilowatt-hour.

"While this system is still experimental, it's an important step in the right direction," said Phil Graham, Lime Village planner and a resident of the village for 25 years. "We're making improvements and refinements to make it more reliable, and we're optimistic about the efforts to bring an effective solar-diesel hybrid system to our village."

An experimental hybrid system installed in 1997 failed due to design problems.

When BP offered additional solar panels for a village power project, AEA incorporated them into a redesigned hybrid system that is expected to reduce diesel use by 30%. The work is part of AEA's rural alternative energy research program.

The new system began operating in late July. A team including representatives from AEA, BP and McGrath Power & Light, as well as State Sen. Georgianna Lincoln and Rep. Carl Morgan, visited Lime Village for a demonstration of the system.

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It includes installation of 106 solar panels manufactured at BP Solar's plant in Fairfield, Calif., a state-of-the-art direct current-alternating current inverter and a small diesel generator. A battery bank from the original demonstration project stores surplus power for future use.

Each solar panel is expected to displace about 10 gallons of diesel annually and should operate for at least 20 years, with little maintenance.

Lime Village relies entirely on air transportation, and the recent delivered cost of diesel fuel has been more than \$4 a gallon. Graham said the system reduced the village's diesel costs more than \$2,000 during its first month of operating.

Sandia Labs, the research branch of the U.S. Department of Energy, will use performance data from Lime Village to study the best mix of power sources in a hybrid generation system to reduce diesel reliance. As a result, the solar component could be increased.

McGrath Light & Power has a management agreement with Lime Village to assist with the operation and maintenance of the system. The village has participated through grants and loans from the Department of Housing & Urban Development and the state.

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PHOTO CUTLINES

(Photos by Randy Lissey)

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State Rep. Carl Morgan (R-Aniak, left) and Eric Yould, executive director of the Alaska Rural Electric Cooperative Association, discuss solar potential for rural Alaska during a recent visit to Lime Village.

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A new hybrid solar-diesel electric system brightens the day for Lime Village residents David Bobby (left) and Caleb Breckheimer.