**Program Fact Sheet: Hydroelectric Program**

| Current Status: | The hydroelectric program is currently administering 32 Renewable Energy Fund (REF) and Legislative grants and assisting with other existing and developing hydroelectric projects. Recently completely program work included enhancing performance reporting criteria, public presentations, and completing a visual assessment of hydro potential for all communities in the state. Recent milestones include the beginning of operation for the Chignik Lagoon project (photo below). Future work for program staff include coordination with the Department of Energy on their national Hydro Vision program, review regulatory requirements, providing technical assistance for owners and developers including stream gauging support, and investigate arctic hydro issues. |

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**Program Background:**

As Alaska’s largest source of renewable energy, hydropower supplies 20 percent of the state’s electrical energy in an average water year. There are currently 42 operating hydroelectric projects in the state of Alaska that provide commercial power to utilities. Most are owned by the utilities they serve. Alaska has much untapped hydroelectric potential. The majority of Alaska’s hydroelectric energy resources are located mainly in south east and south central, with some resource opportunities in the interior, south west and the Aleutians. Hydroelectric plant configurations include conventional dam reservoir projects which regulate flows through the drawing down of reservoir levels and smaller capacity run-of-the-river projects which rely upon the rate and fall of natural streamflow to produce power. Hydropower generation allows the displacement of conventional fuel fired generation of electricity. Though time consuming to permit and expensive to construct, hydropower is a mature technology with the capability of locking in power rates for 50 – 100 plus years.

For a hydropower resource to be capable of economically-viable power production, a number of attributes must be present: (1) flowing water of sufficient quantity, (2) elevation drop in the river or stream (head), (3) proximity to load (power sales) and (4) minimal environmental risks from project development. AEA’s hydroelectric program supports projects through grants for hydropower development for electrical power generation; organizes workshops and training sessions; and coordinates state assistance in developing exploration and study of potential new hydropower sites across the state.

Note there are additional AEA program resources committed to hydroelectric development outside of the AEEE program. These include: (1) a dedicated team to manage the development of the 600 MW Susitna-Watana Hydroelectric project and the Battle Creek Diversion for Bradley Lake Hydroelectric Project and (2) direct management of smaller hydroelectric projects by the Rural Energy Group in conjunction with diesel powerhouse and bulk fuel system replacement projects.