

What's Happening with Hydropower at CVEA



Above, an example of a Run-of-River hydroelectric project, similar to what is proposed for Allison Creek

It is the vision of CVEA to reduce or eliminate our dependence on fossil fuel and stabilize the Cooperative's cost of generation with regional, sustainable resources.

It is with this vision in mind that CVEA continues to look at alternative ways to generate electricity. CVEA believes that hydropower is the most viable and cost effective alternative to fossil fuel and continues to look for ways to add additional hydropower resources to CVEA's generation mix.

Allison Creek

The Allison Creek Hydroelectric Project continues to advance. All activities required to obtain a license from the Federal Energy Regulatory Commission (FERC) are complete; including overcoming environmental issues, which are typically the most difficult hurdle in the process.

CVEA's environmental position has been "agreed to" by key state and federal agencies, which could speed the process at FERC and result in an approved license faster than expected.

In addition to progress with the license application, CVEA is moving forward on the procurement of the Design Engineer

and the Construction Manager. A Request for Proposals was written and issued to prospective design firms on July 2, 2012. Proposals were returned on August 17 and are now under review for selection to award. Concurrent to the Design Engineer procurement, the Request for Proposals for the Construction Manager is being developed.

Your Cooperative also continues to work on a plan of finance for the Allison Creek Hydroelectric Project to ensure CVEA members will receive the best rate/kWh possible from the project. The project has already received \$11 million in State of Alaska Capital Appropriations and \$2.3 million from the State of Alaska Renewable Energy Fund, which is the State's main financing mechanism for renewable energy projects.

CVEA will submit another application for funding from the Renewable Energy Fund and has begun meeting with bankers to evaluate options for providing financing to CVEA at the lowest cost available. Work on the plan of finance will continue as procurement and design are finalized.

CVEA's goal is to have a new source of hydropower by 2015. Despite a significant amount of work before us, we are method-



An aerial view of the Tielkel River

Photo by Chris Botulinski

ically and steadily progressing toward that goal.

Tielkel River

Most of CVEA's members are likely familiar with the Tielkel River, but many may not be aware that this body of water is a potential hydropower resource that has not been fully explored, or that CVEA has begun to evaluate its hydropower potential.

The Tielkel River is located at Mile 45.5 of the Richardson Highway and is fed by the Tsina River, Stuart Creek, and Boulder Creek.

In 2012, with the help of Senator Coghill and Representative Feige, CVEA was given a \$500,000 Legislative Appropriation to complete a reconnaissance level study of the Tielkel River drainage area. Since then, a Request for Proposals was built and submitted to qualified contractors. Several competitive bids were received and evaluated by a selection committee. In July 2012, an award was given to MWH Constructors. They will conduct a study and present the findings to the CVEA Board of Directors by December 31, 2012.

The goal is to determine if the Tielkel River drainage shows enough potential to be studied further and possibly developed into an additional hydropower resource for CVEA's power production capabilities.

For more information on the Allison Creek or Tielkel River Hydroelectric Projects, please contact John Duhamel, CVEA Executive Engineer/Project Manager, at (907) 822-8301 or email duhamel@cvea.org. ■

Increased Efficiency at Solomon Gulch



The Solomon Gulch Hydroelectric project has operated 30 years with only minor repairs and modifications.

In 2010, the first major overhaul of one of the two turbine generators was performed. The overhaul consisted of removing the runner and generator rotor assembly, replacing the wicket gates and associated hardware for the operation of the gates, miscellaneous bearings, repainting of the spiral case, and testing of the generator windings. The runner and stator assembly were reinstalled, balanced, tested, and returned to service.

In 2012, scheduled maintenance at the Solomon Gulch Hydroelectric Plant created an opportunity for CVEA to operate more efficiently.

In August, the second of the two turbine generators at the Solomon Gulch plant began the same major overhaul process as the first one did in 2010; with the exception of the installation of a new runner.

The new runner was manufactured utilizing state of the art flow analysis which will result in efficiency gains of at least 10 percent.

This means, for the same amount of water passing through the turbine, an additional 2,400,000 kWh of power will be generated.

This amount of additional generation will displace 171,000 gallons of diesel fuel annually. This is good news for CVEA and CVEA members.

For questions regarding the Solomon Gulch Hydroelectric Plant, contact Travis Million, CVEA Manager of Generation, at 822-8345 or email million@cvea.org.