

Increased Hydropower Moves Another Step Closer For CVEA Members



View of one of the stream gauges installed to measure the hydrology of Allison Creek

Photo courtesy Hatch Acres

On March 3, 2008, CVEA filed an application for a preliminary permit with the Federal Energy Regulatory Commission (FERC) to evaluate the hydropower potential of Allison Lake. For CVEA, the possibility of increased hydropower generation promised the ability to displace fossil fuel generation and help provide members of the Cooperative long-term, sustainable, environmentally clean energy.

In September 2008, FERC granted CVEA a three-year preliminary permit to determine if there is an economically viable project. In 2008-2009 aggressive environmental and engineering field studies were conducted. Studies were evaluated in 2010 and a Final Feasibility Report on the project was presented in April 2010. In October, after three years of intensive study to determine the best use of the Allison Lake resource, the Board of Directors approved the Co-op to proceed with a Run-of-the-River Hydroelectric Power Project.

The Run of River option was nearly half the cost of the dam storage project that was originally studied and eliminated concerns over difficult terrain, tough access, avalanche risk, poor soils, and structural instability.

Another major milestone was met on the Allison Creek Project, on August 29, 2011, when an Application for Original License was submitted to FERC. This license application included environmental assessment studies, a preliminary engineering design study, an aesthetics impact study, a cultural impact study, and many other studies required by FERC regulations.

Following a two year wait, on August 1, 2013, the Original License was issued to CVEA allowing the project to move into its construction phase and putting members one step closer to increased hydropower generation.

There was no idle time while waiting for the license to arrive.



Left, contractor crews performing boring tests to help determine the geological conditions of the project site

Photos by Dave Banke-Mowat
Construction



Immediately after submitting the license application CVEA began to build its plan. The Board of Directors approved the use of a design/construction technique called Construction Manager at Risk.

The next milestone was to hire a design engineering firm to advance from preliminary to final design. The design engineer was hired in September 2012. Part of the design responsibilities was to determine geological conditions at the project site. This was accomplished through bore testing and site visits. At 60 percent design, the construction firm was hired to participate in the completion of the design to ensure constructability issues were addressed.

Also during the two year wait, to prevent future construction delays, the decision was made to purchase the highly specialized equipment necessary to build the Pelton Wheel Turbine and Generator; this equipment is so specialized, it must be ordered 18 months in advance. The specifications for this

equipment were written and solicited on the open market, looking for the best vendor. In May, the vendor was selected and given notice to proceed.

In addition to procurement work, 16 safety plans and 10 construction plans were developed for submission to FERC. These plans include: environmental compliance, monitoring, spill control, biotic monitoring, sediment and erosion control, construction safety, quality control, water quality compliance, bear safety, scavenger control, and several more. As a result, CVEA is ready to move quickly now that the license is in hand.

FERC was provided the completed project design immediately upon license issuance and are currently conducting their 60 day review. Following FERC's review, construction activities may begin with their permission.

CVEA originally had a goal of project completion in 2015, and in spite of the late timeline, it may still be possible to meet that goal and begin producing hydroelectric power from the Allison Creek Project in 2015. This schedule depends on our ability to build an access and penstock tunnel this winter.

Looking forward to 2014 we will see construction beginning on the diversion structure, penstock installation, powerhouse construction and the transmission line installation.

The Cooperative continues to work on a finance plan to ensure CVEA members have the best rate/kWh possible from the project. CVEA has requested and received \$17.3 million in grant funding through State of Alaska Legislative appropriations and the Alaska Renewable Energy Fund. In addition to grant funding, CVEA has met with bankers to evaluate options for financing the balance at the lowest cost available. ■

For more information on this or any other CVEA project, please contact Sharon Crisp, CVEA Manager of Member Services, at 822-5506, 835-7005, or email crisp@cvea.org.