

## Fivemile Creek Hydroelectric Project

<b>Grantees</b>	Chitina Electric, Inc. (Utility-Private)
<b>Technology Type</b>	HYDRO
<b>Region</b>	Copper River/Chugach
<b>AEDG Project Code</b>	10137

### REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
2	236	Fivemile Creek Feasibility/Conceptual Design	2195456	407058	Feasibility	7/24/09	6/30/15	Active
4	682	Fivemile Creek Hydroelectric Project	7040012	407058	Final Design	7/1/11	12/31/15	Active

### Grant 2195456: Fivemile Creek Feasibility/Conceptual Design

**Project Scope:** The Alaska Energy Authority and Chitina Electric, Inc. will use the grant funds to complete feasibility study, conceptual design and permitting; with the requirement that the feasibility report affirms that a Fivemile Creek hydroelectric project near Chitina, Alaska is practical before subsequent funding is provided for conceptual design and permitting. Work includes environmental assessment, site control, permitting, penstock routing, intake structure location, turbine house, equipment selection and tail race design.

On behalf of the Grantee and through a separate grant agreement funded by the Denali Commission, the Authority has previously completed conceptual design, final design, and construction is underway for the diesel powerhouse and associated distribution tie line adjacent to the mouth of Fivemile Creek. The proposed hydroelectric project would provide power to the new powerhouse.

Preliminary investigation work along with initial stream gauging at Fivemile Creek mouth was previously completed in May of 2008 under the grant for the powerhouse upgrade project. A Notice to Proceed has been issued for additional stream gauging at the proposed intake location on Fivemile Creek.

**Project Status:** The feasibility report prepared by CRW is titled "Chitina Alaska Conceptual Design Report Fivemile Creek Hydroelectric Project" and is dated January 13, 2012.

The grant was amended in Feb 2014 with the scope of work consisting of permitting documents and completion of 65% design documents. Almost all the funds under the grant have been expended and the grantee's contractor (CRW through AEA) provided drawings titled "Chitina, Alaska, Fivemile Creek Hydroelectric Project, 65% Design Drawings, September 2014". Permit status is not known other than FERC ordered licensing is not required (May 2012).

AEA expects to perform some additional hydrological work in the spring of 2016 to shore up the feasibility analysis and address powerhouse location options with ADF&G. This grant is expected to close after remaining funds are expended to prepare a design build contract to complete the project.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$303,000.00	\$302,455.47
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$303,000.00</b>	<b>\$302,455.47</b>
Required Local Match	\$0.00	\$0.00
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$303,000.00</b>	<b>\$302,455.47</b>

### Grant 7040012: Fivemile Creek Hydroelectric Project

**Project Scope:** Chitina Electric Inc. (CEI) has been awarded \$277,000 in Round IV Renewable Energy Fund (REF) grant funds to complete permitting and final design of the Fivemile Creek Hydroelectric Project. This 300 kW high head, run-of-river hydroelectric plant has the potential to displace a significant portion of the diesel fuel now used to generate electricity for Chitina.

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Round II funding of \$303,000 to complete conceptual design and feasibility assessment of the project (#2194556). In addition to the feasibility assessment, Chitina has begun the permitting and design process using remaining feasibility funds. This new grant is a continuation of the work. Project permitting, obtaining site control, completion of final design and a final business plan will be completed. Permitting jurisdiction is outside the authority of the Federal Energy Regulatory Commission and is through the resource agencies of the State of Alaska. As requested by the grantee the Alaska Energy Authority, is administering this grant for CEL.

**Project Status:** The conventional run of the river hydro project has completed the design phase. Chitina Electric Inc. has applied for hydro construction funds from the most recent AEA REF and USDA HECG grant programs. Once they secure construction funds the project will move into the construction phase.

<b>As of Nov. 30, 2013</b>	<b>Budget</b>	<b>Expenditures</b>
Renewable Energy Funding	\$277,000.00	\$159,628.96
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$277,000.00</b>	<b>\$159,628.96</b>
Required Local Match	\$500,000.00	\$0.00
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$777,000.00</b>	<b>\$159,628.96</b>